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Title Human Culture & Cure

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HUMAN CULTURE & CURE

IN FIVE PARTS

BY

The Late Dr. E. D. BABBITT, M. D., LL. D.,

Dean of the College of Fine Forces and Author of "The Principles of Light and Color," "Religion," "Health and Power," etc., etc.

THE CHROMOPATHIC INSTITUTE, (Regd).

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FOREWORD

Being a staunch believer in the efficacy of Nature Cure and its superiority over all other therapeutic systems, in which crude doses of poisons and minerals are administered into our bodies; I was in search of a system of cure which, besides being the cheapest and capable of eradicating the cause of the disease, should be effective and enduring in its results.

As early as 1920, I happened to meet Dr. B. S. Gopalarao, N. D., the famous research worker in dietetics, who was then one of the few pioneer chromopaths in our country. Later, I was presented with a copy of Pundit Jwala Prasad Jha's pamphlet on Chromopathy. Therein I found the principle underlying the use of colour charged water and light for the cure of human ailments. No sooner had I read the first few lines of the brochure than I was tempted to translate the same for the benefit of the Telugu knowing public. It is now running the third edition.

Afterwards, Mr. V. Chinnaiah Rao, B. A., B. L., of Masulipatam kindly lent me Dr. Babbit's Human Culture and Cure, in the year 1924. Acquainted as I am with the miraculous cures effected by me, through the application of colour light and colour charged water, I ardently desired to own Dr. Babbitt's works and enquired in America and England, if I could get copies of 'Human Culture and Cure' and 'Principles of Light and Colour'. No definite replies were received. Even those who responded could not furnish me with the whereabouts of the author or the place from which his works could be procured.

Even Dr C. J. Colwille who wrote a book on Dr. Babbitt's Chromopathy mentioned in his book, that it was hard to secure even second hand copies of the famous Doctor's works.

Then I translated a portion of 'Principles of Light and Colour' which deals with 'Chromo Therapeutics', into my mother tongue, along with Dr. Babbitt's 'Health and Power'. The two books are now available in Telugu.

I was not satisfied with translating the above works and so, I undertook to render into Telugu the three parts of 'Human Culture and Cure', which deal mainly with the therapeutic side of his works, i. e., the first, fourth and fifth. The book is now available for the Telugu knowing public.

On account of my great interest in his works and the interest which, some of my friends also have shown in the science, we took it into our heads to reprint and publish Dr. Babbitt's 'Human Culture and Cure' as the other monumental work 'Principles of Light and Colour' had already been published by some gentleman in America and as the same is now available for sale in the Theosophical Publishing House, Adyar, Madras.

An association by the name of 'The Chromopathic Institute, Bezwada' has since been registered by us, and it has taken upon itself the duty of printing and publishing this unique scientific work of Dr. Babbitt, for the benefit of ailing humanity.

Our thanks are due to Dr. Iyyanki Venkata Ramanayya, N D., F.T.S. Bezwada, Mr. D. Veerabhadrayya of Rajahmundry, and Mr.V. Chinnayya Rao of Masulipatam for giving us original and manuscript copies of the work. We are highly indebted for their valuable help rendered to us in enabling us to bring out this mighty work.

My thanks are specially due to Dr. Iyyanki Venkata Ramanayya N. D., F. T. S. for his zeal in taking the troublesome task of presenting me with well typed manuscript copies of the first two parts of this work, with all the pictures in it well drawn.

But for that help I could not have translated the work into Telugu.

It was Dr. Babbitt that first discovered the exact shape and working of an atom while in motion. Dr. Leadbeater not only admitted this but applauded Dr. Babbitt as it was much later that Theosophists could graph out the shape of an atom through clairvoyance.

Dr. Annie Besant had taken the delightful task of introducing Dr. Babbitt's books and appliances on Chromopathy into India.

Now the scientific world is awake to the details of the working not only of atoms, but also of electrons. But what strikes us is the genius of the doctor, who could discover, the details of the working of the atom as early as nineties of the nineteenth century, even though the highly advanced instruments of research now available, were then scarce.

What Dr. Babbitt wrote about the atom long ago, applies to the electron since discovered.

If you go through the whole work, you can easily understand that he took every care to clear the minutest point; and even a lay man can grasp his theories, as the work is free from all avoidable technicalities.

The first part deals with the philosophy of cure. The first six chapters of this part are the most important of the work, as, in it are recorded the basic theories, which help us a great deal in the study of the whole work.

Quite a large number of customs followed by us, Indians, find explanations in Dr. Babbitt's works, viz.

1. In saluting, we combine both hands.

2. The youngsters and the less learned bow their heads on and touch, with their hands, the feet of the elders or Gurus (more learned than they) in showing their reverence to them.

3. The Guru in his turn places his right hand on the head of his disciple and blesses him.

4. When a person is suffering from herpes or diphtheria the *Mantrika* (he that is well versed in the art of healing with psychological or spiritual forces) holds some roots of grass in his hand and waving the ends of the grass, spells his *Mantra*.

5. On auspicious occasions such as marriages, green mango leaves are tied topsy turvey to the doorways and in the house. The feet of the ladies who do not apply cold water every day to their heads are besmeared with pulverised turmeric paste.

Whoever reads the second, nineth and nineteenth chapters of Part I of the work, can find scientific explanations for all these apparently rude customs of the Hindus.

The second part deals with Sexuology and Sociology. As early as 1890 he could anticipate the necessity of the destruction of the imperial systems of Governments. All those who read paragraphs 65, 66 on pages 236 and 237 of this work, are sure to be convinced of the necessity of a new order of things in social and political fields. For fear of repetition I am not quoting the same here.

Dr. Marie Carmical Stopes, one of the greatest of the present writers on sexuology is still suspicious of the interchange of human electricities in the presence of opposite sexes. Hindus of old, could, by intuition, know these things and they through the *grihyasutra*, say, *uttaro varaha*,

which orders to bring the bride to the right side of the bridegroom on the wedding seat.

The third part deals with the Phrenology and Physiognomy, wherein the doctor gives the details of these sciences, and explains why a particular depression at a certain place was responsible for a certain quality in the possessor of that depression.

You will be highly amazed at the details mentioned about Psychology and Psychometry, Psychoma and Psychotherapy. Inspite of the advanced upto-date developments in scientific knowledge aided by highly refined instruments, the medical world is still groping in darkness, in the realm of the diagnosis of diseases. Lord Brabourne's succumbing to tuberculosis, six months after he was declared free from the same disease in one of the metropolitan hospitals, where the most up to date instruments including X-Ray, are all available, clearly shows the utter helplessness of the Allopathic profession in the art of diagnosis. Lord Brabourne was Governor of Bengal in 1938. If all the doctors of medicine try to acquire the power of diagnosing diseases through clairvoyance, much of the havoc done through wrong diagnosis will be avoided. In this connection, you will find it interesting to read paragraph 8 on page 401.

A close study of the para 21 on page 385 of this work will reveal the importance and the necessity of employing *Statuvolism* in the art of healing, at least as a supplement to the present day methods applied in curing diseases.

The whole is a mental treat with a decisive practical utility.

The fourth part deals with the Nervous system and its physiological and pathological conditions. The present day treatment of criminals, convicts, idiots, people suffering from insanity, hysteria, epilepsy, paralysis and senility is simply barbarous and based on ignorance of the real working of nervous and psychic forces; and needs modification along the lines proposed by the able doctor. The thrashing and subduing of insane people in the asylums needs a thorough reform.

The fifth part exclusively deals with the physiological working of all the organs of the body. No work on Physiology has ever attempted to explain the involuntary working of certain organs. For the first time, in the history of science, not only the physical side but also the chemical and psychological working of different organs, are explained in Dr. Babbitt's works. The appendicula vermiformis is treated by almost

all the physiologists as a useless organ fit to bring on that terrible disease called, Appendicitis.

Even the biggest works (Encyclopedeas in the English Language) tell us that it is a useless organ, a relic of the primitive man's internal organs, now almost useless except for causing that malignant disease referred to above. It is Dr. Babbitt who tells us that there is a red fluid in the appendicula vermiformis which is very helpful in sending up unwanted faecal matter through the ascending colon.

He explains the why of the enlargement of the spleen in almost all intermittent fevers. If you read the work, you will come across explanations for one thousand and one aspects of physical and metaphysical causes of the working of the wonderful things in the universe around us. They were left out, up to the time of Dr. Babbitt, as un-understandable and inexplicable.

So, I do not propose to stand between the reader and the feast the pages that follow, provide. Before I conclude, I am tempted to narrate a few cases from my own experience, which will not fail to interest you.

(1) It was in the month of May. After a hot summer day, a patient, emaciated with fever and cough for a number of months, was brought to me. He was so poor that he could not afford to secure any orthodox medical aid. I could not prescribe for him any costly applications of the Nature Cure system. He was administered nothing but ceruleo (blue water) for 2 months, 4 doses of ½ oz. each day. His fever went down and cough began to subside. Finally, after 2 months he had no traces of the pulmonary affection. It is five years since he had this lung trouble cured and he is quite healthy now without a relapse.

(2) A girl of about 15 was suffering from fever for 2 or 3 months when she was suddenly declared to be affected with tuberculosis of the lungs. She was ordered to be sent to one of the biggest sanitariums in our country. Her brother came to me and sought my advice. She was kept on sweet oranges and was administered blue thermolume baths. In a month, the temperature came down to normal; the cough also disappeared. By continuing Kuhne's baths and colour treatment 3 or 4 months more, she regained not only her normal health but improved considerably in strength and endurance.

(3) A man of a very robust constitution had an attack of insanity. He was put in chains for fear he might prove dangerous to his friends

and relatives. I placed him in the blue thermolume for a week, (45 minutes every day) and he was allowed only oranges for the first 3 or 4 days. Then he was given raw diet for another four days. He was miraculously cured of his disease in a short space of 8 days. It is now 4 years since he was relieved of this trouble and there is no recurrence of the disease.

I have successfully used this system on a number of very hard cases all these 20 years.

Let me tell the readers of this classic work, that many an author has attempted exhaustive works on the subject, but it is only Dr. Babbitt's works which go to the root of the matters and it is this that induced our Institute to reprint this priceless book, and place it before the public in the hope that this new system of combating disease shall be followed by our discriminating friends, as it is not only the cheapest but the most efficacious of all systems that are claimed to alleviate human suffering.

The Chromopathic Institute,
Bezwada.

P. VENKATRAMAYYA, N. D., D. M., F. T. S.,
President.

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HUMAN CULTURE & CURE

IN FIVE PARTS

PART FIRST

The Philosophy of Cure

INCLUDING METHODS AND INSTRUMENTS

BY

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INTRODUCTION.

Medical *Science* not being a science, is it not high time that some one should put forth efforts to make it such? Millions are treading the discordant pathways of disease, vice and misery, in spite of all that colleges, pulpits and pill bags can do; shall we not look around then for some more fundamental methods of human upbuilding?

My discovery of the etherio-atomic law of force, as developed in my Principles of Light and Color, having opened up the basic principles of Chemistry and cleared up, to my mind, many dynamical, physiological and psychological mysteries, has led me to hope that I may, in this work, give at least the outlines of a therapeutical science, as a help to my medical co-workers and the suffering, dying multitudes who walk in darkness and sorrow. Three things, at least, seem to be greatly needed at the present time:—

1. A Science *of Cure* built on immutable principles, by means of which the chemical, mechanical and vital forces of the external world, may be applied to the chemical and vital conditions of the patient.

2. An Art *of Cure* which must include the machinery and appliances for healing disease, and the methods of using them. So deficient have we been in proper healing machinery, or, in other words, in what may be called *Patho-mechanism*, that I have spent several years in devising improved instruments for baths, apparatus for concentrating the sunlight, or distributing its colors to any diseased part of the body, methods of potentizing certain substances by means of the solar rays, etc.

3. *The use of elements so refined that they may penetrate to the innermost portions of the system*, including nerve force and even the mental and spiritual activities, for in this way alone can we attain to a powerful and permanent physical upbuilding of the whole being. Spiritual and physical potencies, to be effective, must ever work in correlation. The clergyman who should attempt to save men through spiritual forces only, or the physician who appeals to the material being only, is getting people to walk with one leg, and will fail. Chromopathy now rising like a new sun upon the world, the electricity of water, air, magnetic massage, and similar fine forces, owe their marvelous success to their nerve sustaining, mind upbuilding and blood enkindling power, and the development of these higher laws of dynamics together with various other natural and practical methods of cure, is an important object of this work. It is intended for both private individuals and physicians, for the former should not be so helpless and ignorant in

every little ailment, and should know better how to remain well when once in good condition, while the latter, armed with his superior experience, training and knowledge of disease and well developed magnetic force, must ever be an important helper and counselor in all severe diseases, especially in obstetrics, surgery, nervous exhaustion, etc.

One of my most cherished objects in this work is the development of a grander manhood, a more beautiful womanhood and a happier condition of humanity as a whole.

A small point may be referred to here: the author has aimed to have his compositors drop the diphthong *æ* in such words as homeopathic, diarrhea, amenorrhea, etc. We have got rid of the nuisance of writing *æra, æconnomy,* etc., and it is high time we should do the same in the above named words, as well as in similar ones, especially as good sense and Webster are tolerant of such a practice. Our English cousins are prone, we think, to stick to the old, even when it costs time and trouble to do so, and sometimes they consider us Americans too fond of new things, but we have to answer that life is too short to be frittered away with useless motions. The truth is that in such words as *color. honor, labor,* etc., we are the ones that follow the old, using them as they come from the Latin, while the English use four useless strokes of the pen, by always writing them *colour, honour, labour* etc. Let us be progressing gradually toward the true phonotypic style, which shall so simplify language, and which the wiser future must so surely adopt.

Greatly loving simplicity of language, I have aimed to run light on technical terms, excepting, when something important is gained by their use, so that even the unlearned may, in most instances, grasp the lessons I have to teach. On the other hand I have tried to present those new truths and discoveries which shall interest the scientific. Immense volumes have been issued in explanation of medical terms, and it looks now as if it was going to take so much of one's lifetime to gain the mere husks of technicality that we shall not have much time left to gain the real kernel of knowledge., A fine flow of technical terms without noble ideas is much like a handsome purse which has no money in it.

HUMAN CULTURE AND CURE.

PART FIRST.

The Philosophy of Cure, Including Methods and Instruments.

I. THE PHILOSOPHY OF FORCE.

All force is dual, including, on one side, a finer fluid-like movement of something against or through a coarser substance on the other side.

1. **Examples:** Water driving a wheel; air driving a windmill; steam or other gases propelling an engine; blood working in the processes of animal life, etc. The two divisions here are as follows:

Fluidic.	**Grosser Elements.**
Water	Wheel
Wind	Arms
Steam	Engine
Blood	Animal tissues

2. **Invisible Forces.** If all forces in the visible or known world include a fluid action, then, as the whole universe is in harmony with itself, the forces of the invisible world must include fluids also (see Principles of Light and Color, p. 3—11, 523), hence, in harmony with the absolute unity of things, the *finer forces* such as electricity, heat, light, color, nerve force, chemical force, psychic force, etc., must include real fluids, although these fluids work in connection with coarser atomic channels and according to some definite laws of motion.

3. **Supposed Imponderable Forces.** All forces in the realm of the known world include weight and motion, therefore all forces in that which is less known, such as electricity, heat, light, magnetism, chemical action, must have weight, and hence are not imponderable as scientists are fond of asserting. These scientists, contrary to the facts of the whole visible world, usually at present advocate the dynamic theory, which says that all these fine forces are not substances at all, but "mere modes of motion". But what causes these motions? Their theory is the same as saying that the force which moves the windmill has no weight at all; it comes from the motion of its arms. The wind that sweeps these arms is entirely

ignored. But it exists nevertheless, and is a ponderable entity. A scientist has lately caused a pair of delicate scales to tip by throwing a tide of light upon one end of them. By the aid of spectroscopy I have shown just what kind of materials the colored rays of light are composed of. In multitudes of cases I have bottled up the different colored rays of light as exquisite and most effective medicines. Following nature and experience, then, we may know that light, heat, electricity, nerve force, magnetism, etc., are actual *things* possessing weight, as well as *motions*, and are forces of the most amazing character, although our ordinary scales will not weigh them.

4. **The Term Force.** It is held by some that the term *force* should never be used except to designate the starting point of all impulse, the primal energy as it is traced back to a spiritual or Deific fountain-head. This is contrary to all established use of language, and is no more philosophical than it is to say that the word *love* should not be used excepting to signify the primal impulse of all love as it exists in God himself. We have liquid, gaseous, chemical, electrical, thermal, muscular and other forces, and then we have one of the underlying principles of all force, in spirit. Spirit and Matter working together may be called the *primates* of all force, and according to the law of the rest of the universe *must go forth in fluid like style.*

5. **Ethereal Forces.** By years of experiment and investigation the author has ascertained that very subtile fluids, a grade finer than gases, which may properly be termed *ethers*, sweep through the channels of the larger ordinary sized atoms, and that these ethers modified by the vibratory motion of the atomic channels through which they pass constitute heat, electricity, color, etc., according to the style of motion and the grade of ether. These and the other fine forces consist of a duality, namely, a substance and a principle of motion. The ether alone, then, would not constitute heat, electricity, etc., nor the style of motion alone, but both. Scientists for ages have been in a sea of trouble by trying to ride in a carriage with one wheel, calling electricity, for instance, sometimes a fluid merely and sometimes " a motion of the ultimate particles of matter" merely, on the dynamic theory. The author has repeatedly collected the rays of sunlight as a pigment on chemically prepared paper, and has a thousand times medicated water and other substances by having the sunlight shine upon them through colored glass, the kind of healing power thus collected depending upon the color used. Prof. Crookes and other scientists have demonstrated the truth of several of these theories, such as the materiality of light, the existence of "ultra gaseous matter" (ethers), etc. We may understand that animal magnetism, psycho-magnetism, heat of all grades, electricity, light, color, are fine fluidic streams or

winds of force which sweep through the substance of human bodies or other solids, or radiate through the air around us, and that these streams may be guided and controlled to a great extent by our knowing how to do it. We may learn also how the refined wind which we call electricity flowing northward toward the magnetic pole, will make the needle point in the same direction as truly as ordinary wind will make a vane point in the direction of its current. The electric whirlwinds that sweep around a powerful magnet will sometimes draw ten thousand pounds of iron, and human beings can in many cases send out those finer magnetic forces which will draw other human beings, who are sensitive, to themselves. And yet these forces are said to have no weight. Then must the water of a maelstrom have no weight. (See Principles, p. 106, 416, 447, 524. See answer to Count Rumford, p. 152.)

6. **The Duality of Force**, being so generally misapprehended by writers on the subject should be illustrated a little farther. We have seen that force embraces a more subtile or fluidic element on the one part which co-operates with a coarser or more static element on the other part. Thus air alone is a force, having ethers or finer atoms which play through the larger atomic channels of oxygen and nitrogen to produce the effect of heat or cold, but air alone would not be able to run the internal machinery of a windmill. Windmill power embraces the sweep of air and arms to catch this air. The arms alone would be helpless to run the mill, and the air alone would accomplish nothing. Wind is in reality a force, but it is caused by a still finer force, the flow of ethers through the atomic channels of air in a way to produce heat. This heat expanding the air causes it to rise, and the rush of cold air to fill its place gives the effect of wind. This wind may drive vessels and overturn houses, and in the language of some writers is incorrectly deemed a mere *instrument* which is set in motion by heat. It is on a par with a missile which is thrown by a human hand. The missile is not the direct force, this being the hand that throws it. If the hand then is the force, where is the duality? This is the explanation. The fine or fluidic part consists of the nerve ethers that are sent to the muscles. These muscles constitute the coarse element of force, which becoming contracted are made to hurl the missile. A series of contiguous balls may be struck at one end by a mallet but only the last one moves. Does this do away with the fluidic side of force? No, for the real force is within the hand that wields the mallet, while the mallet and balls and hand itself are mere instruments for conveying it. If one force in all the realms of nature could be found in which fluidic action is not used, then our scientists might have some excuse for affirming that electricity, magnetism, light, heat, etc. are simply "modes of motion" unconnected with any fluid action. By following nature

in these respects, a thousand mysteries can be cleared up, for a vast range of fine forces which are the basic principles of all things, can be to a considerable extent understood.

7. **Spirit and Matter.** An extensive investigation into the subject of atoms, has shown me that there must be something finer than any material conditions, something unatomic, infrangible, imperishable, and almost infinitely elastic which can flow forth into the finer atomic channels as a quickening power. This unparticled substance we may call ***spirit***. But while spirit thus becomes an active principle of force, quickening the world into life, I perceive also, that matter is an equally important realm of being which draws spirit into itself through the suctional power of its atoms. In other words ***matter cannot act without spirit, and spirit cannot act without matter***. To understand this great central duality of the universe will save us from many blunders. It will remind Old School physicians that they dwell too much among coarse material elements, while the noble Hahnemann made some serious mistakes, by attributing all power to spirit. (See Principles of L. and C. p. 107). We can influence bodily conditions by spiritual forces, sometimes in a triumphant way. We can also react on the mind through the bodily organs, as in the case of perverted hypochondriacal functions, or by the use of alcohol and other drugs, or by a lesion of the brain.

II. TWO GREAT DIVISIONS OF FORCE.

All force may be arranged under two divisions, namely that which causes expansion, as in the case of Heat (Thermism), and that which causes contraction, as in the case of Cold or Electricity.

1. **Heat.** When fine ethers sweep through spiral channels around the outside of a line of atoms they widen their course in proportion as they move swiftly and have the effect of heat, the ether being ***caloric*** or the ***element*** of heat, the spiral channels which give the law of motion being the ***principle*** of heat, and both together giving the effect which we call heat or thermism. The coarsest grades of heat in the sunlight are invisible; when the ethers and the atomic spirals are finer they become visible as red, orange, etc., There are grades of heat in the sunlight and especially in the finer spiritual forces of the human system, which are too refined to appear as color to the outward eye, or to be measured by our thermometers, but which sensitive persons can readily feel.

The following items belong to the THERMAL side of force :
Fire, steam, hot air, hot water.

The south pole of a magnet. The negative pole of a battery. Hydrogen and the alkaline metals. Arterial blood. The left side of the body. The head. The earth end of trees or branches. The small end of crystals. The red, orange, yellow and yellow-green colors. Laxatives and purgatives. Emetics. Sweets. Mustard, ginger, pepper etc. Carbon in the shape of fatty elements. Rubefacients and diaphoretics. The sensory nerve forces. The alkalies, such as potassa, ammonia, etc. The fingers of the left hand

2. **Cold or Electricity.** Ethers which sweep through the centre of a line of atoms in the form of a vortex, tend to contract the atoms and thus produce the effect of cold, or electricity, *i. e.*, the ethers as a *substance* and the axial motions as a *principle*, constitute *electricity* I speak of electricity in connection with cold, because it is really but the refined manifestation of cold, being contractive and exists in the greatest intensity at the earth's magnetic poles where cold is greatest. All grades of ether which flow through the vortical channels of atoms constitute different grades of electricity, the coarsest of which give us the sensation of cold, as in cold water, ice, snow, cold air, etc., which abound in electricity. The electricity of the battery is not felt by most persons as cold, though sensitives easily perceive it and the electricity of sunlight, being still finer than that of the machine or battery, is manifested to the eye in the form of the blue, indigo and violet colors We can see how it is, then, that these colors are astringent, refrigerant and soothing to hot nerves and blood, knowing as we do that they belong to a refined grade of cold, although the thermometer cannot measure this cold except in part. But there are much finer electricities in the sunlight than those which the ordinary eye can perceive as the blue and violet colors, and also finer electricities in the spiritual forces of man, which we term *psycho-electricity*, *psycho-magnetism*, etc., whose penetrating power, as possessed by some persons has wrought marvelous cures. (See principles, p. 105, 124, 127, 298, 422).

The following items belong to the **cold or electrical forces** :—

Ice, cold water, cold air. The north pole of a magnet. The positive pole of a battery. Acids, such as sulphuric, nitric, etc. Blue-green blue, indigo and violet colors. Venous blood. The right side of the body. The feet usually. The upper end of branches and trees. The large end of crystals. The motor nerve forces. Oxygen and acid fruits. Astringents, refrigerants, sedatives, antiseptics. Ferromagnetism. The fingers of the right hand.

There are sensitive persons whose brain may be cooled and quieted by holding near the temples or ears, the large end of a crystal, the north

pole of a magnet, the small end of a twig, or the point of the right hand, while the left hand, or the opposite ends of the same objects will fill the brain with excitement, and sometimes with feelings of fury. It is quite time that physicians understood these penetrating forces so that they may not be so unsuccessful in treating nervous diseases.

3. **Magnetism**, as Ampere has shown, is merely *electricity thrown into curves*. A magnet has countless millions of electrical streams drawn around and around into whirlwinds of force by the tremendous suctional power of the vortexes in the atoms of steel through which they pass, and has also a series of streams that are not thus deflected into curves, the strongest of which currents enter at the negative or south pole, and emerge at the positive or north pole, while other and weaker grades of electrical ether, pass through the magnet in just the opposite direction.* The greatest magnetic tension is at or near the poles, there being no force in the middle of a magnet strong enough to control iron filings. The horse-shoe magnet is more powerful than a bar magnet, because the suction of both poles can be used. If the positive poles of two magnets are placed together, their powerful streams of ether will strike against each other, and drive each other apart. The negative poles placed together will do the same. This is the philosophy of **Repulsion** and explains the well-known expression "*similars repel.*" If a positive and negative ends are placed together, the electrical currents of both will flow in the same direction and *intensify each other*, causing them to rush together with great force. This is the explanation of **Attraction**, and exemplifies the law expressed by the words "*Contrasts attract.*" A hundred mysteries are explained by this etherio-atomic law of force which thus far has not been understood.

All substances and especially all animal life, contain some grade of magnetism, or, at least, of **Diamagnetism**, in which latter the ethers pass through objects transversely, instead of longitudinally, and work more feebly.

The ordinary magnetism which works with iron and steel is *Ferro-magnetism*; another grade which is connected with animal life is called *Animal Magnetism*; a higher and finer grade of ethers, connected with the spiritual and intuitional activities, is called *Psycho-magnetism* or

* The reader may understand just why streams of electricity may go both ways simultaneously, by learning of the constitution of atoms which are generally arranged and combined conversely. Of course, the electricities cannot pass through the same polarized line of atoms in two directions, but the streams of thermal force *must* always sweep in the opposite direction from the electrical forces. (See Principles, p. 98, 115, 133, 140, etc).

Psychaura which is literally *soul force*, or the ether that is more nearly connected with the force which the soul may be said to use. The term *Vital Magnetism* may be used to include both animal and psycho-magnetism. Where in **Woman** the forces are often more influx or negative, in **Man** they are more efflux or positive. For this reason, according to the law already explained, it is conducive to the harmony and activity of the vital forces for the sexes to be frequently in the same atmosphere with each other in school-rooms, churches, societies, and social circles, and is also for the greater purity of both. All monastical and ascetic exclusion of the sexes is founded in ignorance, and leads in the end to lower conditions, as well as to greater misery. **Solar Magnetism** animates and develops much of the vegetable and animal life of the world, and like psycho-magnetism, has a wonderful potency in the cure of disease.

4. **Terrestrial Electricities.** We can never enjoy perfect health until we learn to live in harmony with the forces of the earth. Baron Reichenbach, in his numerous and remarkable experiments with reference to Odic force, ascertained that multitudes of sensitive persons were having their nervous systems wrecked, and even the power of medicines to a great extent destroyed, by sleeping with their heads to the south or the west. He found that by placing them with their heads to the north, they became relieved at once. Some were so very sensitive that they almost went into spasms when placed, only a few minutes, to the south or west. Very many cases in proof of this law have come under my own observation. The explanation of this matter, which the Baron did not seem to understand, is as follows: The magnetic poles which are culminating points of cold and tremendous vortexes of the electricities that are ever rushing inward toward the hot region of the earth's interior to bring about an equilibrium, draw the electricities from all directions northward toward themselves in the northern hemisphere, and southward toward their culminating points in the southern hemisphere. These northward electricities which drive the magnetic needle northward are cold forces, and we should lie with the head northward because it is the most charged with blood and heat and should catch the cooling principle. In the southern hemisphere the head should lie southward for the same reason. When cold forces move in one direction the warm forces move in the other, and it is especially bad to have these warm currents moving upward through the nerves and spine to the brain as they must do when the head is southward. A modification of these electricities is caused by the course of the sun which carries a warm tide of ethers westward, in consequence of which a cool tide must flow eastward through the day and most of the night. For this reason an eastern direction for the head is preferable to the western. A position a little

east of north may sometimes be taken to advantage, for thus the head would catch some of the eastern as well as the northern electricities. It should be understood, however that the direction in which the magnetic needle points should not be departed from too widely, for the fact that it varies considerably in different parts of the world signifies, of course, that the electrical currents vary accordingly in their direction, being considerably west of north, for instance, in London and Paris. Some robust persons, and especially laborers who do not use their brains much, can sleep in all directions with comfort, and yet many of these will after a while get their nervous systems unduly excitable by sleeping wrongly. It is no doubt true, that a few persons whose brains are dormant and lacking in blood or nerve force would be benefited by lying with the head to the south or west. The nerve forces are roused and excited the most by having the head to the west, the blood, by having it to the south. (See Principles of L. & C., p. 438).

5. **Frictional Electricity** and also heat combined may be aroused by making passes of the hand over the skin, by the use of flesh brushes, coarse towels, spatting with the hands, muscle beating with an elastic flat stick or whalebone, pinching and many other methods. The hand is quite superior to any artificial instruments as it conveys a magnetic life power to the patient besides arousing the frictional electricity. Mere frictional electricity is a coarse grade of power and flows along so near the surface of the body where the nerves are sensitive that it is rather exciting to very nervous persons, and yet it is of great value in arousing the skin to action and relieving internal organs which may be inflamed or overburdened. The hand of a developed magnetist is much more powerful than that of ordinary persons, but all persons have some power.

6. **Thermal and Electrical Substances**. I have said that certain colors are innately warm or thermal in their nature, and certain other colors are electrical. By this I mean to say that all substances in the world, whether the separated rays of sunlight, or solids, or liquids, or gases, that are innately red, orange or yellow, belong to the thermal range of forces, and all conceivable substances whose real color potency is blue, indigo or violet, belong to the electrical style of power. Nature is never at war with itself, and if ***redness*** means a burning principle in fire or in Cayenne pepper, it means the same thing in a red ray of light, and in everything elsewhere the red is innate, just as blue is a cooling principle wherever found in the whole universe. But the color potency of a substance cannot always be told by its usual external appearance, for certain substances may be transparent, like alcohol or many of the gases, others may be white or black seemingly. In such

cases they must be heated until they become luminous, and these luminous rays passed through the prism of a spectroscope, which will give the real color forces. Thus potassium, which is a white substance, has a coarse grade of red in its spectrum, that will account for its burning character in potassa. The spectrum of hydrogen, a transparent substance, has its strongest color in red, or more properly red-orange, and its burning character may be seen in such substances as alcohol, ammonia, etc., in which hydrogen is predominant. Again, oxygen, which is a transparent gas, has the strongest colors of its spectrum in blue and indigo, and is the most electrical of atoms, just as hydrogen is the most thermal. Acids get their cooling and astringent effect from their oxygen.

Our scientists, from not understanding the basic principles of chemical affinity, are sometimes prone to consider oxygen a thermal element, although they know its spectrum is most prominent in the cold colors, and sometimes consider electricity a warm power also, simply because by its aid the greatest heat can be developed, and yet they know electricity is contracting in its nature. They know that electricity and magnetism are very abundant near the poles, but are not aware that electricity and cold are identical simply because the electricity of the battery does not give the full sensation of cold to ordinary nerves, being a finer grade of force. All sensitive persons, however, can feel cold streams from the north pole of a magnet or the positive pole of a battery, and even a thermometer is made to fall by blue light. But the mysteries of this subject, such as the explanation of how cold can produce heat and heat cold, will be given under the next caption in connection with chemical affinity.

III. CHEMICAL AFFINITY

When there is an approach of atoms under excitement which are similar in size but contrasting in style, such as the more thermal on one side that are widened by heat forces and the more electrical on the other side which are drawn in narrower by the axial forces, the electrical atoms are swept with a tremendous force into the thermal atoms. This process is called **Chemical Affinity.***

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* For the details of chemical action and pictorial illustrations of the form and working of atoms, which the author has been able to develop in harmony with the facts of Science, see principles of Light and Color, third and fifth Chapters. It may simply be hinted here that the same spiral atomic channel which carries the red ethers on the outside of the atom, turns inward at the vortical or larger end of the atom, grows more delicate and passes through the axis in the opposite direction as the channel for the blue ether. For this reason the red and blue colors form a chemical affinity for each other, the vibrations of the red spiral being communicated to the blue channel and *vice versa*, and these vibrations form a great suctional power to draw on their respective ethers. In the same way the yellow and violet, also the orange and indigo work together.

1. **Examples:** The blue electrical atom of oxygen combines with the red thermal atom of hydrogen to form water; the yellowish green atom of chlorine becomes encased in the white atom of sodium to form salt; the dark atom of carbon flows into the white atom of sodium to form the white substance called sodium bi-carbonate. How do we know that the electrical atom is encased in the thermal? Because we know the broader naturally receives the narrower, but we know still more definitely that this is the case from the fact that the colors of the electrical atom are lost, while the color of the thermal atom alone appears as in the case of salt, in which the color forces of the chlorine seem to be covered up by the white sheath of the sodium atom, or in the case of the carbonate of soda, in which the blackness of the carbon is swallowed up by the white sodium. This solves a mystery on the most simple natural principles which has puzzled the chemists of all ages. It should be stated that the electrical character of chlorine becomes evident in the spectroscope in which the blue-green, blue and indigo are very strong, and carbon though thermal as a whole is much more electrical than such alkaline elements as potassium, sodium, etc. The electrical colors are by no means always concealed by the thermal, especially when they predominate in quantity.

2. **Opinions:** Our scientists while having bestowed great learning and skilful experimentation upon this subject still seem to be quite in the dark as to any basic principles.

"Chemical force like other force cannot be described," says Dr. Attfield, in his chemistry, and he goes on to speak of the great mystery of the loss of color which one substance often sustains when chemically combined with another. "Chemical affinity, like all great forces in nature," says T. P. Barkas, F. G. S, "is perfectly incomprehensible". "Notwithstanding our boasted advances in Science," says Prof, Robt. Hunt, "we have scarcely arrived at any satisfactory knowledge of the powers which regulate the internal conditions of matter. The molecular forces are almost entirely beyond our conception." Faraday says, "we know nothing of atoms." But we would suggest to these eminent minds that these matters instead of being so mysterious and beyond human comprehension, are quite simple in their leading principles when we adopt the true philosophy of force in harmony with all nature. Medicine and all other sciences will forever be on a sliding scale until we build on the true foundation of nature.

3. **Atoms not Chemically Combined** are such as unite but slightly, as in the oxygen and nitrogen which constitute our atmosphere, or two pigments in painting which are simply mixed and show both colors, etc

The same atoms which are so necessary to animal life when united but slightly in the atmosphere, become so intense as to be deadly poisons when combined chemically as in the *nitrogen oxides.*

4. **Grand Result of Chemical Affinity.** In this law of Chemical Affinity in which one extreme is thus seen to be forever appealing to the opposite extreme for a balancing principle and a congenial companionship, resides the great harmonizing system of the universe, without which all things would rush into one-sideness of action and be destroyed by heat or congealed by cold—all human beings would be dazzled or inflammed by the excess of redness, or chilled and made despondent by the excess of blueness. Numerous instances could be given in which persons who have been over excitable, even to insanity, with too much activity of the red principle in their heated blood, or the yellow principle in their nerves, have been cured in a few hours or days by the chemically compensating principle of blue and violet light as transmitted through blue glass or as reflected from blue and violet ceilings. On the other hand persons who have had an excess of the blue principle, such as blue veins, blue finger nails and a pale cast of countenance until a feeling of despondency and inactivity have come upon them with crushing weight, have been kindled into new life and health and cheer, by being in a room with red glass and red ceilings for a single day. The same law of chemical force as manifested by colors applies also to drugs as will be shown hereafter.

— (See Principles, p. 145, also p. 243 to 259).

5. **How Heat and Cold Develop Each Other** *through chemical affinity*, should now be explained, and comes, as I have said, from the fact that *contrasts attract each other*, so that electricity is able to attract heat and heat electricity. In cold, moist regions the hydrogen and other warm elements of the arterial blood are stimulated into action by the electricity and oxygen of the air and more rosiness of complexion results, especially to those who exercise in the open air. Carbon, another warm element, as it appears in fatty substances, may be easily digested and assimilated by the electricity of cold air, but would clog the system, especially the liver, in warm regions. Wheat, oats, maize etc., growing in cold regions, always receive more of the warming elements, especially carbon in the form of starch, as well as phosphorus, than they do while growing in warmer climates, for which reason they are able to hold their vitality in climates so cold as to destroy southern wheat. This is caused by the activity of the electical currents through the leaves and stalks of these cereals, which thus attract chemically the thermal elements from the atmosphere under the stimulus of sunlight.

Onions that grow naturally in warm a region like Spain would be less acrid and heating than those produced in England and the northern United States. Thus beautifully does nature adapt itself to our needs. Our scientists, not understanding the law of chemical affinity, would find it difficult to explain why an element with a predominant blue spectrum like oxygen should tend to develop redness when chemically combined, or why an alkaline element with a predominant red spectrum like potassium, should call forth a blue color. But when it is remembered that chemical affinity deals only with contrasts, acids and alkalies attracting each other, electrical colors attracting the thermal, and vice versa, the mystery is done away with. The red and blue have a direct affinity for each other, as also do the yellow and violet, and the orange and indigo, the reasons f6r which I have given in the Principles of Light and Color, Third and Fifth Chapters. Acids cause litmus paper to become red on account of their oxygen, while alkalies make the same paper bluish or purple on account of their red and yellow potencies. Cold thus develops heat and heat cold. But one thing should be remembered, which is that elctricity cannot develope thermism if there is no thermism to develop, as for instance oxygen cannot develop redness in another element which has no redness in itself, and the cold force of electricity develops a tremendous heat and light only by coming in contact with some thermal element like carbon or some similar substance. Apply this princple now to a human being. Take a persen who is rubicund and warm, full of the red arterial blood, and if you throw a dash of cold water upon him or let him drink cold water, he will become all the warmer as the blue element of coldness will start the red elements into activity. Such a one can profit by his cold water baths in the morning as he rises. Suppose now you take a person who his full of pale bluish conditions with the cold venous blood predominant over the arterial. He has not enough of the red principle to answer to the blue, and therefore he cannot stand cold water or even the electricity of the battery, and must have hot water or red light or some other style of thermism to keep up that beautiful chemical action that brings health and power. Is it not plain than that "what is one man's meat is another's poison?" and is it not empiricism to give the same style of medicine to persons of opposite temperaments?

But is it a universal rule which we can follow, that we may become more and more hot in proportion as we apply ice or cold water to our bodies, and more and more cold in proportion as we apply hot water? By no means. The principle announced above will solve this question.

Put the warmest person into ice water and keep him there and the heat will soon be drawn off so that there will be no thermism left for the cold to act upon. Chemical affinity ceases as soon as two forces become too much assimilated and the contrast destroyed. If we wish to create activity of a contrasting force we must not overwhelm and draw off the contrasting force so that there will be nothing to act upon. A brief plunge or swim in cool water, or a cool dash over the body may cause a fine glow of warmth as the chemical action takes place, but a longer stay would prevent chemical reaction. General Pleasonton, of Philadelphia, constructed a grapery in which every eighth row of panes was blue, while all the rest were transparent and let in the full light. This electrical blue light was sufficiently small in amount not to overbalance the other rays, and kindled the red portion of the contiguous sunlight into such activity, that the thermometer rose to 110° inside of the grapery, while on the outside it went down to 36° or nearly to the freezing point. If all of the panes had been blue, or even half of them, as experiment will show, the atmosphere would have been made cooler than if no blue at all had been there, as there would not have been a sufficient amount of red rays in the remaining white light to have satisfied the chemical affinity of so much blue. These facts go to show that we must keep the two contrasting sides of power more nearly equal, in order to have the greatest chemical and vital action, and they also show the empiricism of always using a hot force or a cold force for all persons alike.

The reader will now be prepared to understand that no atom or combination of atoms of the same kind can have very much power. Thus we know oxygen to be especially electrical, but it becomes greatly more electrical by the aid of a small amount of thermism, *e. g.*, by taking a small amount of the thermal substances hydrogen and sulphur in combination with a larger amount of oxygen we have the intense electricity of sulphuric acid, whose expression is as follows: $H_2 SO_4$. Again potassium, though a thermal element, becomes immensely more thermal, when half as great a bulk of oxygen is combined with it, as in *pottassa*, ($K_2 O$) which has great burning qualities. An equal balance of electricity and thermism, prevents either extreme of force from being predominant, thus, if we combine the red element hydrogen with the blue element oxygen ($H_2 O$) we have the substance called water, the most perfect chemical combination in nature, and the greatest solvent in nature. In this case, however, it seems to take two volumes or atoms of hydrogen to exactly balance the heavier one of oxygen. Ordinary water then is neither thermal nor electrical, although in cold water electricity predominates, and in hot water, thermism. But the reader may say that sulphuric acid, which is but another name of oil of vitriol, will burn also. No, sulphuric

acid does not burn, but is so violently electrical that it seizes the thermal elements of whatever it touches and makes *them* burn. The same is true of some other violent acids. These same acids, however, when diluted, are always cooling.

6. **Physiological, psychological and mental forces** *all act on the law of Chemical Affinity or Chemical Repulsion.* Medical men are generally unacquainted with this fact, and I must beg the reader to take my word in part for it here, as I have adduced a large number of data and principles in proof, in the ninth, and especially the tenth chapters of the " Principles of Light and Color. " There it is shown that *nervous force* consists of fine ethers that sweep to and from the brain or spinal cord, or ganglionic centres, in connection with other parts of the body— that these ethers flow through channels called *nerves* whose insulating sheath the neurilemma prevents them, to a considerable extent, from escaping— that for *muscular contraction* the electrical or contracting ethers are sent from the brain through the motor nerves to the muscles, while for *sensation* the sensory nerves conduct the ethers from any part of the body which may be affected to the brain— that the bluish-white masses of the brain and spinal column and ganglionic centres work chemically with the reddish-gray masses of the same, in a way to keep up the great activity of the life forces— that if from poor food, bad habits, or any other cause, the blood has been robbed of its cholesterin phosphorus or other active principles which kindle quickly under the play of the animal-magnetic and psycho-magnetic ethers, or, if the electricity of the air is not taken into the lungs in connection with the oxygen to purify and animate the blood, then the play of the life ethers becomes too sluggish, and all the internal or even the external organs, are apt to become clogged or perverted in their action— that in various parts of the brain are poles or centres of one kind of force which work chemically or in correlation with poles and centres of another kind in the body — that throughout the system there is an incessant play of ethers of different grades from the coarser frictional and animal electricities that kindle the blood, to the finer ethers that course through the nerves and the still finer mental and spiritual ethers that culminate in the front and upper brain, and act as the direct servant of spirit itself to quicken all the other ethers and bodily functions— that these ethers, while guided to a certain extent by the blood channels and nerve channels of the system, can yet, in part, sweep beyond them, carrying millions of radiating streams into the air in the form of what is called *insensible perspiration*, or passing their more refined elements to great distances, so that those who are sensitive may feel them as a personal aura— that the *will-power* may send out these fine ethereal streams into

all parts of one's own system in a way to animate and heal, or sometime into other people's systems as a psychological potency for controlling their actions or conditions— that the hands or other parts of a person may be conductors for transferring these life-giving ethers to the bodies of other persons, and in some cases working marvelous cures—that no *imagination*, no processes of *faith* or *mental action* can have a particle of influence on any portion of the human system, except as they work through mental or psychic ethers which must be propelled to such portion through internal or external influences, all force, as we have seen, having to be conveyed by means of some fluidic instrument (see Ch. I.), and lastly that these finer forces are the connecting link between spirit and matter, and the underlying principle of the outward universe.*

IV. CHEMICAL REPULSION.

All substances tend to repel and stimulate the action of contiguous substances, whose grade of force and whose colors are similar. This is called **Chemical Repulsion.**

1. **Illustration.** This is on the law signified by the words "similars repel," and may be illustrated by placing two positively electrified or two negatively electrified objects together. Here the efflux ethers rush against each other and drive each other apart, and such a dashing together of forces naturally causes a greater excitement of the atomic spring work of the objects themselves. Take a plant which has a certain amount of redness in it and place red glass over it in the sun. In a few days the amount of redness will be greatly increased, showing that the red stimulates and increases the red. Place a blue pane of glass over a green leaf and it will become more blue-green and the plant itself will be stimulated to a more rapid growth. Under the head of Chromopathy it will be shown how red elements stimulate the blood, how yellow elements stimulate the bile which is yellow, also the nerves which are mainly yellow, etc.

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* One thing which enables me to speak positively where many may consider me rash in doing so, is the fact that I have often seen these finer forces, or rather, the pathway through which they move as signified by a finer grade of lights and colors than those which appear to the outward eye. Multitudes of other persons besides myself are able to perceive these higher grade colors and forces, and the eminent Baron Reichenbach, of Austria, proved the existence of the odic ethers by thousands of experiments made in connection with over sixty persons whom he called sensitives. These radiations of finer lights and colors, revealing a more glorious interior universe, have led me into this philosophy of force which explains so many mysteries.

2. **Chemical Repulsion in Human Life** is exemplified in the case of two persons who are too similar in their mental and temperamental constitutions, as for instance, where both have reddish hair and florid complexions, which adds fire to fire and causes a repellant feeling, or if long-continued, inflammatory diseases; or where they are thin, pale and deficient in arterial blood, coldness intensifies coldness and tends toward chronic diseases as well as to aversion of feeling. In the former case thermal radiations predominate in both, while in the latter the electricities rule in both, and there is not enough of the contrasting element to produce chemical attraction. It should be remarked here in passing, that persons having very red hair and florid complexion are not always warm, as they may not have a sufficient amount of the contrasting forces to call their red elements into play. See Ch. III., para 5.

3. **Objects having the Same Grade and Style of Force** *are required to produce the most complete repulsion.* If a stream of water should dash against a stream of air, the repulsion would be but slight, and if yellow light should strike against a coarser grade of force which we call red light, the repulsion would not be very great, although both are thermal forces. If a piece of glass should be rubbed on woolen cloth a few times and two hairs should be held near it, both hairs would be drawn up to it and charged with similar electricities. If now the two hairs be held near together, they will be repelled from each other. If one of the hairs, however, should be charged with sealing-wax which had been rubbed in the same way, and the other with glass, and then held in proximity, they would rush together for a moment from being differently electrified, and then, when their forces had become equalized, or made similar would be driven apart again.* In the same way two human beings, who may naturally be sufficiently diversified in their temperaments to cause them to dwell harmoniously together for some time, may by constant intimacy and sleeping together, have their forces so equalized as to lose some of their good effect upon each other, or for a time to become even mutually repulsive and injurious. If married people could understand this law, and much of the time sleep six or more feet apart, so as to escape their immediate spheres of radiation, they would retain their happiness and health much better.†

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* Scientists are very much mixed on this subject of electricity, some believing with Franklin that there are two states of a single electrical fluid, called *positive* and *negative*; others with DuFay, that there are two kinds of electricity, namely, the *vitreous*, developed in glass, and the *resinous*, developed in the resinous substances. My investigations into atomic and ethereal forces, have shown me that there are many grades of electricity, all working on the same principle (p. 4 & 5), but that in glass the currents are doubtless more positive and external than those in resin, which are more interior and negative.

V. THE LAW OF HARMONY

Requires the nice blending of contrasting elements. Nature's most common method of manifesting this law occurs in the processes of Chemical Affinity (*See p. 9 & 10*), *which, as we have already seen, combine warm with cold substances, thermal with electrical colors, alkalies with acids, etc.*

1. **The Golden Medium** is not the pathway between extremes, but rather the union of extremes, or, still better, of contrasts.

2. **Health** is that harmony which comes from a well-balanced combination of heat and cold in the life forces, and results from the activity of both spiritual and physical conditions, and *this, to a great extent, is brought about by the free play of the chemical affinities* (See p. 9 to 14) To promote health, then, it is evident that we should keep up a balance of thermal and electrical substances in the human system, and have them kindled into the greatest activity by the refined forces of nature.

3. **Disease** *results from one-sidedness or lack of balance in the vital forces,* and is really nature's beneficent struggle to gain an equilibrium through chemical affinity, or to eject impurities through chemical repulsion. When this onesidedness or discord comes from too much heat, as manifested in fevers, inflammations, acute diseases and over redness, the balancing principle would usually be some grade of cold, as the electricity of cold water, cold air, blue or violet light, cooling foods, etc., if from too much cold, as manifested in the form of chills, paralysis, paleness or blueness, congestions, chronic diseases, etc., some grade of heat, as in hot water, hot vapor, hot air, red or yellow light, warming foods, vital magnetism from a warm hand, etc., would constitute the law of harmony or affinitive action.

The electricity of catskin, however, is so strong as to overcome that of glass, and render it seemingly negative. For explanation of these mystical terms, *positive* and *negative* also the opposite direction of electricities, see Principles of Light and color, p. 142, etc.

† I know that there is many a happy, caressing couple, who would feel like scoffing at this suggestion, and would declare that their health had improved by constantly occupying the same bed. I freely admit that some persons may be so harmoniously mated chemically and socially, that they may blend thus intimately for months, perhaps for years, but in the majority of cases the forces of the two will become too much assimilated, or the one will draw away an undue share of magnetism from the other, or the interchange of vital warmth will cause a too frequent desire for connubial privileges, which will tend to exhaustion of nervous forces. I write thus that people may go with their eyes open, and not feel that when interest and zest in each other may fail, it will be necessary to tear themselves apart permanently, but rather to live in harmony with the law.

4. **Theories of Disease.** One class of extremists declares that health and disease are altogether matters of the physical system, and can be reached only by material elements; extremists of an opposite school say that they exist only in the spiritual system, and that no medicines or external remedies have ever yet availed anything. Such theories come from ignorance of the laws of force, which, as we have seen, always include some spiritual or finer principle on one side, and a coarser power on the other. Either one of these being removed, all force ceases. Disease may start from the material side of things, and react upon the spiritual, as in the case of a cut, the taking of a poison, contusion of the brain, etc., or it may commence in the spiritual and affect the physical, as *e. g.*, grief for the loss of a friend, disappointed hopes, excessive religious excitement etc. What we need are psycho-physicians, or those who know how to supply the refined elements, or in some conditions, the coarser grade of forces, as may be required to affinitize harmoniously with a diseased system in a way to bring health.

5. **Pain** is the signal which nature kindly gives to show that danger is present, and the spur to urge us on in our efforts to escape this danger as soon as possible. When the danger is very great, as in the contact with fire for instance, the suffering is usually very great, also, although in some poisonous narcotics the suffering is often more prolonged and less violent, or the nerves partially stupefied.

6. **Germs, Parasites, Etc., as Generators of Disease.** I have arrived at the following conclusions as the result of the discoveries of histologists, and of my own researches into the principles of force: 1st, that all healthy systems abound more or less in minute vegetable and animal organisms called parasites; 2d, that these parasites, when moderately distributed, are animating and useful, just as the bacteria of the atmosphere, according to Prof. Tyndall, add brilliancy to the sunlight; 3d, that when undue heat is developed in any part of the system, they become excessive in number and lead to greater fermentation and inflammation, and then dying in large quantities, cause putrefaction; 4th, that when the system becomes too devitalized and cold, they are deficient in number, and this adds, still more to the coldness; 5th, that when food composed of fruits, cereals and vegetables is used, there is the more tendency to develop the safer grade of parasites, while grosser foods develop grosser organisms; which may account for the fact that eruptive and putrefactive diseases are less prevalent with those who live more on a vegetable diet, than with the Americans and English, who eat so much meat,* it being well known that animal matter has a more

* It is said that although the Chinese in San Francisco, who live mainly on vegtable food, have entirely escaped the more putrid grade of fevers, it is probable that they

offensive putrefaction than vegetable; 6th, that some of these parasites are more virulent (pathogenic) than others, and being passed off on the breath, or otherwise, of certain diseased persons, are readily drawn into the lungs and absorbed into the blood of persons whose systems are somewhat impure, and thus become the seed, in a fertile soil, of the same disease, such as small-pox, yellow fever, etc.; 7th, that other malicious germs, as well as poisonous gases, are exhaled from sewers, cess-pools, filthy streets and putrid water, and received from the air by people who live or pass too near them; and, 8th, that persons who keep their electrical and other life forces in fine, brisk action, will thus prevent the excessive development of parasitical life, and repel, by their positive forces, the most, if not all, of the malarious influences that are conveyed by the atmosphere. To lessen or destroy parasites, electricities of all grades can be used, including blue or violet rays of light, or objects charged therewith, keen acids, oxygen or ozone, or intense cold, or even a pungent alkaline exhalation, like that of spirits of ammonia. Intense heat would also destroy them, but this would tend to destroy human life also. Does the reader say that these facts concerning parasites destroy my theory of harmonious chemical action as being the true law of health?* Not at all, for we must have the play of the chemical affinities aside from the influence of parasites, and, more than that, this chemical harmony will, in the main, regulate the production of parasites themselves in a way to make them a blessing rather than an evil. At death, when there is no longer a spirit to keep the higher chemical forces in play, we may see how soon the body becomes alive with the grosser parasites in a way to produce corruption and decay.

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would not be very liable to take yellow fever, or other atonic fevers in which putrid conditions are prominent and especially eruptive fevers of any kind. An artist in New York informed me that he had reared his children without meat, and that they had all escaped having the whooping cough, croup, measles, scarlet fever, and other children's diseases. Dr. Livingstone says, in his "Seventeen Years Explorations and Adventures in the Wilds of Africa," that the Darmas, who live near the Zambezi river, in a very miasmatic country, live upon a milk and vegetable diet, have some yellow fever, but "no small-pox, measles, or any other eruptive disease; no hydrophobia, rheumatism, gout or dysentery, and no cases of mania or lunacy. They believe in spirits; their supreme Deity is Umerura, and each tribe has its tutelar divinity and guardian angel. Another great leading cause of their immunity from disease is the fact that they go nearly naked, and thus receive the quickening influences of the sunlight and air on their bodies.

* A few palliative processes in the treatment of disease are adopted without direct chemical action, for instance, the application of cold water in cases of fever or inflammation, but the great organic changes of the system are affected by chemical affinity, as in the processes of digestion, assimilation, absorption, nutrition, oxygenation of the blood, and even of nervous, mental and psychological action, as has been seen (Ch. III, para 6). Medical men have enumerated fifty-five diseases as resulting directly from parasites, but no doubt nearly all diseases are affected unfavorably by them when in excess.

8. **Poisons** are substances which cause discord or death in animal life by being one-sided, or ill-balanced in their style of force, having an excess of thermism on the one hand, or of electricity on the other. Thus, *Alcohol* has two parts of carbon, a yellow element, six parts of hydrogen, a red element, and only one part of the blue, electrical element of oxygen, making the chemical formula C_2H_6O; hence it is on the fiery order, and constitutes a thermal poison. *Chloroform* has the electrical element of chlorine predominant, in which the blue-green, blue and indigo are powerful in its spectrum. Its formula is $CHCl_3$ and shows enough of the yellow and red principle of carbon and hydrogen to rouse the nerves and blood powerfully, and enough of the contractive power of the chlorine to paralyze the heart and cause death when excessive. *Prussic acid* (CNH) combines equal parts of carbon, nitrogen and hydrogen, all of which are intensely active and thermal, although the first two have a fair amount of electricity also, which serves to intensify the thermism, and accounts for its terrifically poisonous character, a fraction of a drop serving to destroy life. *Nicotine* ($C_{10}H_{14}N_2$), an active principle of tobacco, is on the thermal extreme, and is so intense as a poison that small birds approaching a tube containing its concentrated solution have fallen dead.

While the general law of moderate acids is cooling and astringent, and that of moderate alkalies warming and reactive, yet extreme acids and alkalies have a furious and poisonous force which proves reactive and different from its diluted elements. *Ammonia* (hartshorn) is intensely alkaline and thermal, having three volumes of hydrogen to one of nitrogen (NH_3). *Potash* (KHO) consists of equal parts of potassium, with its coarse grade of red, hydrogen with its refined red and oxygen, and so is a fiery and poisonous alkali. The decided acids, of course, are extreme on the electric side, *sulphuric acid*, or *oil of vitriol* (H_2SO_4) presenting a great amount of blue and violet in its four volumes of oxygen; nitric acid (HNO_3) abounding in the electricity of oxygen and nitrogen etc.

It will be seen by the above-named poisons that where electrical substances predominate, a certain amount of the thermal are also on hand to intensify them, and *vice versa*.

9. **Antidotes.** Sickness, caused by acid poisons, such as acetic, sulphuric, hydrochloric, oxalic, nitric, etc., can be antidoted chemically by the alkalies, the simpler forms of which are soda, magnesia, chalk, slaked lime, broken pieces of wall, etc. When poisoned by potash, saleratus, soda, salts of tartar, and other alkalies, acids are the antidote such as vinegar, sour lemonade, etc. Corrosive sublimate, arsenic, verdigris, blue vitriol, etc., may be counteracted by white of eggs, or flour mixed with milk. Severe cases of poison should be treated with the stomach pump, or by vomiting.

10. **Unbalanced Conditions**, which lead to disease, occur when, one part of the system becomes too excitable in a way to draw off the warmth in other parts and leave them cold. The overheated parts tend to inflammation, the cold parts to inactivity and chronic disease. The parts liable to become overheated are the brain, stomach and epigastrium, the uterine organs, the general sexual system, the small of the back, etc., while the parts more apt to become too cold, are the hips, all of the extremities, especially the toes and heels, the liver, the lungs, the knees, and often the cervix, although women, more frequently than men, have too great general heat of the spine, which if allowed to run will produce spinal meningitis or other irritable and dangerous conditions. To bring about an equilibrium, it is not at all necessary to adopt the harsh and injurious methods of our allopathic friends, who cure one disease by bringing about another, on the system of *counter irritation*, using moxas, fierce blisters, setons, leeches, etc. Under the caption of *Magnetic Massage*, I will show how to equalize forces by making passes with wet fingers from hot to cold regions; under the head of *Chromopathy*, how to balance the heat by blue or violet light externally, or blue-charged substances taken internally, and the cold by red and yellow light and red and yellow-charged substances; under *Hydropathy*, I will show how to effect an equilibrium by the use of hot and cold water; under *Galvanic Electricity*, how to scatter the heat by placing the positive pole at the hot and the negative pole at the cold parts, etc.

VI. THE LAW OF POWER.

Other things being equal, refined forces are more powerful than those which are coarse or crude. Their points of superiority are such as the following: 1st, they are more swift and penetrating; 2d, in the processes of cure they reach the nervous and spiritual energies, and thus prove up-building to the mind as well as the body, embracing as they do those basic principles of power which underlie all the others; 3d, acting thus fundamentally, they are more enduring in their effect; 4th, they are more safe; 5th, they are more pleasant, and, easily acquired, the best things, as Ruskin admits, being most common in nature.

1. *The* **Swiftness and Penetrating Power** *of the fine forces* may be seen by the following: *steam* is more potent than the same element in the form of water or ice; *electricity* is still more swift and powerful; *sunlight* starts the whole vegetable world into life; *gravitation* sways all worlds, and *spirit*, the most refined portion of the universe, is an underlying principle of all power. *Minerals* and other solids are the weakest of all elements. (See *Principles*, pp. 54, 107).

2. **Nervous and Spiritual Energies** *are best regulated by refined elements*, and thus the higher mental and moral forces on the one hand and the nervous and vascular forces on the other are kindled into activity, are quieted when over-active. Hence the great curative power of such elements, their success on impaired minds, etc. The following are examples:

Psycho-Magnetism. The Rev. W. C. Van Meter, the famous city missionary of New York, being almost helplessly paralyzed in his legs, so that he could walk only with difficulty on crutches, was cured immediately by Dr. J. R. Newton, who laid his hands over the lower spine. Some of the most eminent European and American physicians had entirely failed to benefit him on the drug system. The doctor made many equally wonderful cures on the same plan.

Dr. Grosvenor Swan treated a lady in Chicago who was so wildly insane that four men were required to hold her. In one treatment by laying on hands, she became quiet, in two treatments was cured.

Multitudes of such cases could be mentioned.

Chromopathy. A Virginia lady wracked with neuralgic headache, whose eyes had to be screened in shaded rooms, and sleepless through long days and nights almost to the point of insanity, was put to sleep in five to ten seconds by a blue chromo lens focused on her forehead. After waking she described the sensation of her "heavenly relief as that of a cool stream heat entered her burning head and passed through sweeping away all the pain." Dr. Ponza, Director of an Italian Lunatic Asylum, cured a morbidly taciturn patient in three hours by placing him in a red room, with red glass in the windows, and quieted fierce madmen by placing them under blue or voilet influence.

Psycho - Hygienic Treatment. Dr. Jas. C. Jackson, of Dansville, New York, who has cured so many thousands of patients by means of careful diet, sunlight, water and magnetic manipulation, says: "The Psycho - Hygienic treatment is beyond all question superior to the drug medicating treatment." "Whoever lives habitually in shadow grows weak; whoever lives habitually in sunlight grows strong," and declares that the sun's rays are more competent by five hundred per cent to rouse the intellectual faculties for any given occasion than the best alcoholic liquors. As a proof of the curative efficacy of these methods he states that he has had over 7,000 persons afflicted with seminal emissions without failing in more than ten cases; has been equally successful with female diseases, etc. But the success of a great number of other institutions that are gradually adopting these refined natural methods of cure could be mentioned if space were not lacking.

3. *The* **Enduring Character of Cures** *made by refined elements is far greater than that of those performed by coarse elements*, from the fact that they influence those nervous and spiritual forces which underlie or control all other kinds of power, while coarser elements appeal more frequently to the blood and muscles, or only secondarily to the nerves. Facts in proof are as follows :

Vital Magnetism. If cold hands are warmed by the heat of ordinary fire, they will soon become cold again; but if warmed by the finer vital heat, as in rubbing or placing the hands together, or by the pressure of the magnetic hand of another, they will remain warm far longer. A Lady in New York informed me that she had always been subject to cold feet until the magnetic Dr. Bryan, vitalized them by placing his hands upon them, since which time, although years had elapsed, they had always been warm.

Chromopathy. If the bowels are costive, the action of most cathartic drugs will be to arouse them in a rude and exhaustive way, after which they will soon become as dormant as ever, but if a substance should be taken which has been charged with the refined principle of yellow-orange light, the bowels will be moved in the most gentle way, and in some cases will remain free for weeks or months afterward.

4. *The* **Safety** *of the fine forces is far greater than that of crude elements*, as rarely ever is any damage caused by their use. On the other hand, the medical books enumerate 51 diseases as being caused by mercury, which, in the words of Dr. McClintock, "has made more cripples than all wars combined." Over seventy diseases are said to be caused by alcohol. "Digitalis has hurried thousands to the grave," says. Dr. Hosack. "Blisters nearly always produce death when applied to children," says Prof. C. R. Gilman. Seeing the ignorance of medical men and the danger of medical remedies Prof, Ramage, M. D., F. R. S., says: "I fearlessly assert that in most cases, the patient would be safer without a physician than with one." Dr. John Mason Good says : "The science of medicine is a barbarous jargon, and the effects of our medicines on the human system are in the highest degree uncertain, except that they have already destroyed more lives than war, famine and pestilence combined.' But the terrors of these old fierce remedies, are positively revolting

What pen or tongue can ever portray the agonies, the sickness and death occasioned by a false system of medication ? How many beautiful forms are needlessly laid low before they have fairly entered upon the duties of life. Let us glory, then, in our diviner and more potent remedies — our sweeter influences which float down upon us from the sky, from the water, from the fruits, and from the loveliest objects of the earth around us.

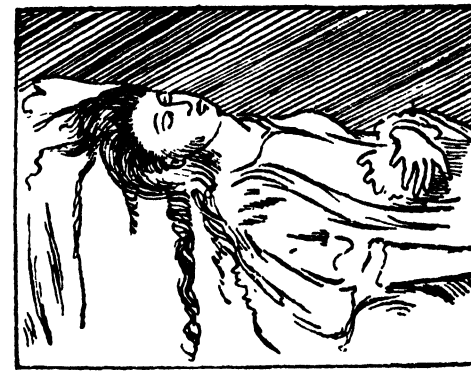

Fig. 1

5. *Refined forces are more* **Pleasant** *in their application than coarse or rude ones.* Notice such remedies as the application of red hot or white hot iron to the quivering flesh of the sufferer, the blisters, the setons, the rude efforts to create action. A far more useful and effective action can be aroused by a magnetic hand, which gives a delightful sensation as it glides over the skin and awakens a rosy glow and life. Sunlight can rubricate, and even vesicate the skin, without causing much pain, or without leaving any permanent scars, like those formed by sinapisms, moxas, lancings, etc. Many a tumor, which under the old system is cut out without even reaching the cause, is destroyed by concentrating the light upon it through a convex lens, or by scattering it by means of magnetism, and then passing it off through natural channels. The coarse method is to transfuse blood from one person to another ; the refined and pleasant method is to transfuse vital magnetism from one to another, and in this way to build up the blood on natural principles. The coarse way is to give drastic purgatives, violent emetics, hypodermic injections, leechings, etc. ; the refined way is to give delicious fruits, small doses, food medicines, baths, manipulations and soothing color forces. The two principles may be illustrated as follows : a blow from a spade, would make a painful bruise ; the fine edge of a razor would cut equally deep with far less pain; the more refined element of electricity would go into the flesh with but slight sensation, while the still more refined element of psycho-magnetism will go all through a system in many cases without the consciousness of the patient or with a pleasant and soothing sensation.

6. *Fine Elements are more* **Abundant** *and* **Less Expensive** *than those ruder drugs which many of the heroic school doctors think so essential,* as we have them from the sky, in the form of light, a free gift from heaven, from air and water with their electricities, and from the

touch of very many human beings. In other words, the divinest things are furnished by nature in great abundance for human good, but the mass of mankind are still prone to reach after and struggle for that which is difficult to acquire and hurtful when obtained.

VII.—RELATIONS OF PSYCHOLOGICAL FORCES.

Like everything in organized nature, force works on the law of progression, a coarse force being animated by a finer one, and this again by a still finer one, and so on until a power so refined is reached as to take the direct impress of spirit.

1. **Illustrations.** The general divisions of nature on an ascending scale are Solids, Liquids, Gases, Ethers, and Spirit. But a coarse force cannot act on a very fine one, any more than a coal seive could sift flour. The intermediate steps must be passed through. Thus, in the human system such solids as bones are moved by semi-solids called muscles; muscles are animated by such a liquid as blood; blood and muscles are kindled into action by the vital electricities and nerve ethers, and these again by the still finer spiritual potencies. In the exercise of the mind on the physical system, the will power starts the spiritual forces into action, these kindle the nerves and vascular electricities, which, in their turn, animate and move the blood and muscular tissues until a new life takes place.

2. **Mental Forces.** Drs. Brown-Sequard,* John Hughes Bennett, and a hundred other medical dignitaries, will tell us there is no such thing as a fine, ethereal fluid called animal magnetism, because *imagination* and the *will power* can produce remarkable results, such as vomiting or sickness, or rush of blood to the face, etc. Our medical men are mere tyros in the laws of force, or they would know that the mental activities can produce such effects simply because there is a subtile magnetism which is fine enough to receive the impulsion of spiritual forces and be sent thereby to any part of the system.

3. **A resolute Will Power** can often electrify the whole system, kindling the nerve ethers and the blood, and thus awakening a new life power which is able to eject impurities and prevent the stagnation that causes so much disease. Merry laughs and impulses of joy start a harmonious play of the vital forces, hence the importance of recreation and congenial employment. A magnetist informed me that for weeks he manipulated his lame knee without results, but concluded to fasten his will upon the knee while treating it, when an immediate and decided improvement took place.

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* Dr. Brown-Sequard, I learn, took a more correct position some time before his decease.

4. **This Progressive Law of Force** demands that we avoid abrupt or violent changes or transitions from one condition to another, except in cases of great emergency. Thus, in giving up wretched habits, like that of indulgence in opium, tobacco or ardent spirits, some other stimulus should be substituted for a while in their place, such as vital magnetism, or sunbaths, or something animating to take internally, at the same time, processes should be adopted for cooling the epigastrium and soothing inflammable conditions. For treatment of these and other diseased conditions, see other parts of this work.

5. **Psychology** is the science of soul forces and their action in controlling other people as well as one's self. Persons who are strongly charged magnetically, and who possess a strong will power, can in some cases send out those currents of magnetism that will control the very motions of sensitive people many miles away, or enter their brains, and even control their thoughts, for the time being. A noble-souled man or woman, possessing this power, can do great good in breaking up bad habits and bad mental conditions in other people. A gentleman in New York has cured many people of the love of intoxicating drinks by simply being with them, without even mentioning the subject, and this no doubt from his own strong aversion to drinking habits. Those that are posted in these finer laws know very well how men of bad propensities who are thrown together in a jail, or deranged people, who dwell in each other's atmosphere in a lunatic asylum, or boys of a somewhat wild tendency at a school or college, all tend to intensify each other's bad traits, and cause them to do or say things which they would abhor at other times. A magnetic and genial person will throw a cheering and healing influence on all around him, especially on those whose temperament may have some contrast with his own. A Boston merchant holds fifty men under his magnetic control, and they never cross his wishes. A New York merchant often silently wills one of his clerks to come to him or go elsewhere, and he obeys. Persuasive arguments in connection with the will power ofcourse increase the psychological control. To develop the finest psychological power, it is necessary to be more or less with magnetic people, to take an abundance of sunlight and oxygen and wholesome food, and to cultivate a genial and loving spirit combined with a decided self-control. (See *Principles*, p. 464.)

6. The **Dangers of Psychology** occur when people are persuaded to do a thing contrary to reason; when persons of the opposite sex throw a spell over each other, and drawn on to the marriage altar although there is not a proper adoption of elements; when parents, who are trained in some religious or medical or political rut, rear their

children in the same narrow and perverted channels; when some pleasing man of strong passional nature throws a seductive aura around a woman who is more negative, etc To avoid such dangers, one should aim to build up as strong and healthy a system as possible, and in case of an undue influence being felt, should be positive, and even indignant if necessary, or should leave the room. However, it should be remembered that one may throw a strong influence over another without the least desire to do so, or without any wrong intention. (See *principles*, p. 482.)

7. **Self-Psychology** is one of the grandest of agencies for subduing disease and developing self-control. When we have gained self-control, we shall soon be able to control others and be powerful for good. But this subject will be explained more fully under the head of Statuvolism or Self-Psychology.

VIII. DISEASES THAT COME FROM EXCESS OF THERMISM

These are Neuralgia and other acute nervous conditions, Inflammations Cancerous Tumors, Fevers, etc. One class of thermal diseases manifests too much redness, another class has too much of the yellow principle.

1. **Neuralgia and acute Nervous Conditions.** Neuralgia results from that depolarization of the substance of the nerves or that loss of vital force, which interferes with the strong and even flow of the nervous fluids, causing thereby blockades and electrical tensions which are ever bursting over in irregular and darting streams that give the most severe pain. Other acute nervous conditions result somewhat from the same law, also from a deficiency of the nerve fluids. Dr. George H. Taylor of New York in his work on Massage says: "Pain is excess of energy of nerve centres." On the contrary, it is more apt to be a lack of energy. If a person possesses a full tide of life the nerve fluids will be so strong that they will sweep away all obstructions and polarize the nerve substance into continuous lines. This depletion and perversion of nerve force results from the following causes, a lack of good, nourishing foods, or the exercise that will help digest them, or a deficiency of pure out-door air and sunlight, or from inactive, sedentary habits, or from giving off the forces to those around Many jarring conditions are also brought about by those who are too widely diverse in their tastes or too nearly alike in their temperaments; also by the irregular vital action caused by disease; by the pressure of the blood-vessels upon the nerves in cases of inflammation; by not sleeping in harmony with the direction of the earth's electricities; by mental grief

and disappointments and over-pressure of cares and burdens; by inflammatory conditions of the phrenal and spinal and nervous channels themselves, etc., etc.

2. **Remedies for Nervousness**, which have permanency of effect, must include a change of conditions, as signified above, as far as practicable, the partaking of larger amounts of oxygen and sunlight, the meeting of congenial friends, keeping the sexual system under control, sleeping with the head to the north, sitting in blue or violet light receiving the magnetism of persons of calm and cheerful habits, having a magnetic hand passed a number of times from the head down the spine and arms, even to the feet when convenient, or holding the right hand on the back of the neck and the left on the lower spine, and especially receiving blue and violet light as they come through blue glass, or drinking water charged by the same colors. (See *Chromopathy*). Of course a general good condition of the system is necessary, and if there are any local diseases, especially in the midst of important nerve centres, such as irritation of the epigastrium and stomach, uterine excitement or misplacement, or spinal trouble, they must be corrected before nervous harmony will prevail. Neuralgic and general nervous conditions will need warm rather than cold water, although a finer grade of cool principles, such as blue and violet light, are generally highly effective; and such an affection as neuralgia of the face may be greatly mitigated by repeatedly dipping two fingers in cold water and placing them in front of the ear, which is nearly over the starting point of the tri-facial nerve. For fuller details concerning the treatment of Nervous and Mental Diseases, see Parts Third and Fourth.

3. **Inflammations**. An excess of arterial blood, especially in connection with gross, unassimilated elements develops diseases which throw out red eruptions, rash. virulent boils, and most acute inflammations. Diseases which develop yellow eruptions, as well as conditions, in which yellowish pus is prominent, often result from a dormant condition of the liver, as well as from those foreign particles of matter which obstruct the nutritive processes.

4. **To Cure Inflammations Caused by Excess of Arterial Blood,** blue or cold elements are required, the blue, as we have already seen, being the chemically harmonizing principle of the red, hence the light which is strained through blue glass, or by means of a blue chromo lens focused upon the part inflamed, or a cloth rung out of blue charged water,* and

* **By *blue-charged* or *blue water* is meant water that has been medicated by being exposed to sunlight in a blue bottle or in a hollow blue lens for some time; by *yellow charged water*, that which has been exposed in a yellow lens, etc. (SEE CHROMOPATHY).**

bound as a compress over the part affected, or blue charged water taken internally, if the inflammation affects the throat, stomach or bowels, will all have an admirable and sometimes a marvellous effect. In the absence of blue-charged water, a compress of ordinary cold water will be useful, though less effective and enduring than the blue water (see VI., 2, 3). While it is the regular law to check excessive thermism by cold and electricity, yet the principle of *adaptation* should ever be remembered, and if a person is already pale, feeble and cold over the general system, a hot fomentation can be placed, with advantage, over the inflamed part, to scatter the heat, on the law which declares that "similars repel." Extremely cold and wet applications should not be used on parts that are very sensitive, such as the eyes, the uterine organs, or the heart and lungs while excitable, for the blood and contractive force must not be driven in upon an excitable heart too suddenly by any kind of coarse electricity, whether it be that of cold water, a galvanic battery, or an administration of chloroform. The blue and violet rays of sunlight are, however, sufficiently refined, I believe, to use in the most irritable conditions of the eyes, ears or heart, and work like a charm in controlling excessive menstruation, or hemorrhage of any kind. Acid fruits and other cooling foods generally should be used, while meats, eggs, oysters, peppers and other exciting elements should be avoided. For the treatment of such eruptive diseases as small-pox, measles, scarlet fever, erysipelas, etc., it should be remembered that there is a virus connected with them, and that if cold water, or even cold air is applied externally, there is danger of driving it inward to the vital organs, and thus bringing about the fatal termination which is so common under the ordinary practice of the day. In case of sunstroke, apoplexy, fainting, rush of blood to the head, it is a fearful mistake to put ice or cold water to the back head and cervix. These should be put freely to the face, forehead and temples, to *repel* the blood from the cerebrum, but water as hot as can be borne should be *poured* over the occiput and cervix, to *draw* the blood from the front. For fuller treatment of these diseases, see elsewhere.

5. **To Cure Yellow Conditions** that come from a dormant liver in which the bile is not properly secreted, but is scattered all through the blood, yellow light should be thrown over all those parts and ambero drank. (See p. 65.) The avoidance in foods of carbon in the shape of fatty substances, and other heating elements is desirable. In case of that yellowness of the skin that comes from a bilious condition, a hand bath over the whole body, of acetic acid diluted from six to ten times, or of lemon juice diluted somewhat, would be very valuable to offset the bile, which is rather alkaline in its character. To prevent the tendency to

ulcers and the formation of pus, it is evident that the liver and spleen should be made active, so that the proper blood corpuscles can be formed, and that an abundance of oxygen and sunlight be indulged in.

6. **Fevers** result from the over action of the muscles of the heart which, contracting too frequently, send the arterial blood in all directions, and thus give a burning feeling to the whole system. Thus far the true philosophy of fevers and the pulsations of the heart seem never to have been given. Farther along the periodicity of the heart's pulsations will be explained. It will be shown there that when the blood is made impure by a surplus of carbonic acid, it becomes too blue and electrical, and being electrial, it must necessarily be contractive in its nature, so that when it reaches the right auricle of the heart, the contractive forces burst over and make the pulsations too violent and frequent. This overaction of the blood, as it rushes through all parts of the body, causes the extra heat, which we term fever, and the over-working of the muscles of the heart naturally tires it out and weakens the whole system. At that place also it will be shown how the blood comes to be charged with so much carbonic acid by means of an inactive liver, which cannot make sufficient glucose to secrete the carbon, hence it goes forward to the heart in the form of carbonic acid. Thus we see that the liver is a great objective point, a power behind the throne in all vascular action, although our medical friends seem to have misunderstood the chemistry of these forces. From this it appears, that fevers, though thermal in themselves, come really from excess of electricity.

7. **The Law of Periodicity in** *Intermittent* Fevers, and the cause of the alternation of chills and fever will be explained in Part Fifth of this work. There it will be shown that the spleen, acting as the electrical end or north pole of a bar magnet, and the liver as the thermal or south pole of the same, set into action those oscillations of the warm and cold forces between the cerebro-spinal and the sympathetic nerve systems which give the sensation of chills at the surface while there is great heat in the interior system, and *vice versa.*

IX. DISEASES THAT COME FROM EXCESS OF ELECTRICAL ELEMENTS

These are seen in the nervous system in paralytic conditions; also in the vascular and lymphatic system, in which cold and congested elements tend to block the wheels of the life and bring about nervous diseases

1. **Excess of Nervous Electricities** prevails when the nervous forces do not have a sufficient stimulus of thermism to keep them full of life, and so the channels of the motor nerves become clogged in a way

to produce *paralysis*. Some times this clogging process is caused by pressure of swollen blood vessels upon the nerves, clots of blood in the brain, etc.

2. **Excess of Vascular and other Electricities** is seen in too inactive a state of the venous blood, which gives a pale or bluish cast to the complexion, causes that sluggish movement to the capillaries and elsewhere, which leads to congestions, hard and chronic conditions and chills; dormant liver, and, consequently, excitable pulsations and fever; uræmic kidneys, and, consequently, dropsical affections; inactive spleen, and, consequently, all the greater tendency to malarial fevers; dormant stomach, duodenum and mucous membranes, and, consequently, imperfect nutrition; clogging of the capillaries, and, consequently, rheumatic affections; inactivity of the secretions of the liver which cause a scant amount of bile, and, consequently, hardened faeces and constipated bowels; a sluggish condition of the kidneys which fails to strain off the uric acid properly, and hence, leads to the formation of calculi; too much of the white blood corpuscles as compared with the red, consequently, anaemic, and scrofulous conditions and excessive deposits of lymph; too inert a state of the pulmonary organs, which induces a clogging of the vesicles with impure blood, thus forming an inviting soil for those parasitic germs, called bacilli, that have lately been shown to be so disastrous in affections of the lungs; in short, too cold and negative a condition of the whole system, which leaves it over impressible to all surrounding influences and too easily overcome by adverse circumstances.

3. **Treatment of Paralyzed Nerves.** To rekindle the action of the nerve ethers, and to open up the depolarized or clogged nerve channels, three styles of force are more potent than other known agencies; first, the application of a warm, magnetic hand over the leading nerve centers and limbs; second, the focussing of yellow-orange light over these nerve centers; and, third, the application of hot water, or other hot substances, to the same places.

To apply vital magnetism for the purpose, let the hand not only rest on and warm up the back brain, cervix and lower spine, but move downward in harmony with the direction of ethers along the motor nerves (see Ch. III, 5), which pass from the brain or spine, to arms, legs, etc. In case sensation, as well as power of motion, should be lacking in any limbs, that would go to signify that a pressure of excited blood upon the nerves, both motory and sensory, was taking place and shutting off the nerve forces; to offset this and clear up the channels, upward passes should be made during some treatments, and downward movements at others, the capillary fluids moving toward the heart and the sensory

nerve ethers moving toward the brain and spinal cord, for which reason both require upward movements of the hand at certain times (see Vital Magnetism). To focus the yellow-orange light upon the medulla and cervix of the upper spine, or on the lumbar or sacral plexuses of the lower spine, the chromo lens or the chromo disc will be good (see Chromopathy), though a power of the same kind can be gained by the common amber-colored sheet glass in the instrument called the thermolume. For the method of pouring hot water over the occiput and cervix, and warming the lower spine by hip baths, see Hydropathy. For treatment of paralysis and other nervous conditions, see Part Fourth of this work.

4 **Treatment of Cold, Chronic Conditions.** Cold, dormant conditions, paleness, muscular weakness, resulting from too much blueness and inactivity of the venous blood, and lack of redness in the arterial blood, sluggish action of the visceral organs, etc., should be kindled into activity by every warming and animating influence, such as manipulation by a warm magnetic hand with plenty of upward and transverse movements to awaken the capillaries, unless the nervous system is too excitable; full sun baths on the whole bare body, excepting the upper head, varied also by light strained through red or red-purple glass; the use of red underclothing next to the skin; abundance of oxygen and out-of-door air, drawn, if possible, always through the nostrils; sweat-baths and hot water baths, ending with cool sponging off; hot packs; fomentations, or hot rubber bottle applications to stiff, or cold, or congested parts; Turkish, or Russian, or still better, the thermolume sweat baths, with the system well cooled afterwards; friction with flesh brushes, or rough towels, over the whole body; movement cures; pounding and spatting of the body and exercise to start the blood into fine play; merriment, laughing, recreation, moderate dancing, or moving around hand in hand with congenial persons; warming and nourishing foods, with a little cayenne pepper or musta d mixed in if the stomach is not too irritable; a resolute use of the will power; a great effort to love and care for others in a way to draw the forces outward and away from self; use of the electrical battery if the system is not too excitable, with the negative pole higher up on the body than the positive; moderation in the use of the sexual system; the avoidance of all private abuses; reading and conversing on cheerful topics as far as possible, etc.

The use of alcoholic beverages, as warming influences is a mistaken idea, being a poisonous style of thermism. The first effect of liquors is to stimulate and warm the blood, especially that in the brain, which does not need heating, and which, by such violent influences, is apt to

become congested, and thus stupefied. Ossian E. Dodge, the well-known singer, and a strict temperance man, was able to endure the cold of Mount Washington better than any of the other members of his party, all of whom partook of alcoholic stimulus; and Dr. Wm. B. Carpenter signifies in his Physiology, that experiments in Greenland have shown that alcohol does not enable men te endure cold.

X. THE HUMAN BODY CONSISTS OF NUMEROUS MAGNETS, GALVANIC BATTERIES AND ELECTRICAL COMBINATIONS.

All worked by the most exquisite spiritual and chemical forces, and arranged in every part into positive and negative poles.

1. **Human Magnets.** The arms constitute a horse-shoe magnet, the right hand being the north pole, and the left, the south pole; the legs constitute another magnet; the fingers and toes a series of magnets. The human head is a compound magnet, the most prominent north pole being at the forehead, the principal south pole at the occiput. The liver and spleen, with their connections of nerves and blood vessels, constitute, as we have seen, a bar magnet, with the north pole at the spleen, the south pole at the liver, in other words, the stronger electricities flow from the right towards the left side, or just opposite to the usual direction of the magnetic electricities in the more external portions of the body, which is from the left to the right side. The right and left kidney, also the duplex portions of the sexual system, with their connecting tubes of nerves and blood vessels, constitute electro-magnets, and are kept in activity by the galvanic and other chemico-vital processes, to be described in the following paragraphs.

2. **Galvanic Batteries and polarized Centres** of the Human System. The *Brain* is the great central Galvanic Battery of the nervous system, its electricities being generated by numerous troughs and cells, its principal trough being the spinal column, its larger cells being the ganglia of the cerebrum and cerebellum, its smaller cells being the ganglia of the sympathetic and sensory nerves, while its conducting wires are the nerves and nerve fibres themselves. The *Heart* is the central galvanic battery for the vascular system, in which a coarser grade of forces is brought into action, having electrical troughs in the form of veins, and cells in the shape of such centres of blood as the brain, lungs, liver, stomach, spleen, kidneys, etc., and wires in the shape of capillaries, and the smaller blood vessels. It is exceedingly important that the blood should be kept well supplied with vitalizing and active principles so that the electrical life-ethers may be attracted briskly through all its channels.

3. **Chemical Combinations** rule in all parts of the body. We have seen that one important arrangement of chemical forces is caused by the union of the thermal red with the electrical blue, and this is exemplified in almost every function of the body; thus, the blue venous blood and the red arterial blood work together in the right and left side of the heart; the bluish-white interior fibrous matter of the cerebrum lies right up against and inter-blends with the cellular reddish-gray exterior matter of the same; and as this junction must be the point of the greatest chemical activities, from the fact that the sensor nerves from all parts of brain and body convey their forces there, we may deem it the true *sensorium*. By saying this, I of course do not signify that thought, sensation, consciousness, etc, result merely from chemical action, but from spirit as a quickening principle in connection with chemical action. In Fig. 2 the bluish-white corpus callosum lies against the reddish-gray great superior ganglion F, which in turn lies near the great inferior ganglion E; the cerebellum L, like the cerebrum M, M, has reddish-gray cellular matter on the outside and bluish-white on the inside, although this white interior is interspersed with reddish-gray lines in a way to make it resemble a tree, and is called the arbor vitae. The spinal cord ends off at the top with the medulla oblongata A, which is bridged over above by the pons varolii B, and all three of these reverse the order of the brain, having the colder bluish-white on the exterior, the reddish-gray in the interior. From each ganglion of the great sympathetic nerve that runs along the whole interior system near the spine, two nerves pass to the spinal nerves (see Fig. 3) one large and reddish-gray, the other bluish-white

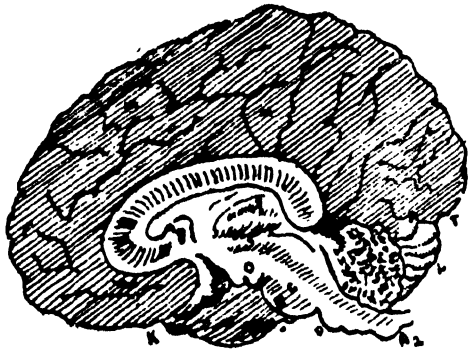

FIG 2.
Cerebrum, M, M; Cerebellum L; Medulla oblongata, A.
The Corpus Callosum, H.

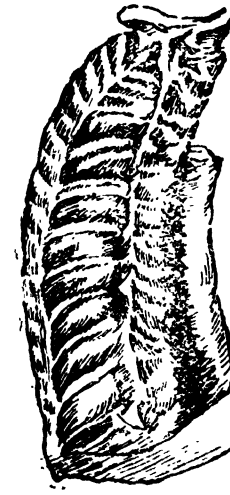

FIG 3

Fig. 3. The Thoracic portion of the great sympathetic nerve and its ganglia; 1 is the first thoracic ganglion; 2 is the last; v, first rib; c, 11th rib; a, aorta; 3, great splanchnic nerve; 4, lesser splanchnic nerve; 5, renal splanchnic; 6, part of brachial plexus.

The bluish white nerves are more directly those of *motion*; the reddish gray, those of *sensation*. It is quite common for the interior portion of the sympathetic ganglia to be yellowish-gray instead of reddish-gray; so it may be supposed, in harmony with chemical law, that some violet elements must co-operate with such.

Thus we see that all through the system we have the bluish-white elements answering in the place of the zinc plates in the galvanic battery, and the reddish or yellowish elements answering in the place of the copper plates. In this way we get a brisk play of the ethers through chemical action, and so the system is kept full of heat and life. Even the skin and the serous membranes have a certain amount of acid, while the mucous membranes are more especially alkaline, and this adds a quickening principle to the whole system. For an explanation of the poles of the system, see "Principles of Light and Color," Tenth Chapter.

4. **The Philosophy of Sensation.** So far, then, everything goes to prove to us that electrical and thermal forces rule everywhere throughout nerves, veins, arteries, tissues, etc: and that even those spiritual forces which underlie and quicken the whole, work in harmony with chemical law, which always requires electricity and thermism. But our physiologists declare positively that nervous force is not electricity. Why? Because it will not move the galvanometer. This comes from the fact that they are ignorant of the whole nature of electricity, so far as basic principles are concerned. They have not learned that electricity consists of many grades, and that the coarser grades mainly are used in galvanic and frictional electricities. The finer vital and psychic electricities can no more be measured by the galvanometer than the heat at the south pole of a magnet can be measured by the thermometer.

To produce conscious sensation, the nervous ethers must make a complete circuit, passing from the point of the body affected through the sensor nerves to the brain, and back through the motor nerves to the starting point. Motor nerves, when acting normally, always carry the ethers *from* the brain, sensor nerves, *to* the brain. It may be asked, why do not these ethers which produce sensation cause contraction of the muscles, if they come back through the motor nerves? Because, evidently, the sensory forces are more strongly thermal than electrical, and heat, of course, cannot contract anything. Sensory nerves, like motor ones, have channels for heat and cold forces. To make this law of sensation clearer, let us suppose that we prick the end of a finger. For two reasons sensation is keener there than elsewhere; 1st the tactile corpuscles are more abundant, 2nd, electrical tension is always greatest at points.

The prick will send the ethers excitedly along the sensory nerves of the arm to the brachial plexus and spinal column. Just before reaching the spinal column they will be fired up anew by passing through the ganglion at the posterior root of the spinal nerve. But physiologists have discovered that after reaching the spinal column some of the sensory nerve fibers pass on up to the brain, while others pass downward along the spine, and thus deflect the currents so that they reach the original starting point and cause sensation there, and not at the brain. In producing a galvanic circuit, it is known that the principal irritating sensation does not result from the positive or efflux'pole, but at the negative end where the forces strike after completing, or nearly completing, the circuit, hence if the sensor currents should stop at the gray matter of the brain, as is sometimes supposed, it would be felt there, and not at the starting point. In such a case terrible and dangerous wounds might be inflicted upon us, and we should not know by the feeling where to locate them. If we should take the effect of the nerve forces to the spine, and not to the brain, we should have *unconscious sensation*, or, at least, a very indefinite effect.

5. **The function of the Special Senses of Sight, Hearing, Touch. Taste and Smell** are all exerted by aid of thermal and electrical currents of the system, working through chemical law. The most refined of these, the *sight*, is acted on by others only; *hearing*, the next in refinement, is produced by means of ethers and the atmospheric gases; *smell* deals mainly with gases; *taste* with liquids, or semi-solids, and *touch* with solids, liquids, gases and ethers.

The organ of SIGHT deals with luminous ethers in the form of light and color, through the medium of which the universe is revealed to man. In my "Principles of Light and Color," Chapter Eleventh, I have adduced numerous facts to show that there are thermal elements in the retina which attract chemically and receive the electrical colors of light, and also electrical elements in the retina which attract and appropriate the thermal rays of light; thus, blue elements in the retina receive the red rays; the red elements of the retina receive the blue rays; the violet elements in the retina receive the yellow rays, and so on; and these luminous ethers send their impressions of forms and colors to the sensorium in a way to produce the marvelous phanomena of vision. Herr Salzer estimated, before the Vienna Academy, from enumeration, that there are 438,000 nerve fibres, and 3,630,000 retinal rods and cones in the human eye.

Hearing is accomplished ordinarily by air waves striking on the tympanum, and especially by electrical and thermal ethers, which go

far beyond the tympanum into the interior portions of the ear, sent forward by vibratory action in connection with gases, liquids, sounding boards, bones, etc., until the cochlea, the presiding genius of sound, is reached, and its impressions conveyed to the auditory nerve, and thence to the sensorium. The wonderful scales of the cochlea, consisting of about 3,500 outer and 5,200 inner rods of corti (Flint), constitute a harp of over 8,000 cords of constantly increasing length, so that every grade of musical tone may have an answering element that shall communicate to human consciousness an exact perception of pitch. The fact that sounds may be communicated to an ear which is under water, or telephoned hundreds of miles through wires, shows that the central principle of sound does not consist of air waves, but of some ethereal fluid which is finer and swifter, although the air is a necessary assistant, and its waves can modify musical tones. *

The sense of **Smell** deals, as I said, with gases, and yet on these gases or atmospheric currents are borne the minute particles of different substances such as the emanations from flowers, from ammonia, from aromatic plants, from diseased persons, etc. These particles, flowing into the nasal passages, find their peculiar chemical affinities in some portion of the mucous membrane or epithelial cells, to which they are attracted, and their impression is carried onward by the olfactory nerve, which has three roots, side by side, the middle one being reddish-gray and the outside ones bluish white.

The sense of **Taste** is generally supposed to be produced solely by the different kinds of papillae on the upper or dorsal side of the tongue. By experiment, however, it can be proved at any time that fruits and other edibles have but a feeble taste unless they are converted into a fluid or semi-fluid form and then pressed between the tongue and the roof of the mouth. Take a cherry or grape and break the skin so as to let the juicy pulp come against the tongue, while the unbroken part comes against the roof of the mouth, and the peculiar taste of the fruit is almost entirely wanting. Why? Because the electrical circuit is broken, the skin of the fruit acting as an insulator to prevent the current from passing between the tongue and the roof of the mouth, on its way to the brain and back again to the tongue. One reason why food must be changed into liquid form before we get its full taste, is, that liquids are better conductors of electricity than solid foods. To prove that the sensation of taste may be caused

* For illustrations of the fallacies of the undulatory theories of force, see the author's "Principles of Light and Color" pp. 84, 88, 409, and for an overwhelming setting forth of their fallacies, see "Problem of Life," by A. Willford Hall, New York.

by electricity, place a silver coin under the tongue and a copper coin above it, and then allow the edges of both to meet, so that the circuit may be complete, when the sensation will occur immediately. On the tongue there are three general sizes of papillae, the large circumvallate, few in number, the medium size fungiform and the smaller conical and filiform. From what we know of chemical affinity, we may conclude that the redder portions of the tongue, such as the fungiform papillae, will attract to themselves the blue elements of food, such as acids and other cooling properties. On the other hand, some of the smaller papillae will be observed to have a pale or bluish cast, and these would naturally attract thermal elements, such as carbons, alkalies, sweets, peppers, etc. When the taste is not perverted by a love of artificial stimuli and over rich diet, the chemical forces of the system will generally call for such foods as are most needed, and the demands of taste should be heeded. Food that is wholly unpalatable will not call forth the saliva and digestive processes sufficiently, and so nutrition is not carried on properly. At the same time we should psychologize ourselves into liking foods that are known to be nourishing and useful to the system, and into disliking foods that give distress to the stomach.

The sense of feeling or **Touch** is explained under the head of *sensation.*

6. Seeing, then, that all the senses, and, in short, all the functions of the system and the processes of life are carried on through the activity and unimpeded flow of the vital ethers, both electrical and thermal, we should learn the great lesson of the necessity of keeping ourselves charged up with plenty of sunlight, the oxygen of pure air, vital magnetism, electricity in its various forms, hot and cold water, exercise, friction, movement, nourishing food and a careful and earnest use of the will power.

7. Our **Physiological Scientists** have failed to understand the laws of the more refined grade of chemistry, from their general habit of dealing only with coarser elements. Those who go beyond them and penetrate the mysteries of which they are ignorant, are apt to be called cranks or charlatans. Real science must go to the basis of things and apprehend those subtile forces which are the ruling power. The fluorescent or odylic light, often termed *X rays,* are already proving to these slow scientists that there is a power so fine as to enable one to look through and through human systems and reveal new secrets of being. At last they should begin to perceive the wonderful nature of clairvoyance and psychometry.

XI. THE DIFFERENT TEMPERAMENTS.

The human body may be arranged naturally under five general divisions, namely, the *Mental*, the *Vital*, the *Muscular*, the *Nutrient* and the *Structure-Forming*. To understand these is of great importance in the philosophy of life, and I shall hope, briefly, in the following, to give some of the underlying principles in connection with them which have not heretofore been presented.

The **Mental Temperament**, sometimes improperly called the **nervous**, results from the activity of the functions of the cerebrum, caused by the brisk flow of ethers through the sensory nerves to the gray matter of the brain. When this temperament is largely developed, these ethers are especially fine and swift, and, working in connection with the phrenal convolutions, produce mental activity, so that even a small brain may be as powerful as a much larger brain with a slower temperamental action. Other things being equal, however, a large brain has a greater intellectual grasp than a smaller one, just as a large muscle has more power than a slender one. When this temperament is predominent, the forehead or upper head are generally large as compared with the lower face and neck, as seen in the case of Mrs. Caroline Gilman, the poetess (Fig. 4), and such a condition is apt to draw the forces of the body to the brain and render the vital action weak. This temperament tends to fineness and paleness of skin and quick nervous sensibilities, and if made extreme by over study and too much activity of the brain, the features will become thin and unsightly, as in Fig. 5, which I take from a publication of Fowler and Wells. Such a one should be taken from her books and from her school, and be allowed to roll hoops and play out of doors in the air and sunlight, or she will soon be forced to lie in a much darker place where sunlight never comes.

FIG. 4
Mrs Caroline Gilman

FIG. 5

The mental temperament is manifested in especially two ways, first in the height of the upper head, and second, in the frontal prominence of the forehead. In another place, I shall attempt to show why it is that some heads, under a fine and expansive grade of mental ethers, are raised into a high and noble appearance, while others, under the influence

FIG. 6.—Sir Isaac Newton.

of ethers which are keen but less fine are projected forward well over the eyes. The high forehead and head may be called the *religio - mental* system, as religious and spiritual aspirations are generally active, and it naturally and easily understands the spiritual and other refined potencies of the universe. This style is very fairly represented in the portrait of Sir Isaac Newton (Fig. 6), one of the greatest scientists of the ages. He could look more or less beyond material conditions ruling in and through all things, and by his intuitional intellect was led into his grandest discoveries.

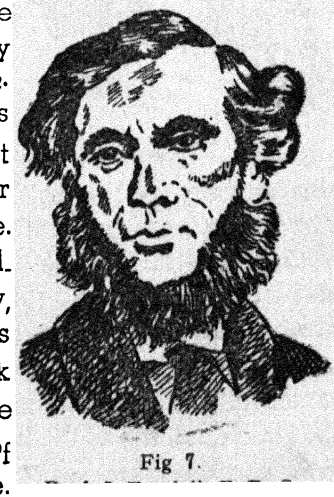

Fig 7.

The horizontal development, in which the frontal region projects well over the eyes, may be called the *Ratio-perceptive mental system*. This is not necessarily very high, though it gives an acute perception of material phenomena, but finds it almost impossible to understand the finer forces and the spiritual realities of the universe. This is the type of the modern scientists, including such heads as those of Faraday, Huxley, Haeckel, Tyndall, Mayer, and scores of others who although they are doing an important work in the world, cannot raise much above the visible and the tangible, and so fail to get at the soul of things or understand the basic principles of force. This would not be so objectionable, if they would not be so free to condemn as fanatics, visionaries, etc., those who have a quicker perception than themselves of these diviner realities. Fig. 7 presents the head of Prof. Tyndall, the eminent scientist, as a type of the scientific heads of this age. The true philosopher of the future and the man of all sided-power will combine the frontal and coronal and lateral and occipital and basilar development which will enable him to appreciate both this world and the next, and possesses that quick intuition by means of which he shall know how to use simultaneously both deduction and induction in his pathway to truth. Fig. 8 is a portrait of the Rev. Dr. Rheinstadt, a

scholarly recluse of Switzerland, who has evidently cultivated his spiritual and reasoning faculties so incessantly as to dry up his physical forces, as signified by his diminutive lower face. The perceptive powers, which are located along the eyebrows, are in his case small and sunken as compared with the reasoning faculties above them, and show that he has had too little contact with the outer world around him. Such a man may be a metaphysician, but not a true philosopher.

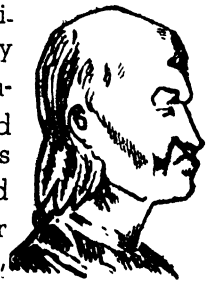

Fig. 8.

For excessive development of this temperament, walking and other out-of-door muscular exercises are important, as well as plenty of sleep with head to the north. To remedy excessive nervousness, see Ch. VIII., 1, 2.

2. **The Vital Temperament** *comes from the activity of the arterial system*, just as the mental temperament comes from activity of the sensory nerves; in other words, the one is developed by the most active and thermal style of blood force, while the other is developed by the most excitable and thermal style of nerve force. The frontal brain, especially where the reasoning faculties reside, connects electrically with the cerebellum as its negative poles, and through that with the medulla oblongata and lungs so that where the reasoning and spiritual powers are strong the tendency is to draw off some of the powers of the lungs, hence great thinkers are not loud talkers or speakers as a rule. But the vital system connects more directly with the heart, having its phrenal manifestation in the temporal regions on account of the blood thrown there by the carotid artery, which, in case of great activity, causes a fullness or widening of the head in front of and above the ears.

Fig. 9. Victoria in 1835

The Vital Temperament being founded on the red principle in the blood, *tends to impart redness and warmth* to everything, giving a rosy, red or sandy or auburn or light brown hair, fresh, and somewhat rounded complexion, firm, flesh, wide through the temples, strong pulse and generally quick impulses and passions, especially when the basiliar regions, including the lower face and neck are made full and rubicund by means of the quantity of arterial blood

thrown there. This temperament naturally develops the red principle as I said, but in one feature, the eye, the chemical affinity of this color is developed in a way to give it a bluish cast, just as in so many violet colored flowers an affinitive yellow forms the center. Queen Victoria (see fig. 9), is a good example of the Vital Temperament.

Here let me say a word about *phrenological development*. In one sense phrenological development is but a phase of physiological action: thus, it is admitted by phrenologists that the widening of the head near or back of the ears signifies destructiveness or passional energy. Is it not easy to see that in case a large amount of the hot, red grade of blood should be poured into each side of the brain through the arteries it must fire up and render a person highly impulsive and active? And is it not perfectly natural to suppose that the greater the amount of blood which is sent there the larger the tissues and the wider the head will become? But space is wanting here to show how the blood and nervous ethers reach the sexual energies through the cerebellum, how the cerebellum acts in correlation with the frontal brain to energize its functions, and how the most refined ethers naturally gravitate upwards, lifting the brain into greater altitude and spiritualizing its functions. In all this we should by no means affirm that all these processes of mental and physiological action are caused solely by material elements, for it requires a wonderful invisible something which we call spirit, as a quickening, modifying principle, before such marvellous manifestations as *thought* or *love* or *consciousness* can ever be evolved.

FIG. 10.—King Henry VIII.

An excessive vital temperament leads to an inflammatory condition of the system, to violent passional impulses, to love of stimulus, etc., which calls for cooling principles, as explained in Ch. VIII, Para. 4. When this temperament is too feeble and the system needs firing up to energize inactive conditions, the oxygen of the out-door air, sunlight, especially the red rays, magnetic manipulation and warming foods are needed. A moist climate, especially like that of England, or the sea-shore, gives a rosy complexion, on account of the amount of hydrogen in the air, which hydrogen, as we have seen, becomes potentized by a goodly amount of oxygen. This fact will no doubt account for some of the indomitable energy of the Anglo-Saxon and Teutonic races.

In Fig. 10, I have given King Henry the VIII., of England, as an extreme development of the vital temperament, combining also the nutrient temperament to be described hereafter. He was a sensualist, and a man of great force of character, but this force ran into brutal fierceness. The religious system needs to be greatly cultivated in such characters.

This temperament has often been called the *sanguine*, which signifies, of course, the *blood temperament* but the incorrectness of this term will appear as I now come to describe the muscular temperament, which is also the product of blood action of quite a different kind.

Fig 11. General Jackson.

3. **The Muscular Temperament.** While the mental temperament deals with thermal (sensory) nerve forces, and the vital deals with thermal (arterial) blood, the muscular temperament deals with electrical or motor nerve forces and electrical or venous blood.

The thoroughly muscular temperament has a yellowish or dark cast of countenance, dark eyes, coarse dark or black hair, strongly marked features, prominent or Roman nose, and strength and hardness of muscles, which give great endurance. It possesses less quickness of action, delicacy of feature and refinement of style than the mental or vital temperament, but is slow, and sure and strong. In Fig. 11, furrowed features of Gen. Jackson give a good example of the muscular system, although the mental temperament also is fairly developed.

But why can the venous blood develop power of muscle? Because it is more surcharged with acids, especially the carbonic, and, acids being electrical, have an especial chemical affinity for the thermal elements that constitute muscular tissue, and attract them from the arterial blood as it enters the capillaries of the muscles. But why does the skin at times have a darker and more yellowish cast in this temperament than in other? Because the liver is more sluggish, and does not secrete its bile very fully, for which reason it flows off into the blood, and is thrown to the surface as a yellowish or brownish principle. For this reason, the old method was to call it the *bilious* temperament, which was to make the lesser feature of the case predominate over the greater. But, it may be asked, Does this emphatic *venous* system, which causes

muscular development, consist of a *large amount* of venous blood? No, but rather of a darker and deeper blue of the veins, caused by being more surcharged with carbonic and other acids.

Fig. 12.
Catherine Alexiewna II.,
Empress of Russia.

Fig 13.— Rev. Geo. Whitefield

Excessive use of strong coffee is a darkening principle of the skin, and tobacco has its influence. It should not be inferred that a dormant liver and dark venous blood are the causes of all brunette complexions, but the carbon and other darkening elemets derived from living under a southern sun, as in the case of Spaniards, Italian, etc., are a sufficient explanation of this. These same races, coming into a colder climate, become whitened.

4. The Nutrient Temperament embraces the *Digestive* and *Lymph forming* system, and has sometimes been improperly called the *Lymphatic* temperament. Its office is to convert the food into chyme, chyle and lymph, and lymphatic or fatty tissue and blood, and through the blood, both venous and arterial, to furnish the elements which, when passing through the capillaries, are attracted chemically in a way to form muscular tissue, and even bone. If we were to characterize the different temperaments, so far as the nerves are concerned, we should say the mental uses the sensor nerves, the vital uses the pneumogastric nerves, the muscular uses the motor nerves, the nutrient uses the pneumogastric, the vasomotor, and the sympathetic nerves. A *Lymphatico nutrient* temperament gives round and soft features, and sometimes flabby tissues, often presents the flat, or round, or pug nose; the movements will be slow, the muscles weak, the sides of the face somewhat pendant, presenting the double chin appearance, and the complexion oftener light than dark. In this case, both mental and physical action will be sluggish, and the face will present the form of an oval and larger end of which is below and the smaller above. Empress Catharine, of Russia (Fig. 12), has a fair nutrient and also a fair

vital temperament; George Whitefield (Fig. 13), had an immense nutrient, a powerful vital, and a large religio-mental temperament, constituting a perfect magazine of spiritual and animal magnetism, by means of which

Fig. 14.—Honoria.

Fig 15.—Gov. Van Twiller.

he could sway thousands in his preaching. Fig. 14 presents a fair amount of the nutrient and vital temperaments, with the mental temperament predominating, and is given to show that a countenance in which the mental and spiritual forces rule, and the oval of the face has its larger end upward, is more refined and pleasing to a cultured taste than that of the Empress Catharine, which approaches an inverted oval; while Fig. 15, purporting to represent the Dutch Governor Van Twiller, of our early colonies, and who, in Washington Irving's humorous description of him, ate four hours and slept twelve every day, is a monstrous perversion of the lymphatico-nutrient temperament. Such a system, with its inverted oval face, the fullness of the lower part of which indicates a large abdomen, which has absorbed the brain forces, is a good type of a sensual, scrofulous beer bloat; and I have placed it by the side of the sweet face of Honoria, that it may seem the more repulsive by comparison.

The lymphatic condition which causes the full pendant or lower face, inverting the oval, is sometimes said to be a sensual devlopment, but it is not necessarily so, unless attended with the floridness caused by activity of the vital temperament; and even then, may be balanced by a large religio-mental temperament, as in the case of Whitefield.

The fatty tissues of the body being a non-conducting substance, serve to shut in the vital ethers, so that they will not escape, and to keep out the external cold. But being a dormant material, as compared with

the muscles in which the red vascular elements circulate, a lymphatic system may be the colder of the two in some cases, and especially colder than a vital temperament. Americans, stimulated into activity as they are, by a bright sun and the keen, electrical air of their winters, tend to over-activity of the mental temperament, or, rather, to an under-activity of the nutrient, and would be decidedly improved in their power to sleep, and in their nervous control, as well as in beauty of outline, if they could induce a greater amount of flesh. To American ladies especially, will this remark apply, although in vivacity, intelligence, beauty of expression, and elasticity of movement, they possess charms which foreigners have often admired them for.

In another part of this work rules will be given for causing *lean persons* to grow fleshy by stimulating the lymphatic nutrient system through the sympathetic nerves, the vascular system through the vaso-motor nerves and the general gastric system through the pneumogastric nerve. Methods there will also be given for reducing *obesity* by some new and effective processes.

5. **The Structure Forming Temperament, or Bone-Building System,** is, like the muscular temperament, evidently, the result of the venous blood as a leading factor. I deduced this from two facts: first, a large muscular development is quite apt to have a large frame-work of bones, as in the case of John Calhoun, Daniel Webster, Gen. Jackson, President Lincoln, etc., hence like results argue in favor of like causes; and, second, the principal material of bones, including the marrow, also the cartilage out of which bones are originally formed, belongs to thermal elements, nearly two-thirds of the substance of bones being the phosphate and carbonate of lime,* which last is an alkaline substance; hence, according to the principles of chemistry, it would require electrical elements to attract and segregate such materials; and as the venous blood abounds much more than the arterial in such electrical elements as acids, we conclude it has a predominating influence in osseous formations, though it may seize upon the thermal elements of the arterial blood. Those persons whose children have a tendency to grow too bony, should aim to prevent the venous blood from becoming too dark and sluggish by giving them plenty of the oxygen and pure air in their sleeping rooms, and by causing them to have out-door exercise and play. Soft water is doubly important for such also, as the hard water of limy regions will

* In 100 parts of bone, 51 are the phospate of lime (calcium phosphate), 11·3 carbonate of lime, and two parts fluoride of lime. About one-third of the substance of bone consists of animal constituents. Marrow being a fatty substance, is mainly carbon.

not only tend to make them too large boned and coarse, but to develop hepatic and renal calculi as they grow up, for the acids in the venous blood are predisposing causes of calculi.

To prevent brittleness of bone, whole wheat flour, oatmeal, gluten etc., should be eaten freely.

6. **Perfection of Temperament** *is a fair combination of them all* President Adams, (Fig. 16) presents an example of well-balanced temperaments, as also did Washington. Extreme temperamental conditions tend toward insanity. The religio-mental, without the vital and muscular, tends to exhaust the physical powers and make one unpractical in his worldly duties. An extreme vital and nutrient system without the religio-mental, tends to animalism, or to at least a disinclination to cultivate the higher spiritual nature. The disease and insanity that result from the over use of the lower nature are more distressing and violent than those caused by the excessive activity of the higher nature, coarse elements being ruder than refined ones. Conjugal harmony demands that the temperamental onesidedness of the one party should find its complement as far as possible in the other party without having too great a diversity.

Fig 16—John Adams, Second President of the United States.

For a more thorough explanation of mental development see Part Third.

XII. CHROMOPATHY, OR HEALING BY LIGHT AND COLOR.

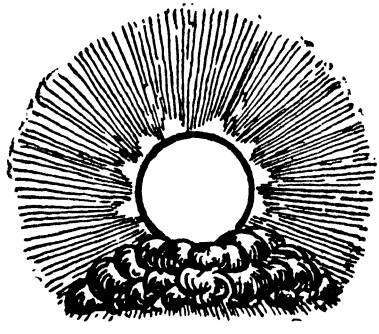

Fig. 17.
The Kig of day.

The power of all substances may be made known by their colors in case we ascertain what their innate color forces are. The colors of sunlight, when combined, constitute the ordinary white light, and this streaming down upon all things is the great vivifying and potentizing principle of the animal and vegetable world. Being so mighty in all nature, I concluded it must be powerful also to heal disease, and that the chemistry and therapeutics of color could be formulated into a science. In 1876, I announced pub-

licly my "Etherio Atomic Law of Force," and its application to light, color, and other fine forces, and in 1878, after many experiments and also researches into the experiments of others, I published my large work, entitled "The Principles of Light and Color," in which my discoveries concerning Chemical force, Electricity, Magnetism, Psychic force, and Odylic force, as well as light and color, were announced, and a somewhat extensive array of facts given in corroboration thereof. Since its issue, physicians and others from various foreign nations, as well as all parts of our own country, have sent in hundreds of facts from their experience proving in every case the correctness of the principles therein given, and demonstrating abundantly the great importance of this new department of therapeutics. Some of the general principles of chromopathy will now be given.

I. **Light is a Material Substance** *as well as the result of certain vibratory laws of motion in the atoms through which it passes* (see 1, 2, 3), *and each of the colors which combines to form the full ray of light, has a special grade of substance with its own style of power, which is capable of being transmitted as a refined medicine or chemical agent to the human system direct, or into water or other substances which may be taken into the stomach, applied externally to the skin, etc.*

The colored plate at the beginning of the work gives the leading chemical and therapeutical properties of the colors.

2. What I have termed *Electrical* or cold colors, were formerly called *actinic* or chemical colors, the absurdity of which will appear when we remember that the warm or thermal colors are exactly as chemical as the cold ones, for without the aid of these, the cold color forces could not act chemically, and *vice versa*; in other words, substances whose innate forces are manifested in the form of blue, indigo and violet colors, require substances which are active in the red, orange, or yellow potencies, before chemical affinity can take place freely. To be more exact, the red affinitizes more directly chemically with the blue, the orange with the indigo, the yellow with the violet. *See Chemical Affinity*, Ch. III. 1, 3, 4.

3. **Thermal** which is coarser than the red and just below it in the solar spectrum, is the region of greatest heat and is invisible.

4. **The red, yellow** and **blue** constitute the most distinctive and important colors. The red and yellow, combined equally, form an orange; when yellow predominates it is a yellow-orange, when red, a red-orange. Red and blue form purple, which nearly resembles violet, while yellow and blue form green, it being a blue-green when blue predominates

over the yellow, a yellow-green when yellow is more abundant. The pure violet of sunlight is a more refined element than ordinary purple, but cannot be got in absolute purity by means of any colored glass, though the blue glass, especially mazarine, will transmit a large amount of violet, as well as trans-violet, blue, and some red. Red-purple is more rousing than the blue-purple but is softer than red.

5. While **chemical affinity** thus brings electrical and thermal substances together, **chemical repulsion** causes similarly colored elements to repel and stimulate each other (see Ch. IV, 1); thus red light stimulates a red principle, like arterial blood; yellow light with some orange and red, stimulates the nerves, the interior elements of which are strong in these colors; blue cools the arterial, and intensifies the bluish venous blood, etc. We see then, that chemical affinity helps balance extreme or one-sided conditions by bringing a contrasting color or substance; while chemical repulsion helps kindle into greater action any part which is deficient in intensity. Thus, for the head, where the blood and nerves are predominant, we generally need blue or violet light as a balancing principle; for the extremities, red is generally best; for the thorax and stomach, purple is best; for dormant liver and dormant bowels, yellow and orange; for deficient menstruation, red over the womb; for too free menstruation, blue; for a pale, cold system the red is best, if nervousness is not too great; for arterial, inflammable conditions, blue or indigo is required. Proofs of these positions will be given more fully in after parts of this work, where the treatment of special diseases is given.

6. In **drugs** or **chemicals**, exactly the same law of force as manifested in the colors of sunlight, rules, thus:

Such *red substances*, as Capsicum (Cayenne pepper), red cedar, bromine, the oxide of iron, which are generally bright red, ether (C_4H_6O), and alcohol (C_2H_6O), in which the ruling element hydrogen is bright red in the spectroscope, ammonia and potassa, the spectra of both of which are predominantly red, etc., are spoken of by our medical authorities as being "rubefacient," "arterial stimulants," "raising the pulse," etc.

Such *yellow* or *orange substances* as saffron, valerian, mustard, dandelion, senna, podophyllum (May apple), colocynth, sulphur, figs, gluten, castor oil (yellowish), ginger, etc., which have yellow as the leading color in the spectrum, or yellow and some red, are known to be stimulant to the brain, or nerves of the bowels, liver, stomach, etc. All purgatives or laxatives stimulate the nerves of the bowels, by means of

the yellow as the leading color, although in drastic purgatives, as well as in emetics, diuretics and brain stimulants, a good deal of the red substance is also used as a blood-rousing principle. Some of the yellow stimuli animate the bile, which is a greenish yellow substance, and is itself a laxative.

Such *blue*, or *indigo*, or *violet substances*, as aconite, ergot, indigo, the galls, sulphate of copper (blue vitriol), together with a moderate form of the acids, which have the blue principle of oxygen in them, including sulphuric, phosphoric, nitric, etc., are spoken of as being "refrigerant," "astringent," "antiseptic," "arresting hemorrhage," "narcotic," "allaying spasms," etc. Chloroform ($CHCl_3$) has the blue-green, blue, indigo and violet strong in its spectrum, and is called "a direct sedative to the nervous system." Tannic acid, though bluish yellow externally, has the oxygen, very strong, and its blue and indigo principle seems to be potentized by the hydrogen in a way to make the substance, as a whole, highly astringent. Aconite, whose flowers are "a dark violet blue," is called "a powerful nervous sedative and anodyne." Opium, which has the red and yellow elements in predominance, and yet being called a narcotic, and sometimes an astringent, may be thought to controvert the principle, but it should be remembered that opium is a narcotic, by over-exciting and congesting the brain, and is an astringent in part by drawing the vitalizing ethers from the bowels to the head, which thus leaves the bowels weak.

7. **To Sum up Color Power in Healing.**

The *red* is warming and especially stimulating to the arterial blood, and desirable in cold, pale or bluish conditions. It is contra-indicated in inflammable and over-excitable conditions.

The *yellow*, aided by some red (yellow-orange), is animating to the nerves being laxative, diuretic, stimulating to the brain, liver, etc., and especially desirable in constipated, paralytic and stupid conditions. It is contra-indicated in delirium, diarrhea, etc.

The *blue*, *indigo* and *violet* being cooling and contracting, are nervine, astringent, refrigerant, antiseptic, febrifuge, anti-inflammatory, narcotic and anti-spasmodic. They are contra-indicated in cold, bluish and chronic conditions, unless considerable excitability is present.

The *green* is mainly cooling, and much like the blue as strained through ordinary green glass, though the yellow part of green gives some nerve stimulus, good for uterine inflammations, etc. The green may

often be used to advantage over the small of the back and lower spine, in cases of over-sexual warmth and seminal emissions.

The *purple* combines the blood warming red, and the cooling, antiseptic blue, and is excellent for lungs, stomach, kidneys and other parts where animation without irritation is needed. Red-purple is good for a dormant stomach, but blue-purple or blue are best if the stomach is hot and excitable.

The *orange* arouses the nerves and to some extent the blood.

These colors are usually applied externally to the bare body by means of colored panes of glass, or by use of the disk or chromo lens.

8. Power of Sunlight to give Strength.

In order to bring my reader to appreciate this mightiest power of nature, I will have to present a somewhat extensive array of facts, the significance of which has heretofore been too generally ignored by medical men. To understand the real power of the sun, however, we must take those races who go partly or wholly nude in the sun, for in the case of those who wear clothing, especially that which is dark, the solar rays are almost completely absorbed before they reach the body. I have already given a portion of these points to the public through some health journals.

The Dyaks (pronounced Dyahs) of the Island of Borneo, go nearly nude, will walk a white man down and then seemingly as fresh as ever will take him on their back and carry him by the mile. "One of these men while on a march with some English soldiers exhibited his strength in a very unexpected manner. The path was a terrible one, all up and down over steep and slippery hills, so that the Chinese coolies who accompanied the party, first threw away their rice and lastly sat down and wept like children. The English Sergeant, a veteran accustomed to hard marching both in India and China, broke down at the first hill and declared his inability to move another step under the load which he carried. Mr. Brooks, who was in command of the party, asked one of the Dyaks to carry the sergeant's burden and promised him an additional piece of tobacco. The man was delighted with the proposal and accepted it. He was already carrying food for three weeks, his whole store of clothes, one twelve pound shot, two twelve pound cartridges, a double-barrelled gun, a hundred pounds of ball cartridges and his own heavy sword and spear. Such a load, which would be almost too great even for a man walking on good roads, seemed a mere trifle to the agile Dyak, who went lightly and easily up and down paths, which the foreigners could hardly traverse even without having to carry anything except their own weight. So little indeed was he incommoded that he strapped the whole of the sergeant's kit on his back and walked off as easily as if the whole load were but a feather's weight. . . . The native gets over the ground in a manner that is absolutely exasperating to the Europeans who accompany him. . . . The ordinary dress of the men is simple enough, consisting merely of the "chawat" or slight strip of cloth which is twisted around the loins in such a manner that one end falls in front and the other behind."—[*Uncivilized Races of Men by Rev. J. G. Wood, M. A., Vol. II., p. 458.*]

The Andaman Islands are in the bay of Bengal, somewhat east of India. The Andamaners or Mincopies are very small men but powerful and go entirely naked. The paddles of their canoes seem to be ineffective and yet "the tiny Mincopies with these simple paddles and seated in a canoe cut by themselves out of a tree trunk, can beat with ease our best oarsmen. Capt. Monatt got up several races between the Mincopies and his own prize crew in their favorite boat. In point of fact there was never any race at all, the Andamaners having it all their own way and winning as they liked. . . . The sailors were hopelessly beaten although they strained themselves so much that they felt the results for some time afterward." — [*Id. Vol. II., p.* 214]

The *Ahts* of Vancouver's Island have some of the habits of the Eskimos, but being exposed to sun and air by going partly or wholly nude, are incomparably stronger. It is said that when one of them gets a grip on a white man, the latter has no power to remove it except by cutting his tendons. "A slight looking native can carry with ease on his extended fingers a weight which a white man can scarcely lift. Their power of grasp is more like the grip of a machine than the grasp of a man.—[*Id. Vol. II., p.* 723.]

The Polynesians whose general complexion is olive or reddish brown, have ascertained that those men among them who have become most darkened by being in the sun are strongest and are said to prefer the bones of such ones when slain to construct chisels, gimlets and fish-hooks out of, from their superior toughness. The point in question will be well illustrated by contrasting the Eskimos who are immensely bundled up with furs so as to exclude sun and air from their bodies, with the Fuegians south of South America who generally live in a state of nudity, excepting so far as grease and dirt on their bodies, constitute clothing. The former are described as having only about half the strength of ordinary white men while the latter are considered about twice as strong as the average European. The vitality of the Fuegians must be prodigious, as their climate is so cold that Europeans with their clothing on, have been known to freeze to death even in summer, while they without clothing and in their poor and open built huts can survive from age to age. The women plunge into the icy water after fish and from their abundant exercise become as strong as the men. On one occasion the "Fuegians nearly struck the sailors with stones thrown by hand when they thought themselves even beyond musket shot."

A comparison may be made between two similar races, the Chinese the most of whom known to Europeans near the coast wear clothing and the Japanese, many of whom spend much of their time nude or nearly so. The Chinese are below the average size and are not very strong or very brave. The Japanese on the average are taller, much more powerful, more virtuous in their habits, more intellectual and possessing a tide of vitality so marvelous as to enable them easily to endure a degree of either heat or cold, that would kill many a Chinaman, European or American who should attempt the same. Mrs. Brassey in

her "Around the World," speaks of the following incident in Japan: "At a stone quarry that we passed on the side of a mountain, there were about seventy men at work without any clothing, though the thermometer was far below freezing point." A well known account of the Japanese represents them in certain cases, as sitting smilingly in a cauldron of water which is heated more and more until it simmers around them. That a portion of the great vitality of the Japanese is given to them by means of their frequent hot baths and gymnastic practice is no doubt true, but these would doubtless be still more effective if they were to end off with a dash of cold water. Speaking of the Japanese, Mr. Wood in the work already quoted from says: "Their stature is about equal to that of ordinary Europeans and their limbs though not large are often very powerful, a slightly made Japanese being able to lift easily a weight which a stalwart Englishman would find a heavy burden.....As acrobats the performers are far superior to those of any other nation, performing the most audacious and apparently impossible feats with an absolute precision which quite removes any idea of danger." —(*Vol. II. P. 838*) We have had a taste of the Japanese quality here in New York in which Matsada Sorakichi raised the 150 pound club nineteen times, while a famous New York gymnast could raise it but thirteen times, and the German giant Ems still less. If we fare so poorly when compared with a small Japanese like Sorakichi, what kind of a show would we make if one of their real giants were to come over and show his quality?

One of the esteemed physicians of New York, Dr. F. G. Welch, speaks of the nude Kaffirs whom he met in south-eastern Africa as being magnificently developed. He says they are able to run ninety or one hundred miles on a stretch, and he saw them throw bags, weighing six hundred pounds, upon their heads, with such ease, that he felt confident that some of them could have lifted twice as much. Two bushels of wheat weighing one hundred and twenty pounds is considered a sufficient weight for ordinary Europeans to shoulder. Dr. Welch though an earnest advocate for muscular culture, admits that the Kaffirs must get their strength from the nerve force developed by sunlight and air rather than from exercise, as their women do most of the work.

Dr. J. M. Peebles, of San Diego, California, a noted traveler, visited exhumed Herculaneum and Pompeii, and saw not only stone reservoirs and stone ovens used for cooking purposes, but stone bathing houses two and three stories high, the third story being roofless. These Romans and Pompeiians took tepid baths in the evening, and sun baths at mid-day. Disrobing themselves, they placed upon their heads a moist cloth, and then stood or walked half an hour or more in the full vitalizing sunshine, thus developing health, vigor and that muscular power for which the old Romans were so famous.

I have just received the following letter from Joseph Simms, M. D., the well known author, traveler and lecturer, and find it another fine argument in proof of the sun's power to give strength and quicken the mental faculties. These Arabs are reared in childhood in almost a state of nudity, and when clothing is worn it consists of a thin, white fabric which transmits the light to the body. Sometime since a gentleman informed me that the *sais* who run in almost a nude condition in front of horses in Egypt would keep ahead of the horses all day long however great the effort to overtake them might be. At first thought such a thing would seem almost impossible, but the following letter fully confirms it:

Dr. Babbit:

Dear Sir:—I have often been astonished at the intellectual and physical feats of men who reside in sunny climates and wear but a slight amount of clothing. Having listened to one of your valuable and instructive lectures on color and sunlight, I think you will pardon me for calling your attention to a few facts concerning the Arabs of Egypt and Palestine, where sunny days are the rule and cloudy ones the rare exceptions.

While I was making the trip on horseback, with a Bedouin Arab on foot as my guide and guard from Jerusalem to the Dead Sea and on to Jericho, Bethany and back to Jerusalem, we came to a wide, long plateau of ground sufficiently smooth for a race between the Arab man and the fine Arabian horse which I rode. My guide was bare on most of the body with only a few thin, loose, white cloths around his middle. Both horse and man started abreast on a full run. I applied the whip and my horse dashed ahead as if desirous of winning the race. The man erect as an arrow, ran like a deer and was soon ahead of my noble animal. When he reached the foot of the hill, where the race was to terminate, he was fully five rods ahead of the horse in a race of from 30 to 50 rods. He neither cheered nor alluded to the race as a feat worthy of mention. On the entire trip of three days the man was usually in advance and beckoned me, to let the horse go faster. He was full of jokes and ever good-natured, as people inhabiting sunny countries generally are. Cloudy climates and shady walls make glomy thoughts troop through the minds of men, while disease insinuates itself through their bodies. The men called "sais" run in advance of the carriages of the aristocrats in Egypt, and at the highest speed of the horses always lead the way by ten to twelve rods.

These, nature's children of the sun, are far stronger than Americans or Englishmen or other Europeans. They are also far more active. An Arab mounted to the top of several pyramids in an amazingly brief time and offered to give me all he was worth, if he could not lay me on my back. A look at his colossal calves and shoulders satisfied me that he was my superior in action and strength, although I weigh upward of 200 pounds and have wrestled much without often finding my match. I refused to take hold of the brawny Arab.

In Cairo, Arab men were stone masons, and while moving stones of immense weight, they seemed easily to carry as much as two Europeans can possibly move with great effort. The children of the Arab families in Egypt, Palestine, Syria, Algiers and Morocco learn twice as rapidly as white children of the same age. In proof of this fact, the reader is referred to Miss Whately in Cairo, Miss Williams of Tyre, Syria, and to all the mission teachers in the above mentioned countries. One class of twelve Arab boys of ten to thirteen years, taught by an American teacher in Cairo, in four years had learned four languages and could translate verses from Arabic to French, from French to German

from German to English and then to Arabic as rapidly as an American boy of ten to twelve can read in English. Not one of those boys knew a letter in any language four years before. I also gave them one of the knottiest theorems of Euclid which they worked out with skill and swiftness.

In conclusion allow me to add, that after traveling with Arabs for several months, sleeping in their houses many times, I can say, that not one ever deceived me or stole an article from me, or told me a falsehood. Their honesty would be an excellent example for Christian nations to follow.

Yours truly, and heartily in sympathy with the cause of sunlight;

JOSEPH SIMMS, M. D.

9. Power of Sunlight to Develop Beauty.

Free exposure of the body to sun and air is found to give a higher grade of beauty than all the cosmetics and powders in the world, because 1st, it gives the skin a soft, velvety apperance; 2d, it removes the ghastly white and gives rich bronze and rose tints; 3d, it gives greater sparkle to the eye, elasticity to the motions, comeliness of the form and vivacity of manners, and 4th, it makes the complexion pure, free from eruptions and, prevents all growth of tumors. It is true that the face alone may be exposed to the sun so excessively as to cause an over-redness which is not so pleasing, but if the whole body could be well solarized this would not occur, as the blood would be drawn to other parts. Whiteness of complexion is not beauty, otherwise the chalky countenances of clowns would cease to be hideous. The late Dr. Dio Lewis uses the following language:

"*Don't you see a good many pale girls* in your stores, girls with a bloodless, half-baked sort of face, whose whole expression is void of spirit and force? Those girls are in a green state. Look at *their lips* and *cheeks*. They are not half ripe. Send them out into the country; let them throw away their parasoles and live out in the *sunshine* three months and I would give more for one of them in any work requiring spirit than for a dozen of those pale things that live in the shade. The only girls *with red cheeks* and *sweet breaths*, the only girls who become fully ripe and sweet, are those who baptize themselves freely in sunshine. . . . For many years I have advised, in the case of a weak, emaciated child, the sun-bath. These little frail, half-baked creatures that die of marasmus, would, in hundreds of cases, recover if they could be thoroughly cooked, or baked over in the sun. With what magical rapidity I have seen little ghostly, dying things recover by two or three hours daily sleeping and rolling about naked in the sunshine."

The naked nations of the world are often spoken of for their superb development of form, and this would be still finer if they understood the laws of life better. I will quote the following from "Woods Uncivilized Races" concerning the Kaffirs:

"When the youths and maidens are in the full bloom of youth they afford as fine specimens of humanity as can be seen anywhere. Their limbs have never been subjected to the distorting influences of clothing, nor their forms to the absurd compression which

was, until recently, destructive of all beauty in this and neighboring countries. Each muscle and sinew has had fair play, the lungs have breathed fresh air and the active habits have given to the form that rounded perfection which is never seen except in those who have enjoyed similar advantages. We all admire the almost superhuman majesty of the human form as seen in ancient sculpture, but we need only travel to Southern Africa to see similar forms but breathing and moving; not motionless images of marble but living statues of bronze."—[*Vol. I. p., 12.*]

With the usual ignorance of causes, Mr. Wood here speaks as though all this unequaled perfection of physical development came merely from giving the muscles fair play and the lungs fresh air, but why is not such perfection of development obtained in nations which shut out the light by their clothing, and which in many cases, carry out exercise in a more scientific manner? Exercise, of course, is a fine thing, but we have seen that the Kaffir men do not exercise much and that the Kaffir women by too severe a system of exercise and drudgery lose all their beauty as they grow older.

Sun exposed bodies gain such activity of the blood forces as to prevent any excessive forming of adipose matter and hence the ugliness of obesity is avoided. On the other hand the solar rays quicken the nutrient functions so that leanness may be averted or remedied. From these and many other facts which could be given, the beautifying effect of sunlight is abundantly evident.

10. Power of Sunlight to heal Disease.

Races whose bodies are sun exposed know but very little of diseases of any kind. The tremendous strength of the peoples I have already cited shows that their health must be admirable, even in spite of many irregular habits of living. Syphilis, that bane of the so called civilized nations which the physicians are so helpless to eradicate, is unknown among the nude nations unless introduced from abroad. This was the case in Central Africa, in Japan, in the Sandwich Islands, etc., as signified by Livingstone, Sir Samuel W. Baker and others. Speaking of one of the nude African races, Livingstone says that when Syphilis is introduced among them it dies out in a little while. Sir Samuel Baker says that Livingstone is correct in declaring that hydrophobia does not exist in the tropics, and that idiocy and insanity are rarely seen in Central African countries. He uses the following language:

"The diseases known among the Bakwains (a nearly nude race) are remarkably few. There is no consumption nor scrofula, and insanity and hydrocephalus are rare. Cancer and cholera are quite unknown. . . . A certain loathsome disease dies out in the interior of Africa without medicine . . . Equally unknown is stone in the bladder and gravel. I never met with a case, although the waters are often so strongly impregnated with sulphate of lime that kettles quickly become incrusted internally with the salt."

Our false civilization carried vile diseases to the Sandwich Islands, and then since clothing has been forced upon them and the sunlight excluded from their bodies, they have been dying out until their numbers are now said to be only about one-tenth of what they once were. The Japanese are being shamed into wearing our close style of dress, and are being led into the use of crude drugs until they are in a fair way to become as weak and sickly as the rest of us.

The native tribes of men and women in Guiana go entirely nude. "As is the case with most uncivilized nations, "says Rev. J G. Wood," the Guianan mothers think but little of the event which lays a civilized European on the bed of sickness for weeks. Mr. Brett saw one Warau woman, only two hours after the birth of her child, tie up her hammock and carry it together with her newly born infant from one house to another." Compare such people with ourselves, and especially with the Eskimos who shut out heaven's light and air from their bodies more thoroughly perhaps than any other people on earth. There "after a child is born, the mother is obliged to confine herself to her own igloo for some months."

Mrs. Elizabeth Oakes Smith sends me the following:

"I have been long a believer in sun baths. Indeed, I once effected the cure of a girl who had been five years confined to her bed, by telling the family to carry her bed every day and spread it upon a beautiful granite ledge in the sun. They did so, and she recovered her health."

The following are the words of Walt Whitman, the poet:

"Twelve years ago I came to Camden to die; but every day I went into the country, and naked, bathed in sunshine, lived with the birds and the squirrels, and played in the water with the fishes. I recovered my health from nature. Strange how she carries us through periods of infirmity into the realms of freedom and health."

Dr. Dio Lewis speaks of several young ladies and boys who had been dwelling in rooms shaded by great trees, and who had become cadaverous, pale, dyspeptic, and subject to headaches and general lack of spirit. He induced their parents to cut down the trees and build some pens in the garden eight feet high. Each of the invalids had his or her own apartment, where after disrobing, they spent one or two hours in the sun. After a few weeks they were made over new and were no longer invalids. Dr. E. C. Angell, of New York, writes as follows:

"In dyspeptic conditions I have observed the very best results from frequent and prolonged insolation. I recall in particular the case of a young Englishman who had been a great sufferer from dyspepsia, and had derived only a limited benefit from a long course of general treatment, but who readily acquired, by regular exposure to the sun, the healthy development and vigor of an accomplished athlete. Still another case of dyspepsia, with much emaciation, gained twenty pounds in six weeks by the same treatment."

The marvelous power of sunlight to heal disease by aid of instruments will be shown hereafter. See also Principles of Light and Colour, Chapter VI.

11. The Power of Sunlight to rouse Mental Forces.

To rear a child in shadow is to invite idiocy as well as disease. The solar ethers penetrate deeply into the system and kindle the nerves and brain forces into a more lively action. Every one experiences a new cheer when the sun breaks forth from its hiding place behind a storm cloud.

A gentleman informed me that in a certain factory in Providence, Rhode Island, two hundred girls were employed. Those on the sunny side were buoyant in their feelings and would sing while those on the shady side were silent and sober. Suddenly the position of the girls was changed and the sober girls immediately commenced singing while the others became silent.

An English gentleman informed me that the sun-exposed Hindoo children take an educational course in two years' less time than in England.

Voltaire advised that two dull actors should be planted in the sun for six months. For its effect on the intellect see Dr Simm's letter, p. 55.

The marvelous cures of insanity by Dr. Ponza, in an Italian lunatic asylum, by means of colored rays of light, have already been referred to.

I quote the following from Dr. James C. Jackson's work "How to Treat the Sick Without Medicine."

Fig. 18.—Spirit of the Mountain.

"The more a man lives in sunlight, other things being equal, the more vigorous will his brain be. On the brain particularly, the effect of sunlight is to magnetize it, and magnetism is, in itself, a very powerful though a very occult force. Whoever has a brain which is largely magnetic, though in size it may be much smaller than some other brain which is not magnetic, has a central force which the unmagnetized brain can never show."

The Doctor then shows how superior is the intellectual stimulus of sunlight to that brought about by alcohol.

12. Terrible Results of a Lack of Sunlight.

"The total exclusion of sunbeams," says Dr. Forbes Winslow, "induces the severer forms of chlorosis, green sickness and other anæmic conditions depending upon an impoverished state of the blood . . . The face assumes a deathlike pale-

ness, the membranes of the eyes become bloodless, and the skin shrunken and turned into a white, greasy, waxy color; also emaciation, muscular debility and degeneration, dropsical effusion, softening of the bones, general nervous excitability, morbid irritability of the heart, loss of appetite, tendency to syncope and hemorrhages, consumption, physical deformity, stunted growth, mental impairment and premature old age."

"The necessity of light for young children is not half appreciated," says Dr. Winter, of London. "Many of the affections of children, and nearly all the cadaverous looks of those brought up in great cities, are ascribable to this deficiency of light and air. If mothers knew the value of light to the skin in childhood, especially to children of a scrofulous tendency, we should have plenty of glass-house nurseries, where children may run about free of much of that clothing, which at present seals up the skin to sunlight and oxygen."

Fig. 19.—Semi-nude Children Playing in the sun.

Cretinism is a kind of an idiotic and scrofulous condition, which prevails among the deep sunless valleys of the Alps and elsewhere.

"An infant being deprived of heaven's free light," says Dr. Moore, "will grow into a shapeless idiot instead of a beautiful and responsible being. Hence in the deep, dark gorges of the Swiss Valais, where the direct sunshine never reaches, the hideous prevalence of idiocy startles the traveler. Many of the citizens are incapable of articulate speech. Some are deaf, some are blind, some labor under all of these privations and are misshapen in every part of the body. . . . Epedimics attack inhabitants on the shady side of the street, and totally exempt those on the other."

Sir James Wylie, late physician to the Emperor of Russia, attentively studied the effects of light as a curative agent in the hospitals of St. Petersburg, and he discovered that the number of patients that were cured in rooms properly lighted was three times greater than that of those confined in dark rooms. This led to a complete reform in lighting the hospitals of Russia, and with the most beneficial results.

Dr. E. B. Foote uses the following words:

"There is said to be an office in Nassau street in this city, the windows of which are so shut in by its contiguity to another building, that the sunlight never enters it, and that every one who has occupied it for the past ten or fifteen years has died of consumption. . . . . When people allow the sun to paint their faces brown, torpid livers are less liable to paint them yellow."

Experiments have been tried, for a long series of years, with people who live on the northern or northwestern slope of a hill, where the sun is comparatively feeble, and with other people who start out under similar conditions on the southern or southeastern slope of a hill near by, where the sun, of course, is more direct and powerful. Families on the ormer location, after a while, ran into a series of diseases, and generation

after generation died with consumption. Those in the latter location, who started under no better auspices, retained their health and power during the same time.

Multitudes of people have houses shaded by large trees, their blinds closed, curtains down, and even windows shut, until the air within becomes so damp and impure as to be unfit to live in, causing the cheeks of the inmates to become more ghastly, their eyes more dull and their steps less elastic. What self-sacrificing beings thus to ruin themselves to save their carpets! Pasteur, of France, has shown that rooms when shaded, become filled with bacteria, and it is known that water and all other objects tend to become impure if not exposed to sunlight. The reader may ask, "How is it that stagnant ponds become impure in hot seasons?" The answer is that the sunlight is shut of from the water during cloudy days and during nights.

But the disastrous effects of a lack of sunlight are seen in multitudes of cases which I cannot enlarge upon here, such as the putrid air of a shaded sick room; the lifeless and waxen complexion of many persons who always shut out the light by parasols, by pulling down the blinds in railroad and tramway vehicles, and veiling their windows with heavy curtains; also, in the feeble and shriveled forms of miners, who have spent many years in their underground occupation, until they have become unfit for military duty, and many others.

Animals suffer greatly if sunshine is lacking. A rabbit in a dark room will die of consumption in three weeks. The *National Live-Stock Journal* gives an experiment on two calves of deep red color, 60 days old, one weighing 180, the other, 182 pounds. The latter was placed in a dark room and after three months, had faded to a dirty red and weighed 360 pounds. The other was placed in sunshine, and weighed 430 pounds after three months. Both were then admitted to the light, but the dark room calf, though improving, never fully recovered its color or its power.

13. How much Sunshine is necessary for the greatest Power?

We have seen that the law of harmony requires a balance of contrasting elements, for instance, we should have the cording up power of electricity on the one hand and the firing up power of heat on the other hand. The sunlight in the torrid zones is not balanced with sufficient electricity, to give tone to muscles and nerves unless clothing is dispensed with, and even then, thermism being predominant from the heated state of the earth, the conditions would be less favorable for develop-

ing a grand manhood or womanhood than it would be from 20° to 45° each side of the equator. In the frigid zones electricity is predominant and all faculties become too much congealed for the highest action. If clothing is worn to a considerable extent, we would need a much colder belt of the earth than if unclothed, to balance the extra heat, and from 35° to 55° would probably be the realm of greatest power. If we were to look for the greatest athletes or for the mightiest intellects, we would not go to Egypt, Greece, Italy, Spain, Southern France or the extreme southern portion of our own states, at least, under the present system of dress which so robs the body of the greatest vitalizing forces of nature. The people, as a mass, have become too debilitated to attain any great power. And yet there were mighty Rome and Egypt and Greece of the ancient world with their learning and their power, and all this in the same regions which we now deem too hot and weakening. How is this to be accounted for ? In the first place, the children of those days grew up in a semi-nude and sometimes, entirely nude condition, and drank in the forces of nature at first hands. In the second place, the adults wore those loose robes which let the air, and to some extent, the sunlight, to the body. In the third place, these countries had all the advantages of athletic games and exercise of other kinds, to give muscular power at the same time that the sunlight gave nervous power. In the fourth place, they lived near to nature. The Romans often had solaria in the tops of their houses, where the people received the sun on their bare bodies. They also had hot and cold baths on a wonderful scale, and these, aided by open air exercise and freedom from hurtful drugs generally, kept them in that fine health and vigor, which enabled them to dominate the world.

In our own country, under the present system of life, the realm of power is more in the northern than the southern portions. For mental, literary and physical power, we would select Boston rather than New Orleans, and for that vigor, manifested in rowing, walking, etc., we should have to go as far north as the lower portion of Canada and the northern portion of our own states.

England has less sunlight than America, as an aid to her fine physical and mental development, but what she has she improves better than we do, as nearly every man and woman has pedestrian skill and loves to get out of doors. Then the ozone of old ocean is a stimulating power that has contributed to her greatness. When luminous baths shall have been thoroughly established in England, they will awaken a new development of power in her people, which they have never before known. The rosy cheeks, however, that come greatly from the hydrogen of their moist climate, must not be considered as the highest type of health and power,

for with all their infirmities, Americans are longer lived than Europeans as Dr. Brown-Sequard admits. America is fast waking up to the true laws of life, and if she will but improve her splendid sunshine, and the keen electricities of her winter, without hovering around air tight stoves too much, she will have some decided advantages over the mother land.

But we must remember that the grade of electricity commonly known as *cold*, is not the sole cording up and strengthening power, but that the blue, and violet rays of sunlight constitute a superb grade of electricity, which, when allowed to reach the bare body as in the case of the Kaffirs, Dyaks and many other races, enables them to far transcend, even in their hot climates, what we can do in our colder climate so far as physical power is concerned. In view of the magnificent sunlight of northern Mexico, and of our Pacific and Rocky mountain states, we may readily see what a splendid manhood and womanhood are possible there, when their people learn how to use this great natural energy properly.

14. **A Summing up of Points.**

It is evident from the foregoing that the sunlight sweeping in ethereal streams through our atmosphere, drives some of the refined portions of all substances down upon the earth. In the solar spectrum, Sir David Brewster observed 2,000 of the dark Fraunhofer lines and there being as many more of the bright spaces between these, this enables us to designate 4,000 different points of color force in sunlight, each of which has its own special power, from the burning rays below and in the red and thermal, up to the cooling rays in the blue and violet, and far beyond.

There is a vast array of forces of every kind, including iron, magnesium, sodium, carbon and the other elements conveyed by the sunlight, but why shall we not take these elements in their ordinary form from our drug stores and not go to the trouble of taking sun baths? Because when these elements are given to us in so refined a form, as to come directly from the sun as an ether, or to float skyward and be driven to us by the solar rays, they must be far more penetrating, enduring, safe, pleasant and upbuilding to the mental system than they would be if used in a crude form.—[*See VI, p. 21*].*

* The reader should realize that the different elements in their more refined form float in the atmosphere, and that the sunlight is able to repel elements similar to its own constituents toward the earth. Our scientists understand that vegetable growths receive their carbon from the sun and that by means principally of the yellow rays. If they would remember that the color potency of carbon is yellow, and that "similars repel," they would see why the yellow rays of sunlight repel the yellow ethers of carbon toward earthly objects, and they would understand that the grade of yellow rays which repels these ethers must itself be carbonic in its nature. These carbonic streams striking a plant or other object, are frequently drawn into such an object by chemical affinity. For explanation of the materials that exist in the different colored rays of light, see Principles of Light and Color, pp. 259 to 264.

If such a tide of ethereal forces, charged with all the higher elements of nature, come from the sun, we may readily understand why the nude races who absorb into their systems, this power unobstructed, possess such a marvelous strength, health, vitality, endurance, immunity from disease and power of recuperation in case of accident, while the highest medical science of civilized nations, that neglect to receive this great power into their systems, cannot develop a people who for a moment compare with them in these respects.

In reviewing the different races of the world, we find that people are strong and healthy, other things being equal, in proportion as they wear less clothing, and weak and sickly in proportion as they smother and bind up their systems with much clothing. *

If the forms of the wearers should become more apparent by wearing thin clothing, it should not be supposed that there is any immorality in it, as impurity lies in impure deeds. The most impure people where harems are kept, veil even the faces of their ladies from the public gaze, and the nude races like the Kaffirs, the Dyaks of Borneo and others are so much more pure than the so-called civilized races, that some white travelers who have lived among them are ashamed of the licentiousness of their own people when they return home. With these races all prurient feelings are done away with, and the sun and air kindling the surfaces of their bodies into wonderful activity, those internal congestions and inflammations that lead to so much animalism are done away with.

We have seen that people living constantly in shadow tend to a perverted and stunted growth, to scrofulous, consumptive and anaemic conditions as well as to loss of nerve power, mental power and all the elements of a true manhood.

I have dwelt so fully on this subject because the general public as well as the literary and even the medical world are so ignorant of this mightiest power of nature, that it is high time they were waked up to its

* Some of our well dressed and intelligent people are learning the evil of too much clothing and will be seen constantly during our cold winters without an overcoat. A singer told me that when he bundled up his neck he became tender and often took cold, but gradually he uncovered his neck, rolled his undervest away from his breast, and now never takes cold. The author has spent very many winters without an overcoat except on two or three occasions, and that partly to gratify friends for appearance sake. He wears warm underclothing and feels that he needs as much when sitting inside of a house, using his brain as he does while his blood is warmed by walking out of doors, but if he were to ride in an open vehicle in very windy, cold weather, would need an overcoat. Ex-Governor Rice of Maine, now a hale, hearty old gentleman living in New York, once stated that he used to pass through the cold winters of that state without an overcoat, and felt no inconvenience from it. But those who change from much clothing to a smaller amount should do it gradually, and toughen themselves, if possible, by sun baths on the bare skin.

importance. Some time ago I condensed many of the foregoing facts which ought to be of thrilling interest to every thoughtful and philanthropic mind, and sent the paper to several of the great magazines and several of the prominent papers of New York City, and not one dared to publish anything so new, or was advanced enough to realize the importance of the subject. Newspapers generally take more interest in publishing accounts of contagions, epidemics and deaths, than they do in showing how to obviate or mitigate these evils, and a morbid public taste demands that their columns shall be so crowded with murders, suicides, drunken sprees, fights and exciting items of various kinds, that but little room will be left for upbuilding our poor suffering race. The Phrenological Journal published a story showing the power of light and other natural forces. The *New York Herald of Health* gave one of my articles illustrating the science of color forces, which was immediately copied into the *London Sanitary World*, and *Hall's Journal of Health*, ever alert for "the new and the true," gave several of my articles showing these Wonders of the Sunlight and other fine forces, which have been variously copied. Before many years the whole literary sky will become more or less luminous concerning this free gift of heaven, which the people are in such dying need of, and those journals shall be glorified which lead off in this reform. Every day this mighty chemist of nature rolls through the sky, floods us with its glorious tide of life, beautifies all things with its rays and beckons to mankind to look up and grasp its marvelous forces in connection with which new worlds of magic shall constantly be revealed.

Some one may say to me, "Why dwell so fully upon the marvelous effects of the sun upon the nude races as long as it is quite impossible for us who dwell in civilized lands to go in this undressed style of nature?" For two reasons, first to encourage those who in some private location, or in their own private room may have the opportunity to expose themselves to these higher elements, and second, because a solar instrument called the *thermolume* has been invented, which, aided by external and internal reflectors, will enable one to receive as much sun power on the bare body in forty minutes, as can generally be obtained in hours from the sun alone.

XIII. MEDICATING BY LIGHT.

1. **A Celestial Materia Medica,** of the most definite and exquisite kind, may be formed from the direct forces of the sunlight, as these forces charge different substances. We have seen that the whole range of forces from the warmest to the most electrical, is to be found in the

solar spectrum, and these forces are signified by the color. How shall we collect and store up these penetrating color forces fresh from the great fountain?

2. **Solar Rays as Substances.**-We have seen that light is a substance as well as a motion, and, of course, each of the color rays that constitute light are substances with chemical and therapeutical potencies. These rays may be strained off most conveniently, by colored panes of glass which transmit certain rays that are required, and absorb the others, as already explained.

Thus, what is called amber glass, transmits the yellow rays principally with a slight amount of red, thus making its real color a yellow-orange. Ruby glass transmits red rays and absorbs the other colors. Mazarine blue glass transmits blue as the leading color, also a considerable amount of violet, a large amount of the refined trans-violet among the invisible rays of the spectrum, a slight amount of red, etc. To determine the mazarine blue glass, hold a lighted match or lamp just back of it and it will have a violet tint; if it remains blue, the same as before, it is not mazarine, but a cooler grade of blue. Blue glass itself, in the sun, becomes heated by the warm rays which it absorbs, but the rays which it transmits are cooling.

3. **Substances Charged by the Full White Light** receive a vitalizing force. Some delicate people cannot drink ordinary cold water, but if such water could stand in the sun awhile, it is probable that almost any one, however feeble, could drink it. Baron Reichenbach let a glass of water stand five minutes in the sun and then gave it to one of his sensitives, who felt a burning feeling from it all the way to the stomach. At another time he let her take his hand and left the room. Without her knowledge, he let the sun shine on all sides of him for ten minutes. When he came in he gave her his hand; she was astonished at the increased power with which he was charged, though she was unaware of the cause. Abundant exposure to the sun will give a great increase of magnetic power.

4. **The Color Forces** can be conveyed most readily, first, to water, as the most neutral and best balanced substance in nature and the most convenient for use, both internal and external; also, to sugar of milk or to the smaller grade of Homeopathic pellets of sugar, or to pulverized gum Arabic, which can be got at any drug store. Sugar of milk for charging best without becoming lumpy, should be coarse and granulated.

5. **To Charge Water,** place chromo lenses* or bottles of different colors, filled with pure water, in the sun one hour upward. Several hours

* **Chromo lenses of the different colors are kept by the College of Fine Forces. See explanation hereafter.**

will charge it more strongly than one hour. In cold weather remember not to let it freeze and break the bottles. The blue, being an antiseptic principle, prevents the water from becoming putrid, however long it may stand, but the yellow and red had better be changed at least, every two or three weeks in cold weather, and every three or four days in warm weather. The purple water remains pure a long time.

6. **To Charge Sugar Pellets, Sugar of Milk, etc.**, spread the material out thin in a chromo lens, or, if that is not available, in a small vial of the desired color. These constitute exquisite medicines and should be kept in vials of the same color, or if these are not conveniently found, in cloth or paper of the same color, and should be kept in the sun as much as possible. All solarized materials are most active when taken direct from the sun, but will retain the same kind of power for weeks or even months.

7. By the following very simple **Nomenclature**, a whole system of materia medica is given in a nutshell, and these articles being medicated from the pure laboratory of the sky, are free from all poisons and marvelously cheap and effective. Substances charged by different colors have a root signifying the color and an affix signifying the substance charged.

8. The **Roots** *signifying the color force* are *rubi* for red; *amber* for yellow with some orange, or mainly amber colored; *purpur* (from purpureus) for purple; *viole* (pronounced vi-o-le) for violet; *cerule* (pronounced ce-ru-le) for blue or cerulean and *verd* (verdant) for green.

9. **Affix for Water** :—The French *eau*, signifying *water*, is pronounced Ō. Spelling it phonically we will use simply the letter *o* as the affix from its greater brevity and simplicity. In this way we have the word *rubio* instead of having to say the five words *water charged with red light*, or the three words *red charged water*; *ambero* for *yellow charged water*; *purpuro* for *purple charged water*; *violeo* for *violet charged water*; *ceruleo* for *blue charged water*; and *verdo* for *green charged water*. To get absolutely pure *violeo*, or any violet charged substance, it will be necessary to expose the substance to the violet rays as separated by a prism in a camera obscura. Ceruleo made in a mazarine blue bottle or lens would almost equal violeo for soothing nerves, and surpass it for cooling hot blood.

10. **The Affix Lac** (Latin for milk) will be used for *sugar of milk*. Thus, the word *rubilac* would stand for the five words *red charged sugar of milk*; *amberlac* for *yellow charged sugar of milk*, while such words as *purpurlac, verdlac, cerulelac, and violelac* would be understood by the reader at once.

11. **The Affix Lac** (saccharine substance, Lat. saccharon), stands for charged sugar ; thus, *rubisac* is *red charged sugar,* and the meaning of *ambersac, purpursac, verdsac, violesac, cerulesac,* is obvious at once.

12. **The Affix Gum**, from the Latin *gummi*, will stand for charged *gum Arabic*, an excellent compound. Thus we have *rubigum* (red charged gum Arabic), *ambergum, cerulegum, purpurgum, verdgum violegum.*

13. **Doses.**—These solar medicines in the form of color charged water, can be taken two to four swallows, or about three tablespoonfuls at a time, or two teaspoonfuls for little children. The medicines ending in *lac, sac, gum*, can be taken to the amount of two grains or more at a time, a grain being as large as a good sized pea. Ambero is excellent to take on rising in the morning, purpuro or rubio before or after dinner and ceruleo on retiring, or the dry solar medicines on the same plan. For severe cases, take every hour.

14. **The Power of these Sun charged Substances** has been tested many hundreds of times, and in many cases they have proved marvelously effective when all drugs and other remedies have failed. They are especially gentle, safe, far reaching and enduring in their effect.

15. **Ceruleo** proves to be one of the most marvelous medicines ever given to the world. When taken internally, it cures diarrhea, dysentery, inflamed or painful stomach (gastritis), epithelial cancers, insomnia, etc. As a gargle held in the mouth awhile, it cures beyond all other known remedies a cankerous or otherwise sore mouth, inflamed gums, etc. As an eye water for inflamed eyes, it is believed to be unequaled. As a wash, it often cures chapped hands or dandruff immediately, relieves burns, especially in the form of a compress, destroys red eruption, making the skin as soft as silk and cures wounds and hemorrhages. As an enema, it cures inflammatory conditions of the womb or rectum very wonderfully, and is especially good when taken hot from the sun. As a nervine, it is remarkable. It is contra-indicated wherever organs are too cold and dormant.

16. **Ambero** is a great nerve animating principle and is especially effective in arousing liver and bowels into action. It is doubtless, the most exquisite laxative in the world, as tested for many years. A prominent New York manufacturer declared it was worth a thousand dollars to him, and a lady, whose whole being was revolutionized by it, called it "the elixir of life." Charged solid substances have the same effect.

17. **Purpuro** is especially good to help digestion if taken internally, is excellent as an *enema* in leucorrhea and ulcerated uterine organs or rectum, makes an excellent nasal douche for catarrh, and a fine wash for

baldness and dandruff. For these latter conditions, it should be rubbed in over the whole head from the end of fingers repeatedly wet in it.

18. **Rubio** like Ambero, contains an exquisite element of iron as well as other enkindling substances, and, of course, is animating to the blood. It is good for a very dormant, inactive stomach, but in case of irritation purpuro is better, or ceruleo, if the irritation is great. As a wash, it is good for rousing the skin when inactive.

19. **Artificial Light** will medicate substances, although gas light or oil light is not so rich in electrical as in thermal forces.

20. **Use of Terms.**—This exquisite solar materia medica, so simple, so cheap, so potent, is destined to come into extensive use, and should have labor saving terms. Thus, if we wish to charge a substance with blue light, we express the fact by the word *ceruleanize*. *Amberize* means to charge with yellow-orange light, *purpurize*, with purple light; rubify, with red light; *verdize*, with green light, etc. A family that is constipated may amberize their bread a few minutes by placing it in the sun under amber glass, and thus find relief, or persons who have too much irritation of the stomach and bowels may ceruleanize their food by placing it in the sun under blue glass. Wine becomes more or less amberized, and thus animating in its nature, by being put up into yellow bottles as is so commonly done. It would not be safe to drink rubified liquors in the usual amount.

21. **Gases.**—In the foregoing I have spoken of the charging of solids and liquids with the solar forces. But gases such as the atmosphere, may also be color charged and in this way the lungs can be reached. Thus, the *air* in a red bottle will become rubified by standing a few moments in the sun, and if inhaled as soon as the cork is withdrawn, will prove animating to the bronchi and lungs; in a blue bottle it will be ceruleanized and will prove healing and soothing to irritated or hemorrhagic conditions of the lungs or for phthisis. We may designate color charged air as *rubeges*, *ceruleges*, *purpurges*, etc.

22. **Chromo Homeopathy,**—Under the head of Homeopathy I will, show how some leading homeopathic preparations may have their power greatly increased by being color charged, and may be designated in connection with the foregoing color roots on a simple and beautiful plan.

XIV. HEALING INSTRUMENTS OR PATHO MECHANISM.

1. **Therapeutics** has heretofore been a very lame science, for lack of instruments to work with. To remedy this deficiency, as far as possible, and to utilize the wonderful power of sunlight, with its various colors, the author has invented a series of solar instruments, now to be described.

Fig. 20.-The Chromo Disk.

2. **The Chromo Disk** (fig 20) is a funnel-shaped instrument, made of planished copper, with nickel plated inner surface to give a brilliant reflecting power or more latterly of aluminum. The large end is held directly opposite the sun, so that all sides may receive the light equally, while the small end is placed near or against the part of the body to be affected. It has required a considerable experimentation to get the rate of convergence for the greatest power and the best method of using colored glass circles. At first the colored circles were placed at the small end, but they were so constantly broken by the heat, that they are now placed at the large end, almost directly over the standard, and are held in place by little catches. For the greatest heat the disk is to be used without any glass, and in an open window. In a good sun the skin can be rubricated in one minute and blistered in three minutes when held close against the small end. It is called a red disk when the red glass is in, a blue disk when the blue is used, a full disk when used without glass, etc. One shaft 3 moves up and down in another, where it is held at any point by a thumb screw. The disk is held at any angle to receive the sun the best, by another thumb screw, and moves in all directions with the utmost ease.

Some marvelous cures have been made by the disk. A lameness of years standing, in Michigan, was permanently cured by a red disk, in fifteen minutes; an internal hemorrhage, which the doctors had pronounced incurable, was entirely healed by a blue disk, and many other cases could be given. A gentleman in Cincinnati focused the full disk upon himself, a few minutes every morning before dressing and said "it made him feel like a fighting cock all day." For local treatment, it is a great power, an amber disk being very fine over the cerebellum and sacral plexus for paralysis, and over the bowels for constipation; a purple disk is especially fine over the stomach, lungs, kidneys, etc., and a blue disk over acute inflammations, and over the womb fifteen or twenty minutes for menorrhagia.

3. The **Chromo Lens** (fig. 21) is a double convex hollow lens, which, when filled with water, concentrates the light by *refraction*, just as the disk does by *reflection*. It has this advantage over the disk, however, that while the water is being exposed to the sunlight in lenses of diffe- .. colors, it is converted into a medicine of most refined

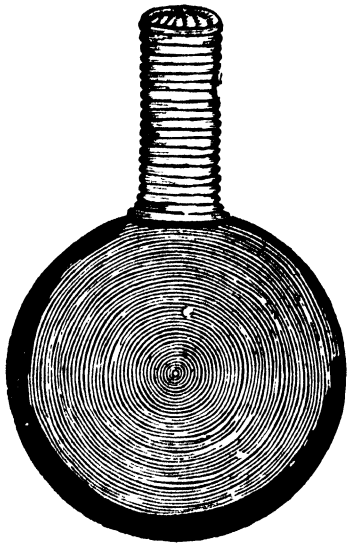

Fig. 21.—The Chromo Lens.

safe and penetrating character, which is more potent to cure various diseases than any drug in the whole range of our materia medica.

The color of these lenses is the *transparent*, which produces the greatest heat and admits of colored solutions of any kind, which can be focused upon the body; the *yellow-orange or amber*, which is nerve animating and laxative, and can be focused over the liver, bowels, etc., to advantage in case of dormant conditions; the *red*, which is animating to the blood, and is admirable in chronic rheumatism, gout, bronchitis, suppressed menses, cold blue conditions, etc.; the *blue*, which is cooling, nervine, astringent, etc., and the *purple* which is excellent for lungs, stomach, kidneys, etc. They are over seven inches in diameter and will hold between one and two quarts. When used to focus the light they should be held upright by the handle, and when used to charge water they should be hung in the window by a ring not shown in the engraving. The great advantage of the chromo lens is that it can be focused over the external portions of the system where the serous membranes can be best reached, while the water charged within, taken internally, affects more directly the mucous membranes, thus reaching the positive and negative poles of power.

The remarkable character of water medicated in these lenses has been tested many hundreds of times, and is explained under the heading *Medicating by light*, p. 64.

These lenses sometimes accomplish great cures by focusing on different parts as well as by charging the water. Thus the amber (yellow) lens should be focused into the ears for deafness caused by dormant conditions—into the eyes for amaurosis, over bowels for constipation, etc. The blue of course is used to quell excitability and inflammation.

Cancers and other tumors of the stomach have been cured by their internal and external use, hundreds of cases of constipation and diarrhea some of the most obstinate kind, have been healed. Burns, chapped hands, acne, inflamed eyes, dandruff, etc., have been speedily remedied by the charged water as a wash, while insomnia, fever, gastritis, canker, menorrhagia, deafness, cholera infantum, etc., have been made to subside.

4. The Thermolume

We come now to the most important healing instrument thus far given to the public, namely, the Thermolume, which is a solar sweat bath, or an instrument which can be used to animate the system without sweating if desirable. To yoke the sun to our chariot is to control the grandest life-giving force of nature, the force which kindles the brain, nerves, muscles, blood and all other growths in the world.

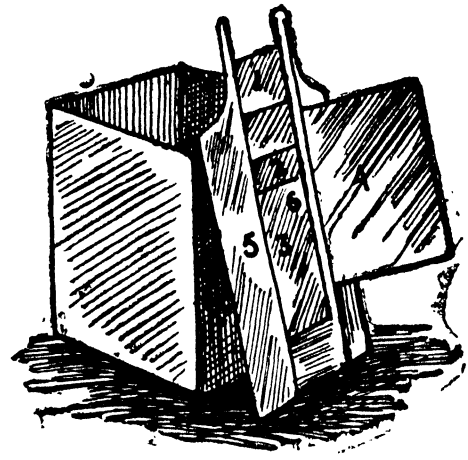

Fig. 22—The Thermolume.

1 is a sheet of enameled blue glass which shields and cools the brain; 2 is a colored pane which may be inserted at any point; 3 is a double thick sheet of French glass; 4 is one of the polished reflectors; 5 is the front frame; 7 is the body of the instrument which folds up.

The word thermolume (from *therme* and *lumen*) means the *heat and light* instrument. The heat that is not connected with light is almost a dead force as compared with luminous heat. Luminous heat follows law of power by being refined and hence penetrating, enduring in its effects, safe, enkindling to mental forces and delightful to the sensation as it strikes the bare body. A cultured lady once remarked that she felt she was in Elysium when she was in a thermolume, and spoke of the great difference between it and a hot air or steam bath. Her life was saved by it. Every case of Rheumatism, Consumption, Dropsy, Scrofula and Neuralgia that has received a regular course of treatment in it, has up to the present time been cured, and it is, perhaps, the only treatment ever devised that can eradicate syphilis from the system. In all treatment of the blood, nerves and skin, the thermolume stands pre-eminent over all other instruments. * The patient sits in the instrument

* Mr. W. C. Bowman, formerly of the University of Virginia, and now pastor of the Church of the New Era, Los Angeles, Cal., gives the following account of this treatment in Cincinnati, which I quote, although some cases of still greater importance have occurred elsewhere. The author spent three years in establishing a Health Company in Cincinnati.

"I now desire to say something about this latest and most marvelous method of practice which is still more important to the suffering. I have not only studied this system with strange delight, but have also known and witnessed its practical power in actual cures.

"A case under my own personal observation was that of Mrs. Celia W. Hunt, who came from Indiana to Cincinnati in a helpless and almost dying condition, from a desperate combination of Diseases—swollen to monstrosity with dropsy, morbid with various tumors,

with his head out in the cool air, and under the soothing effect of the dark enameled blue glass (1), while a blanket or oil-cloth arrangement covers the whole top of the instrument, coming around his neck, the right corner catching over a sharp hook toward the left of the front frame, and the left corner hooking over toward the right. This shuts out the cold air, and is much better than a wooden frame for the top. When the patient is seated, with knees as close to the front glass as possible, the feet being placed on a little stool, the operator must adjust the colored glass to different parts of the body that may be diseased. If he is not sure what color is best, it would be safest to take the full sunlight. It would nearly always be safe and wise, however, to put the purple glass so that its light would come over the stomach. For constipation, put the yellow glass over the bowels, for profuse menstrual flow, put blue glass over the womb; for deficient flow, have red glass over the womb; for rheumatic joints, use red or red-purple glass; for bronchitis or asthma, place red or red-purple over the upper chest; for consumption (phthisis) if there be no hemorrhage, the same, but if there be hemorrhage, blue must be used until the hemorrhage ceases, and then purple or the full sunlight; for irritated condition of the spine, blue-green and blue-purple; for spermatorrhea, green over the lumbar plexux; for inactivity of the sexual system, red over the lower spine and sexual organs; for dormant kidneys, purple, alternating at times with the full white light; for cold parts, red, or red-orange or red-purple; for

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and one knee stiffly anchylosed with rheumatism, all have grown worse and worse for eight months under eminent regular medical treatment. She placed herself under Dr. Babbitt's treatment, and in three months she was practically well, the stiff bent knee having been straightened in the second treatment. (Her weight to commence with was 271 pounds, fifty pounds of which was taken away in a few weeks.) In her fullness of rejoicing she wrote: 'The **Thermolume** is God's best gift to man in the nineteenth century.'

"Among other notable cases of cure in the same city, some of them personally known to me, others only by report of persons of undoubted credibility, were the following:

"The wife of C. W. Clarke, was cured of *consumption* under the doctor's personal treatment.

Another Case of Consumption was cured in the same way, Mr. J. W. Black handing the **Thermolume**. This same Mr. Black, whom I knew quite intimately, cured himself of *hay fever* in a single treatment in the **Thermolume**, the disease having been running upon him for ten years.

"A case of inherited *dyspepsia* was completely cured in Robt. E. Clarke, and his condition was pronounced terrible.

"Also, two cases of *sick headache* (Mr. & Mrs. Groene) were cured by Dr. Babbitt's **Thermolume** at his own house, in three treatments.

"I give these few testimonials, prompted in what I say purely from my high estimate of this new and marvelous medical revolution, and my sincere esteem and admiration of Dr. Babbitt, the upright man and the exalted genius who is working out this startling reform with such untiring persistency."

peritonitis, blue or blue purple over the bowels; for all hot or acute inflammations, blue.

The reader may say, why use instruments at all? Why not expose the body to the full sunlight? 1st, because by external reflectors we can get more sun power, and thus save a great deal of time; 2d, by the internal reflecting surfaces, the light is preserved and sent all over the body at once; 3d, because the thermolume enables us to protect the brain by the soothing blue, and to give the exact color forces to other parts of the body which their condition requires; 4th, because in many cases, people cannot expose their bare bodies to the direct sunlight, for the air may be too cold, or the sun too exciting to the nervous system or burning to the skin without colors, and last but not least, the thermolume constitutes the most delightful and invigorating sweat bath instrument in the world. The sun destroys impure germs in the blood, and the perspiration eliminates still other impurities with such a gentle and upbuilding power, that even feeble invalids can take it without exhaustion. If the patient is very thin and ought not to do much sweating, after two or three times it would be well in hot weather to open the cover a little, so that the cooler air could come in. Very feeble patients, under a hot sun, may at the first bath, feel faint, and should have a cool wet cloth or sponge on the head. The more these thermolume baths are taken on the bare body, the less tendency to sunstroke will there be.

The thermolume shown in the cut, Fig. 22, has no floor, and as the reflectors and top frame (5) come off with ease, the whole instrument can be folded into a small space and laid away in a closet when not in use, or folded for shipping.

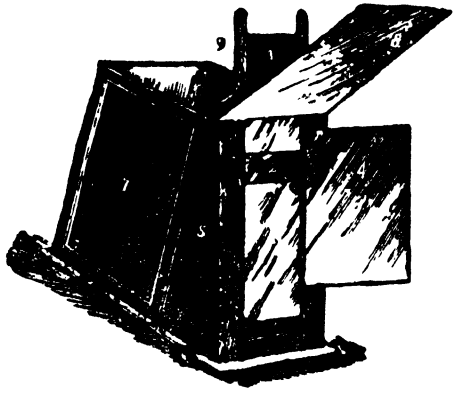

Fig. 23.—The Physician's Thermolume.

5. Fig. 23, presents the **Physician's Thermolume**, which has reflectors of aluminum, which is a metal-less tarnishable than silver. The top reflector (8) may be held at any angle according to how high the sun may be at the time of a bath. When it is desired to sun the legs and feet it must, of course, be raised higher than when the chest is to be reached.

6. When **Artificial Heat** is needed and gas be conveniently used, iron tubing is placed under the higher grade thermolumes, with a burner and circular metal frame under the chair of the patient,

on which a steaming pan rests, and a smaller burner farther forward which comes under the sloping stool. The steaming pan should be partly filled with water and the light not turned too high.

If there is no gas in the house a kerosene stove is furnished to go under the seat, and a low alcohol lamp to go under the foot stool.

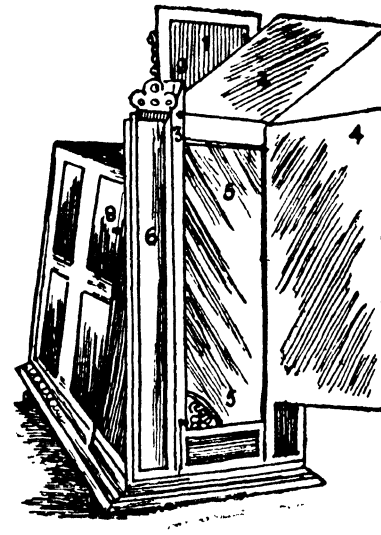

Fig. 24.—The Grand Thermolume.

Explanation of the Grand Thermolume.- 1 is enameled blue glass which cools the brain and protects it from the sun; 2 is a top-reflector of polished aluminum which is held at different angles according to the altitude of the sun, by the chain at number 9; 3 and 4 are large side reflectors of aluminum, which should not rest at an angle of 45°, as this would not reflect a single ray inside of the instrument—half as much outward slope would be about right; 5 is a broad sheet of double-thick French glass, over which colored panes are placed, as explained elsewhere; 6 is the front frame with triangular side-pieces that fold; 7 shows through the glass the oilcloth on the floor of the platform; 8 is the door which is hinged on the back part of the instrument. The whole instrument can be folded for shipping. The glass front of this instrument is wider, the colored glass more abundant, and the finish is superior to that of the other instruments.

7. **The Reclining Thermolume** (Fig. 25) is especially suited to a sick or weary person. When reclining, the body is thoroughly negative

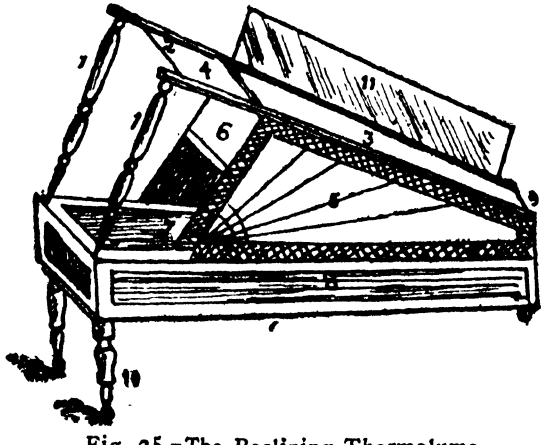

Fig. 25.-The Reclining Thermolume.

1, 1, the pillars that hold up the frame; 2, 2, are screwed into the rail below; 3, the French sheet glass, 14 x 46 inches; 4, the enameled blue glass to shield and cool the head of the patient, which lies below; 5, one of the side doors with a bright inner reflecting surface; 6, the front door; 7, the steel wire mattress; 8, the hot air chamber; 9, Slit to let an upright pane of red or red or purple glass for warming the feet; 10, legs; 11, one of the reflectors. A top reflector attached to the upper crosspiece would add much to the power.

and receptive of nature's subtile forces. A doubled blanket or comfortable is laid over the spring wire bottom (7), to which is hung a heater, that will warm any part of the body with steam or hot air if sufficient heat is not received from the sun. The lamps rest on the bottom of the hot air chamber, and can be moved under the steaming pan or under the dry metal or both. The front door (6) has a bright reflecting inner surface, which throws the light down over the lungs of the patient, an important thing in pulmonary weaknesses. On the outside of it are two hooks, on which a towel is caught and allowed to come down around the neck of the patient, to shut in the hot air. The feet being usually the coldest part of the body, can stand to advantage a red or red-orange pane in the upright position at 9, but if the patient is too excitable, a purple or transparent pane should be inserted. The instrument can be taken apart for shipping, the reflectors pulled out, the frame 2, 2, lifted off, the legs (10) folded, the pillars (1, 1,) unscrewed, and the side doors (5, 5) slipped off their hinges.

8. **For Family Use** where room is wanting, the folding thermolume, fig. 22, is best. By the aid of such a *home doctor* to keep the system cleared out and vitalized, sickness ought to be impossible with any kind of a correct life.

The Electro Thermolume, fig. 26, is supplied with an arc light, which being equally white and pure as sunlight and working with the same kind of chemical power, is especially valuable for cloudy days and nights. The incandescent light is too yellowish, like gas light, to act as a perfect healing power. See 'Principles of Light and Color' for fuller description.

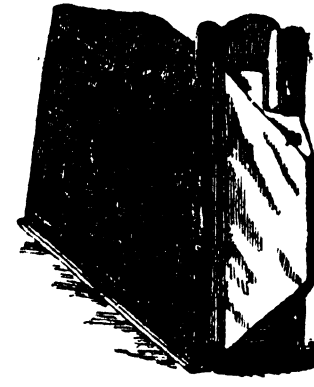

Fig. 26.—The Electro Thermolume

XV. ENCOURAGING FEATURES WITH REFERENCE TO THE NEW METHOD OF CURE

Space being wanting, a multitude of statements in proof of the foregoing principles of Chromopathy must be omitted here, while a considerable number will be given in connection with the treatment of various diseases in the after parts of this work. It will be proper, however to quote some of the expressions and experiences of various thinkers and workers, in connection with this department of the science of cure.

1. Opinions.

From the Rt. Rev. Jas. T. Wholly, Port au Prince, Hayti, Episcopal Bishop of Hayti, who has commenced practising Chromopathy in his own family:

"I am much interested in the perusal of your 'Principles,' etc. As all must confess, however little they may know of science, the solar ray is the great fructifying medium of all terrestrial life. Your application of this principle to the healing art is founded upon an incontrovertible basis.

From Rev. Shirley W. Baker, D. M., LL. D., Auckland, New Zealand.

"I am more in love with these principles every day and have more confidence than ever that you have revolutionized the whole system of healing and introduced to the world God's own system."

From the late Prof. R. F. Humiston, eminent as a Chemist and a Professor in Medical Colleges for twenty-five years.

"I find I am becoming very much interested in therapeutic chromology from reading your inestimable book on the subject."

Mrs. C. W. Hunt, a lady of culture, writes as follows to Mr. Albert F. Ransom:

"It has been left to Chromo Chemistry to give us, for the first time, the basis of an exquisite Materia Medica, which will be hailed with joy by millions, who are beginning to believe that their bodies were not designed by nature merely as receptacles for drugs. The principles of Chromopathy are founded on immutable truth."

The Rev. John H. Hall, New York, writes as follows to the author:

"I believe the principle of cure you have developed is successful, and the most extraordinary discovery of the age."

From M. L. Holbrook, M. D., the well-known editor and author:

"Your cause is noble. Heaven bless and guide you in all you do."

From Geo. H. Binkley, M. D.:

"Your work (Principles of Light and Color) has come to the minds of men as a new revelation—is simply invaluable to the honest physician. My success in my practice has been greatly enhanced since using it. Disease gives way as if by magic."

The following is translated from a very able review of the Principles of Light and Color in *Le Lotus*, a philosophical journal of France:

"This extraordinary work by its character, its subject, its method and its 'conclusions commends itself to the attention of all who are interested in science and philosophy . . . It recalls the celebrated discourse where Clausius has been able to deduce from the relationship of light and electricity, the unity of force in the universe. The *Principles of Light* should then be for savants, a key which permits them to penetrate to the very secrets of substance. It is, indeed, that which commends this book, compared with which, the bold efforts of the savant Crookes, seem but as brilliant first steps. Although, notwithstanding the evident care of the author to escape from all poetic development, it always captivates by the majesty of this grand subject, in which not a feature is neglected in its rigorous conciseness. He does not act here upon a system purely hypothetical, constructed *a priori*. Mr. Babbitt, a savant well-known, tells us he has spent years in his researches upon the form and constitution of atoms. Those which he attributes to them, seem at first, to be but an ingenious hypothesis, but its justification comes almost immediately from the explanations that are furnished of molecular mechanics, then hundreds of scientific facts, some well-known, others neglected up to this point, complete the confirmation. . . The book commences by explaining these great principles of nature to ultimate in transcendant theories.

"We give all our gratitude to Mr. Babbitt for having consecrated with so much success his high science, in explaining to us this grand mystery of the sphynx, this constitution of man, animal in the image of God, who outdoes the genius even of a Pascal, in so far as that does not reveal the sublime harmonies taught in this book, and we greatly desire that a French translation may soon spread before us these amazing *Principles of Light and Color.*"

2. Progress of the Work.

Although our first instruments were rather imperfect and our means of making the sun healing movement widely known, were limited, yet the remarkable results achieved, and the importance of the principles connected therewith, have already made the cause widely known. Orders for books and instruments have come form Australia, New Zealand, India, many countries of Europe and all parts of our own country.

3. Educational Features.

The New York College of Magnetics founded in 1883, and chartered under the laws of the state of New York, on January 28, 1887, had for its purpose the teaching of the science and use of Light, Color, Magnetic Massage, Water, Air, Electricity, Mind Cure and other refined natural forces, in the process of human upbuilding. In 1893, the institution was transferred to the suburban town of East Orange, ten miles from New York, under the name of College of Fine Forces and chartered under the laws of New Jersey. In 1896, the Institution was transferred to the beautiful city of Los Angeles, California, this great sun-land being considered especially appropriate for the experimental development of these grand forces of nature.*

The following Testimonial, signed unanimously by the students of the first class, was drawn up by Mr. W. C. Bowman, formerly of the University of Virginia, and well known as an able lecturer:

The undersigned, students in the College of Magnetics which Dr. Babbitt has established, esteem it both a duty and a privilege, to make a brief statement to the public as to their estimate of his merits and the merits of the new and marvelous system of Therapeutics which he has discovered, and is now introducing to the world. Having just passed through his first course of lectures on nature's finer forces as medicinal agencies, they feel a profound appreciation of the high instructions they have received, and also a strong desire that the community at large be made acquainted, as rapidly as possible, with what they regard as by far the truest, grandest and worthiest step of progress in medicine the world has thus far seen.

The grand thought underlying and permeating this new system, and one already accepted in a general way by advanced thinkers, is, that *all forces are powerful in proportion to their subtlety, and that all real progress is from the coarse to the finer.* In fact the application of this principle has been measurably illustrated all along in the past history of medicine. The crude and nauseating drug doses of the old practice, have been

* The following gentlemen, all eminent in their departments have been Presidents of the Board of Trustees: The late Prof. Henry Kiddle, long the Superintendent of the New York Schools, Dr. F. G. Welch of New York and Prof. Alexander Wilder of Newark, N. J., for some time at the head of medical colleges.

gradually displaced by the more refined extracts and essences in the sugar pellets of the Homeopath, until "taking medicine" has been relieved of much of its disgust.

And now at last the glorious fact has dawned upon the world, through this latest and highest revealment, that nature's true materia medica and art of healing are not found in the drug store, but in her own grand laboratory, already essentialized and refined, teeming in exhaustless store all about us in the very elements themselves, in vital air, in sunlight, the prismatic colors, the electric current, the magnetic hand, forces so all abounding and so refined that we almost feel it is the hand of God and not of man, which now prepares and administers our medicine! medicine so pure and fine that it heals the soul as well as the body.

W. C. Bowman, Mrs. J. R. Sanford, Mrs. Celia, W. Hunt, Geo. Wilhelm, Mrs. A. E. Kibby, Mrs. S. A. Bowman, A. F. Ransom, Miss. Eulalie Gleason, Mrs. Pauline, M Pillsbury, Mrs. N. S Crossley, Mrs. Dr. Mary, A. Powell.

The following is from Mr. Hudson Tuttle, the well-known author:

"Dr. E. D. Babbitt is Dean of the New York College of Magnetics (now called the College of Fine Forces), an institute of refined therapeutics, which is fast becoming of world-wide fame, and attracting students from many countries. It builds on exact science and includes the Magnetic, Electric, Chemical, Solar and Spiritual Forces which underlie everything. Its course can be taken at home, and a diploma conferring the title of D. M., Doctor of Magnetics, granted. Dr. Babbitt is author of several valuable books on the subject."

XVI. SOLAR ARCHITECTURE.

1. It is quite time that our architecture had taken a new and higher step in harmony with the better science of life that is now dawning upon mankind. The whole architecture of the world must gradually be revolutionized, in proportion as these grand forces of sunlight become understood.

2. **Windows.**—One great need of the day is more and larger windows—windows with large panes and light sash—windows which will open above and below, and thus ventilate as well as illuminate. If sunlight is necessary to destroy the bacteria and other impurities of the air in a room, how important that every room in a house should receive it, for a greater or less time each day. When the weather is excessively hot, the windows can be shaded after a room has been properly sunned.

3. **A Solar Story** is one which slopes much like a Mansard roof but has the windows sloping with the roof, as in the second story in figure 27. This lets the sun much farther into the rooms and is quite as handsome in appearance.

4. But the **Roof Balustrade** is the feature of greatest importance in the new departure. This is built all around the outside of a roof and should be four and a half feet high, so that a person may walk within its enclosure in a nude state, to get the sun and air. The Romans often

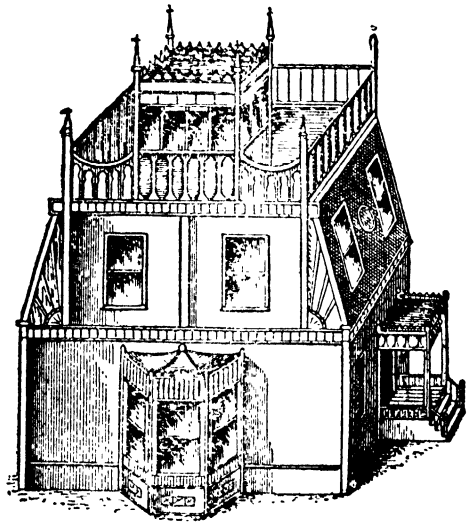

Fig. 27— House with Roof Balustrade and Pavilion.

used the tops of their houses for a *Solarium*, in which they walked naked at mid-day with only a wet cloth around their heads. By these and other natural appliances, they attained to a splendid power both of mind and body.

5. I have designed some residences on a simple plan which I herewith present. The balustrades painted with contrasting colors will prove highly ornamental, and the architect can add embellishments to a much greater extent if required. The house, (fig 27,) is 28 × 36 feet. The upper part of the solar story is 20 feet wide, the sides sloping in at the top, four feet each. The balustrade enclosing the pavilion and the whole upper portion of the house constitutes the ***solarium***, and is 20 × 36 feet. The pavilion is 8 feet front and 12 feet deep. The stairway leading to the pavilion from below, is through a covered passage so that in cold weather one need not come in contact with the wintry air in going to or from it. The windows of the pavilion are four feet wide by five feet long, and can be let down in summer to get the breeze as well as the light. Within the pavilion a thermolume could be placed so that delightful solar sweat baths could be taken.

As a family retiring place for a summer evening, the solarium is delightful, being so airy and so private. As a place for getting well and keeping well in the day time, it will be found to have a marvelous potency.

Figure 28 shows the interior arrangement. The parlor is lighted

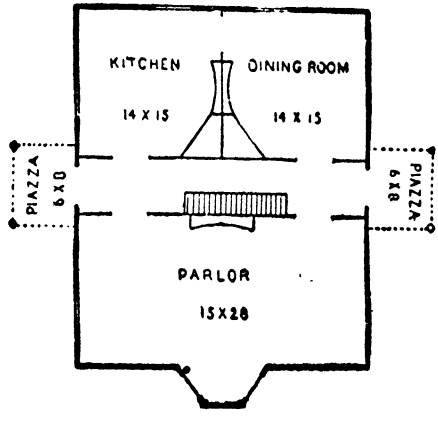

Fig. 28.—Plan of First Story.

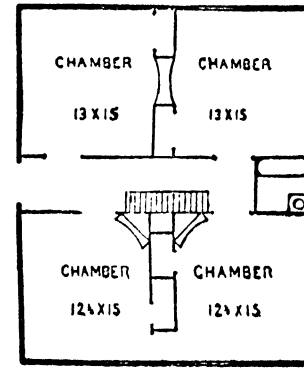

Fig. 29.—Plan of Second or Solar Story

by a bay window and by a window at each end, which lets the breezes through. The room marked the kitchen can be used as a reception room if desired, and a kitchen be built on beyond the dining-room. Figure 29 shows the four bed-chambers and the bath room, which is lighted by a circular window. The figures show the dimensions of the rooms, including the walls. The stair-way leads to the solarium. The bedrooms are so arranged that in case the house fronts the south or the west, the heads of the beds may stand toward the north, as they ought to.

6. Fig. 30 shows how balustrades and pavilions may be combined in a block, each house being separated from its neighbor by a wall 8 or 9 feet high, so as to prevent intrusion. The pinnacles give a spirited effect, and, pointing heavenward, typify upward aspiration. The balustrades can be made of wood at small expense, and admit of rich color effects. Each house is 25 x 32 feet. The pavilions are 15 feet front and 9 feet deep, and will admit the sun powerfully, being arranged as a solar story.

Figs 31 and 32 show the plan of the two stories of these houses. A screen may be placed on the inside of the kitchen door. All the outside doors, both front and back, should have glass panels. For larger families, these houses can have another story added. The stairs to the solarium are entered next to the outside walls, and the front bed room adjoining has a closet under the stairs.

7. Fig. 33 presents a block of buildings 84 feet long and 40 feet deep, arranged for six families who co-operate, and have their common

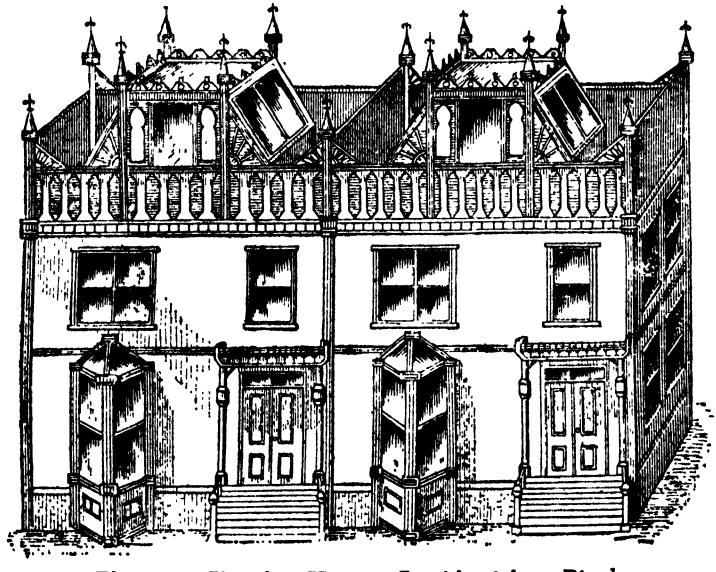

Fig. 30.—Showing Houses Combined in a Block.

kitchen, laundry and storeroom, a little ways back of the building, in connection with which are telephones, also wires for conducting baskets of food, clothing, etc., to any of the apartments. A tower, twelve feet square, leads into all the apartments, which have their own private halls. Each family has eight rooms besides a bath-room, store-room, and the co-operative rooms. The arrangements for steam heating are in the basement.

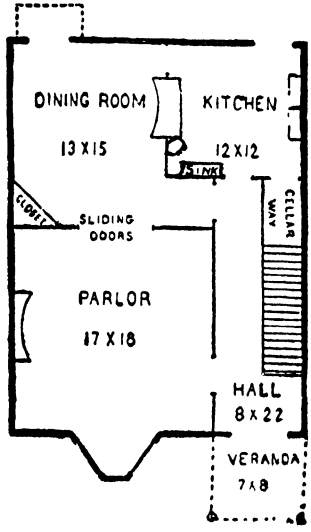

Fig. 31. First Floor.

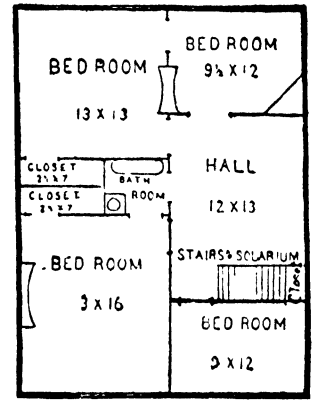

Fig. 32.—Second Floor.

Fig. 33.—A Block of Buildings for Co-operative Homes.

On the top of the house is the glass house, or solar gymnasium, which the draftsman has made too low and with too many panes of glass in the roof. This house is entered from the tower. It should have a number

of gymnastic contrivances which the members of the families below should use in nearly a nude state so as to gain the soft and vitalizing light that comes through the roof. I speak of soft light, as the roof glass need not be fully transparent, but rather a thick and somewhat translucent glass similar to what is sometimes used over stores. A pool of somewhat warmed water would be fine for a brief closing exercise

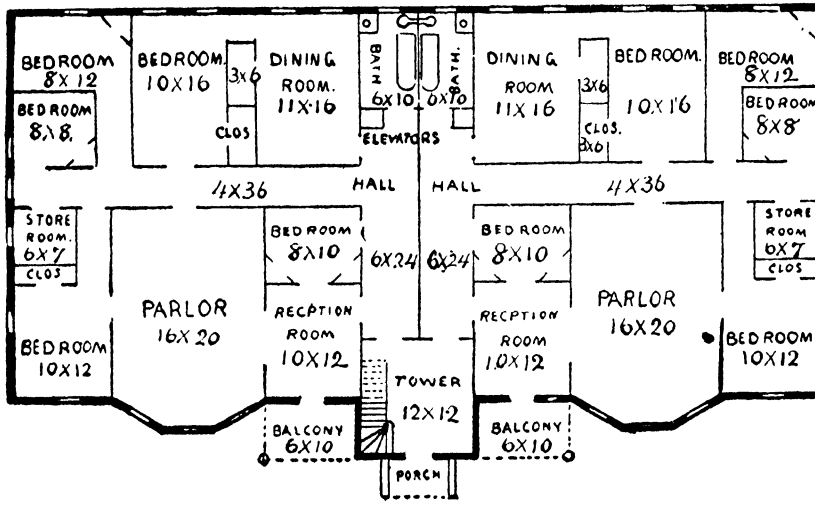

Fig. 34—Plan of the rooms for the Co-operative Block.

and will give great freshness of feeling as well as cleanliness, if not used long enough to conduct away the magnetism gained by the sunlight.

One part of the day should be sacred to the women and babes, another part to the men, while at least, Saturday should be given up to the children. In this way, pleasure and power would be gained simultaneously. In the early, hot summer evenings all could gather in this solar gymnasium, where the breezes would be far more refreshing than those that are nearer the earth.

8. The cut represents a block of two buildings. It would be more profitable to have four such blocks, while between them, in a central position, should stand a co-operative kitchen, laundry and storehouse, in which everything is bought and worked up by wholesale for the good of the whole. Each family could telephone its order for food and have it promptly sent up excellently cooked, at prices as low as the raw material usually costs. The agony of washing and ironing would be done away with, for machinery and equipments for the purpose at the central building would ensure its being done better and more cheaply than private washing. The blocks should run north and south so as to get the sun on both sides each day. The families combining could get

a landscape gardener at a small expense each, to cultivate the lawn and flower beds between and in front of the two blocks, until the surroundings would be quite park-like.

The floor of the solarium should be made strong and sound proof, so as not to disturb the people of the third story. If the third story is eleven feet high there will be ample room for the pool, without touching the heads of the dwellers.

9. The **Sun Garden** is an enclosure on the ground, suitable for a combined sun bath, air bath, sand bath, and, if practicable, a water bath. Such a garden would require that there should be no houses sufficiently near to look down upon the nude bathers. A good model would be the balustrade and pavilion of the house, Fig. 27, only that this enclosure should be seven or eight feet high, and if convenient, larger. It would be desirable to have two or three loads of sand in one part of the garden, near this the pool of water, in another place some simple gymnastic equipments, and in the pavilion a thermolume or disk or both, for more powerful solarization. Here nude children would love to roll and play in the sun-charged sand, or take a dash into the water, and thus, in the course of a few weeks, would gain a toughness and vitality of constitution which would benefit them for a lifetime. Here too, the weary adults of the family could gain freshness, and power and freedom from disease, which would make life a joy instead of a burden. There would be one great *drawback*, however, in case sun gardens and solaria should come into general use, namely, the doctors and druggists would lose many of their fees.

10. Public Sun Bathing Establishments could be built on the tops of houses, and should have, at least, the southern exposure slope, so as to let the almost vertical sun of summer well into the building. Fig 35 is a structure for public sun bathing about 25 feet wide, 44 feet deep, and 10 or 11 feet high. The six panes in front are 4 x 5 feet and good sheet glass, double thick would answer. These could be hinged at the top and drawn up toward the ceiling when it is desirable to have the fullest light and air enter. Some large eastern and western windows would be required for early and late bathing. Fig. 36 shows the interior arrangement of the same and the plan for treating both sexes

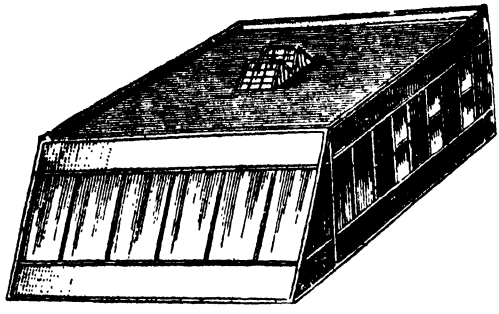

Fig 35 - Form of a Sun Bathing Structure.

at the same time. The whole of one side is for ladies, the other for gentlemen. I will now describe what I deem the most luxurious and upbuilding bath thus far brought before the public. The patient is supposed to come up the stairway at S, males turning to one side, females to the other. In order to have expense in an institution which is not of the most extensive kind, the same shampooing and spraying room is used by both sexes, which can easily be done, as the process is not long. For example, a male patient, after disrobing in one of the dressing rooms, is first taken by his attendant into a shampooing room, the door on the ladies' side being locked. A small cistern above, which is sun-charged from a skylight, supplies the water, and the patient's skin is soon thoroughly cleansed. He is then taken out, the door locked on the gentlemen's side, and he is brought into the gentlemen's side of the solarium, where he enters a thermolume. A large movable screen extending entirely across the solarium, separates the sexes, and can be so changed as to give the most room to the side which has the most bathers. The operator adjusts the colored glass over his patient, according to his condition, and allows him to lie or sit in the sun until he has perspired sufficiently. He then takes him into the spraying room, where, by aid of a compressed air pump, an exquisitely fine spray of perfumed and ceruleonized water is thrown over the patient, to cool and close the pores and rinse off the perspiration. This is but a brief process, as we do not wish any long applications of water to conduct away the solar magnetism that has been received. The patient is then taken to the gentlemen's massage room where, lying in a sheet, if it is summer, or in a blanket, if it is winter, he receives a number of minutes of treatment over his whole body from a magnetic masseur or masseuse and comes out wonderfully rejuvenated.

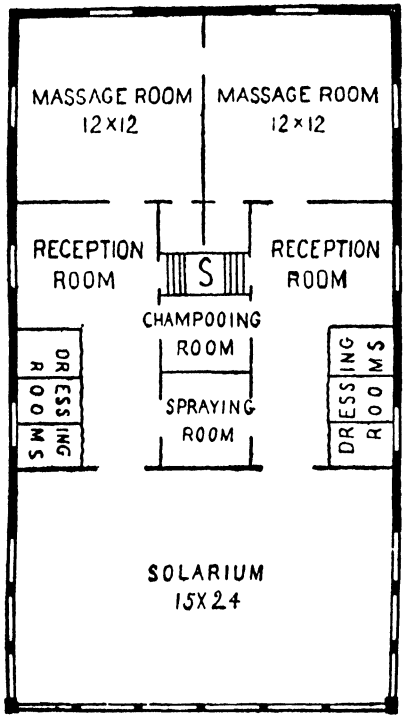

Fig. 36.—Interior Arrangement.

The spraying process should be understood a little better. The glass in the little skylight above the cistern should be of blue, the astringent character of which closes the pores, prevents taking cold and makes the

skin as soft as silk. For feeble or delicate persons, the spray thrown over them should be almost as fine as a mist, such as the air pump throws.

11. **Electric Light Baths.** For private families we are sure to have sunlight often enough to keep all the members of them in fine condition, if they possess a thermolume and use it. In the public sun bath establishment, however, it would be inconvenient to have a large rush of patients, and have the sun suddenly go under a cloud. Then again, those who wish the vitalizing power of a luminous bath, and have no time except in the evening to take it, must, of course, do without sunlight. To remedy this, I have devised an electro-thermolume in which the electric arc light is used. (See fig. 26.) Why do I say that this resembles sunlight? Because a powerful arc light can blacken the salts of silver as rapidly as sunlight, and Professor Siemens, in England, ripened fruits in mid winter by the arc light even more rapidly than is done by sunlight in this climate. Raspberries and strawberries were developed in sixty days, and grapes, with a flavor pronounced superior to those under sunlight, in seventy-four days.

XVII. COLOR, THE MEASURE OF FORCE

1. **Its Universality.** Color measures *forces* and to a great extent *qualities* in every department of the universe. Thus *red* is the color of warmth not only as seen in coals of fire,* in red sunlight, in capsicum and the like, but in emotions of love and passional energy, as is apparent to persons whose interior vision is opened. Blue on the other hand measures coolness and elctricity as in the blue rays of light, blue venous blood, the blue element of acids, etc. To the clairvoyant, the cool reasoning front brain appears blue, the back-brain and lower brain red. Such facts prove the absolute unity that rules everywhere, both in matter and mind.

2. **Atomic and Chemical Force.** By aid of the atomic theory already given in this work and especially in the "Principles of Light and Color" we may know absolutely that such minute particles as atoms have an existence, and constitute the basis of the universe, as demonstrated by the law of color. Thus we know that hydrogen and the alkaline metals, as well as the white metals generally, are thermal, and hence their atoms being widened out by heat, will naturally encase and hide electrical atoms, which are made narrow by cold. To chemists it has been the mystery of ages that when two atoms combine, the color

* Some persons may suppose, from the fact that white or bluish light is often hotter that red light, than the above theory is false, but the bluish light gets its intense thermism by appealing to the red through chemical affinity. There is such thermism in the orange and yellow also, but generally of a milder kind.

force of one of them is apt to be entirely obliterated. If now we shall find that the colors of electrical atoms are generally obliterated by contact with thermal ones, and not those of the thermal atoms by contact with electrical ones, our position will be proved, and it will also be settled beyond dispute that there are definitely formed particles of matter, acting according to exact laws, which may be called **atoms.** I will now give a few leading combinations of thermal and electrical atoms, and indicate their colors as admitted by chemists:—

Calcium Chloride (Chloride of Lime, $CaCl_2$) has a white color like the thermal calcium, not yellow-green like Chlorine.

Magnesium Chloride ($MgCl_2$), white like the magnesium.

Potassium Chloride (KCl), white like the thermal substance potassium.

Argentic Chloride (silver and chlorine, AgCl), white like the silver.

Mercuric Chloride, or corrosive sublimate, ($HgCl_2$), white like the mercury.

Mercurous Chloride or Calomel (Hg_2Cl_2) white.

Antimony Trichloride ($SbCl_3$), white like the antimony itself.

Hydrochloric Acid (HCl), transparent like the hydrogen.

Hydrogen Iodide (HI), transparent like the hydrogen, although the iodine is a blue black.

Hydrogen Bromide (HB), transparent like hydrogen, not red like the bromine.

Manganese Dichloride ($MnCl_2$). reddish like the manganese.

Aurous Oxide or oxygen and gold, the symbols of which are sometimes written AuO, but as the yellow of gold combines with the blue of oxygen here and makes a green, it may be presumed that they combine by 2's thus Au_2O_2.

Potassium Bisulphide (K_2S_2) orange colored, seems to combine the red potency of Potassium with the yellow of sulphur.

Potassium Carbonate (CO_3K_2), white like the potassium. The oxygen seems to have driven the black substance carbon into the potassium. The same principle rules in Sodium Carbonate (CO_3NA_2) the white sodium atom alone showing, and Sodium Chloride (common salt.)

Various other compounds could be given, but this will be sufficient to establish the principle. The principle of *color change* or Metachromism is explained in the 'Principles of Light and Color.'

XVIII. MAGNETIC MASSAGE

1. The word **Massage*** is sometimes used to signify a frictionizing process performed by instruments, but it is more properly a method of

*Pronounced Massazh, the last syllable like *az* in *azure*. *Massein* in Greek means o knead, but all true and high grade massage is given by a magnetic person.

animating the system by kneading or manipulation. The old ignorant conception of the subject considers it a matter of mere *friction* or *rubbing*, as it is termed, a mere mechanical matter which may be performed with a piece of wood, as well as by the most animated human hand. Dr. George H, Taylor, of *Movement Cure* reputation, uses the following language in his work on Massage, as to whether the masseur is in some way beneficial to the nervous system.

"The settlement of this question is greatly facilitated by reference to the fact that all animated existence depends utterly on nutritive processes, for the development of any power which may appertain to any species or individual; that cell life is the general source of all vital manifestations whether of nerve, muscle or other organ; that the action communicated is therefore only mechanical and possesses no vital characteristics, that it did not lose on emerging from its source." (p. 137)

That is about as fine a condensation of false theories as could well be put into so many words, especially to be given in the face of many hundreds of thousands of facts, which could be adduced from the records of the vital magnetic practice to show its marvelous power to upbuild nerves and muscles, and that in a permanent way. To say that all "vital manifestations" reside in the cells, is the same as saying that all the power of a steam engine dwells in the boiler, without reference to the fire that kindles the boiler into activity. The doctor would have escaped this error if he had been familiar with the principle, universal in nature, announced at the opening of this work, namely that "all force is dual, including on one side, a finer fluid-like movement of something against or through a coarser substance on the other side." On the third page I have shown that all nervous and other forces must flow forth as fluids, and these fluids give life to the cellular portions of both the nerves and the brain. When the doctor says that "all animated existence depends utterly on *nutritive processes* for the development of any power," it would seem as if he had fallen absolutely asleep as to the whole grand system of the universe, in which the vegetable world drinks in through every pore the infinite ocean of sunlight, while all human and animal life will languish and die under the most nutritive diet in the world, if the enkindling force of sunlight and the electricity of the air be withdrawn. Is it not obvious, then, when some human beings are able at times to cure the disease of half a lifetime by a mere touch, or sometimes by a mere power of the will, that they must be highly charged with vital electricities and thermal forces ?

Fig 37. The Magnetic Child of Nature

In 1874 the eminent Dr. Brown-Sequard, delivered before the Lowell Institute of Boston, six lectures on nerve force. In these lectures he concluded that nerve force cannot get outside of the nerve channels, and if so that this must be "a death-blow to animal magnetism." "Death-blow to animal magnetism!" echoes one of the leading New York newspapers, and the matter was considered settled. Ten thousand proofs to the contrary were occuring all round us, but a savant had said the word, and the papers accept it as law. It is the everlasting moss-grown theory, when one person exerts a power over himself or others, that *mind does it, imagination does it.* But how does the mind do it except as it has some instrument to work with? According to this system of reasoning, the sun wakens the vegetable world into life, therefore there is no such thing as sunshine. A cable sends a message across the ocean, therefore there is no such thing as electricity. The volition can cause certain parts of the body to become warmed or swollen, by repeated efforts, as the Doctor admits, therefore, there is no such thing as a magnetic or mental ether through which this power is exerted. The author published and forwarded to Dr. Brown-Sequard, a brochure entitled, "Vital Magnetism, the Life Power, being an Answer to Dr Brown-Sequard's Lectures on Nerve Force."

Some time afterward a French gentleman informed me that Dr. Sequard had changed his views on animal magnetism, and of late I see he has become greatly interested in psychological experiments. In fact, in France and in various other European countries, the magnetic phenomena are taking a deep hold upon the people, and medical men, after a century of scoffing at the subject, are becoming profoundly interested in it under the name of *hypnotism*, a term invented by Dr. Braid. Having condemned animal magnetism and mesmerism as delusions so long, and finding out at last that they themselves were deluded in so doing, they now advocate the same thing under this new name. The noble Dr. Elliotson of England, Prof. Gregory of Edinburgh University, and others, cast their pearls of wisdom and experience on the subject before hostile minds long ago, while in America, the phenomena have been extensively developed for nearly half a century, in much of which time they were condemned by those very physicians who were sacrificing the community through ignorance of the very forces thus made known. Alas! for the wretchedness of the systems of education still too prevalent, which leads young minds in ruts, forbids them to seek the new and the true, and causes them to adopt that which is fashionable and respectable, while heaven-born truths go begging.

2. **European Psychology.** Germany has long had the manual treatment in her hospitals, and is becoming much interested in psycho-

logical experiments, but the scientists of France are especially active on the subject. The following was cabled from Paris to the New York *Herald*:

"A series of the most extraordinary experiments in hypnotism, made, under the direction of Dr. Charcot, by his assistant, Dr. Babinski, of the Salpetriere Hospital, surpass all hitherto conceived possibilities in medical science and cause a profound sensation in Parisian society. These experiments prove as perfectly practicable the transmission by magnetism from one person to another of certain nervous phenomena, such as dumbness, paralysis of the legs and arms, violent pains and coxalgia, and the final elimination of the evil from the original sufferer. These cures, seem, at first sight, to be nothing short of miracles, and certainly they equal in dramatic intensity many cases narrated in the New Testament.

"As many fantastic and more or less exaggerated accounts of these experiments have appeared in the Parisian papers, I resolved to go at once to the fountain head authority, and called upon the famous Dr. Charcot himself at his magnificent mansion, on the Boulevard Saint-Germain.

"Soon afterward an attendant conducted me into a vast library, at one end of which sat a man of about sixty years of age, with a fine large head, and bearing a striking resemblance to Napoleon I. His long, straight locks of coal black hair set off to fine advantage the massive marble white forehead and descended nearly to his shoulders. His nose is prominent and aquiline. His mouth firm and compressed, gave an air of sternness, and there was a sharp, penetrating glance in his eagle eyes, which was mitigated by a pair of eyeglasses attached by a black silk ribbon. This was my first view of Dr. Charcot, the greatest living authority upon the human nerves. As Dr. Charcot rose to receive with a cordial smile, all his sternness disappeared as if by enchantment. His voice is soft and musical. * * *

"These experiments have awakened renewed interest in neurypnology, or the science of nerve sleep, and on the tables of the most fashionable *salons* in Paris are to be found James Braid's treatise on the subject, with the preface written by Brown-Sequard. In fact, hypnotism is the great sensation of the day."

I have omitted from the above the account of the experiments, which have been equaled and surpassed in many of the cities of our country for a number of years back. See Part Third for explanation of such phenomena.

3. **Magnetic Massage**, carrying with it, as it does, a subtle life force which penetrates through the whole nervous and vascular system, is especially enduring and fundamentally upbuilding in its effect, as I have shown under the law of power, page 21. Dr. Taylor, accustomed to the unmagnetic machinery used in the movement cure, and seemingly unacquainted with the fact that true and potent massage comes through the touch of a highly charged human being, declares, referring to this force, that "nothing appears in aid of the energy producing functions; no physiological power is promoted; only transient cessation of pain with no correction of its cause is secured." The truth is that the com-

munication of the vital magnetic aura affects the most fundamental and enduring cures of anything in the known world, excepting, perhaps, the forces of sunlight.

4. **Proof of Vital Magnetic Radiations.** There are many proofs that fine ethereal emanations can flow from and around human bodies and affect objects or persons in proximity; 1st, all sensitive persons can feel these emanations, and can often tell what persons are approaching without seeing or hearing them; 2d, the phenomenon of insensible perspiration shows that efflux streams are constantly carrying fine particles of matter out into the air, which particles are often recognized by special odors; 3d, as I have already shown, thermal or electrical ethers sweep through and out of all things, and affect the chemical changes that are ever taking place; 4th, thousands of persons are able to see as well as feel the radiations that take place from all objects, especially when these objects are under the excitement of electrical, or chemical or vital action. These emanations flow forth like streams of light in all directions, and with especial brilliance around the heads of persons who are inspirational and magnetic. Following the law of electricity generally, this vital magnetism is held with the greatest tension at the points of the body, especially at the ends of the fingers. In my own case, my hands are positive to every part of the body, and if held for some time on any other portion, will give off so much vital force as to feel almost paralyzed. For this reason the hands and fingers make fine magnetic conductors, and *manipulation* is one of the most effective methods for the cure of disease. Fig 37 will give some idea of the straight line radiations which take place from the head and body; but there are also magnetic curves, which are omitted in the picture, but are given in the "Principles of Light and Color." p. 481. Fig. 38 is a head of Christ, as conceived by the eminent artist Dore, and the halo of light that is placed around this and the heads of saints in the various ages of the past, shows that there have been persons in all ages who could see these interior lights and colors, which are the manifestations of vital power. On pages 14, 15, 33 and 34, I have shown that there are multitudinous chemical processes, vital magnets and galvanic batteries in every human system in connection with which these ethereal forces rule.

Fig. 38.—Head of Christ by Dore.

5. **The Magnetic Character** of these **Vital Ethers** may be perceived in the fact that sensitive persons are often drawn toward those who are

magnetic, or even towards canes or other objects that have been charged by a magnetic person, just as all ferruginous objects will be attracted by a steel magnet. Magnetic ladies and gentlemen will often throw out their psychic curves of force by their will power, and draw persons to them without saying a word. Prof. Cadwell was once giving a psychological exhibition, when a seat full of wild young fellows concluded it was all a deception, and were making a disturbance. Going down to the seat, he sent his forces into the brains of those who sat at the farthest end of the seat and drew them pellmell over the very heads of the impolite leaders of the gang who sat in front, having concluded that rude characters are sometimes best controlled by rude methods. As all ethereal forces, when under excitement, are thrown into magnetic or diamagnetic curves, it is quite proper to use the terms *animal magnetism, psycho magnetism, vital magnetism, solar magnetism, or ferro magnetism,* to show what grade of magnetism is meant.

6. **Nomenclature.** When I first treated of healing by the *manual treatment,* I realized that the vital forces imparted were different from those of a steel magnet, and so devised the word *psychomany, psychomist* from *psyche,* soul, and *manus,* hand, or *soul and body treatment.* As I went more thoroughly into the laws of atoms and ethereal forces, I perceived that the animal and psychic forces were as truly magnetic as those of a steel magnet, only possessing a different grade of fineness, hence the term *magnetist* is not really improper. The word *metaphysician,* as applied to healing, is unphilosophical, *meta* and *phuse* meaning *beyond* or *away from nature.* But mind itself is simply *spirit working in connection with a physical brain,* and we have no knowledge of any condition of things in which spirit can work apart from matter. The word *psychopathy* means a system of *soul cure,* and is less comprehensive than the term *mind cure,* which latter embraces at least a portion of the great system of duality, without which all power is impossible. The word *psychophysician* is incomparably superior to metaphysician. The word *massage* is a scientific system of rubbing, kneading or manipulation, but the mere *masseur,* who performs this massage, may be only a mechanical worker, who awakens a certain amount of frictional electricity in the patient, while he may be almost wholly devoid of this divine fire of life, which arouses the nerve forces and even the blood to the very centre. The true *magnetic masseur* is a higher grade of being, who, at times, like every true genius, feels himself filled with a divine afflatus, and longs to upbuild the poor weak patient before him.

7. **Unscientific Methods.** A late writer on Massage, declares that it would require two years of study to learn to be a Masseur. Such an estimate is based on the lack of a true scientific arrangement of ideas

on the subject, a lack which comes from ignorance of the fundamental principles of vital action. Many a medical college will keep its students at work three or four years, and are supposed to be very thorough going, but when they have become able to crystallize the fundamental principles of Chemistry, Physiology, Pathology and Therapeutics into a science, they will turn out students in a single year who will be far more practical, effective and useful, than is now done in their whole course.

8. **False Theorists.** Mrs. Eddy, of Boston, uses the following language: "The animal magnetizer heals his patient through human headlong will, not through truth. Is the patient then healed permanently? No, for bad effects alone can follow animal magnetism."—*Science and Health.*

Such is the teaching of a lady, who, as I learn, charges three hundred dollars for a three weeks course of lessons. She ignores the infinite field of power that fills the universe and makes the one department of force, called the mind, all in all. So confined is she to her one hobby of the Mind Cure, that she is blind to all the thousands of cures of a most enduring kind, that have been performed through Vital Magnetism and many other methods. As to the "headlong will," such a method is often used by the psychologist or the mind cure practitioner, but rarely by the magnetic masseur. In fact, it is not unfrequently the case, that mind cures, faith-cures and prayer cures are effected by the transmission of the magnetic aura from the operator to the patient. Many other vague theories with respect to these refined forces, have been propounded, but to those who have become familiar with the etherio atomic law of force, the matter is too simple for further words.

9. Why is vital magnetism thus potent for human good? Because multitudes of human systems have become so depleted in their nerve forces as to be negative, feeble and diseased, and the treatment by the well charged masseur, pours new waters of life through all the nerve channels, and sets the blood in to a delightful movement. Then others who are over excitable and whose forces are out of balance, can have their excessive influences drawn off, equalized or quieted.

10. If there is nothing but **Faith** or **Imagination** in this magnetic force, as some people are always saying, let them explain how it is that some of the wildest birds, horses and other animals are often entirely subdued by its influence, while infants are healed as readily by its power as adults. How is it that people are so often cured by this process when they have felt confident that there was no potency in it? How is it that people have in many cases been cured of sickness simply by being in the presence of a magnetic person, and that without any exertion of

faith or will power ? How is it that faith can sometimes cause great cures except by using these subtie all-penetrating forces ?

A few *general rules for magnetic manipulation* will be given here, but the methods for special diseases will be treated of in the after parts of this work.

11. **The Position of the Patient** should often be horizontal, or nearly so, in order that he may be negative and receptive. A reclining chair would be excellent, but if this cannot be had, a lounge, or cot or bed would do. The patient is most conveniently treated on the right side of the chair or bed, and, if possible, with the head to the north, to harmonize with the earth's electricities.

12. **Clothing** *should be removed for treating*, or at least, not over one garment should be kept on, and when not under bedclothes, a large blanket should be folded lengthwise once, and spread with the open part next to the operator, so that the body of the patient, when inside of it, may be manipulated with ease. Treating over one's clothing may do much good, but much of the precious life fluid is wasted in the garments. The purest people make no ado about being treated on the skin by even the opposite sex, except in the cases of some persons who, being reared under the old ideas, have come to think that the Divine Hand fashioned something to be ashamed of and altogether vulgar, when he made the human form.

13. **Who should Treat ?** Most persons who are not diseased can do good by manipulating a friend, but those who are naturally electrical, or who have active vital systems, who have dwelt much in the midst of out-door oxygen and sunlight, who have kept their bodies pure from tobacco, opium, pork eating, alcoholic stimulus and sensualism generally are very desirable as magnetists. To grow magnetically powerful, insolations on the bare body and treatment by a magnetically strong person, are great stimulating forces. Some persons have such a fine balance of all the temperaments, that they can treat almost any one with advantage. The greatest advantage, as a general rule, is derived from having a certain amount of contrast between the operator and the patient, in order that the chemical action of the latter may be brought into play by that of the former. For this reason treatment by the opposite sex has advantages over treatment by the same sex, although great good may be accomplished by one of the same sex. In an English hospital the patients are manipulated by the opposite sex, and this practice is becoming quite common in our own country. Dr. James C. Jackson, whose immense practice in his Institution at Dansville, New York, gives him a right to speak, says: "To the degree that propriety will admit, the nurse

should be of the opposite sex. This is admitted by everybody who is sick to be a correct view, the rule working only one way, men always preferring women to persons of their own sex, to care for them. ....It is not generally supposed to be the case that women prefer men, but they do; and to the degree that they can properly have them, they should."

My experience has shown me that magnetists are more apt to become exhausted who constantly treat their own sex, while various persons are repelled and made nervous by the touch of their own sex. I admit that some, under the influence of a false education, shrink from treatment by the opposite sex, but as society is progressing into greater simplicity and purity, this feeling is subsiding. If the magnetist cannot treat with a feeling of purity, and a ruling desire to heal and bless the patient, some other employment should be chosen.

14. **The Portions of the Body to be Treated** are not only the parts most affected, but in nearly all cases the whole system should be manipulated so that the skin, the capillaries and the nervous forces of every portion should be quickened. To treat a tumor, for instance, at the part affected only, is to leave the system full of those impure conditions, which will be apt to develop other tumors; and, although it is a very common practice among learned doctors thus to treat effects to the neglect of causes, it is truely a system of empiricism. While some patients are so sensitive as to need only slight touches, or to receive sufficient power by having the magetic aura thrown upon them from a distance by a motion of the hands, most persons, especially those with chronic diseases, need longitudinal movements and all kinds of *massage* practice over arms and legs, like the wringing of cloths, etc.

15. **The Best Part for Commencing** on is usually the feet, which should be animated, pressed, held, rubbed and warmed, so as to attract downward the extra irritation and heat of the brain, lungs, stomach, bowels, uterus, etc. Then the legs should be carefully manipulated, as well as the whole front of the upper system, including abdominal and thoracic portions; also the arms and hands should be made rosy with new life; then the head should be treated with hands wet in cold water, the hair of the temples and upper portions being well dampened, and the ends of the fingers carried with some pressure over the whole scalp, especially over the occiput and cervix, to draw away the pressure from the front brain. *Ceruleo* is excellent for use on the head, or for other hot portions of the body, or in its absence, ordinary cold water will do; but for bringing out the hair in a new and luxurious growth, and also for preventing dandruff, *purpuro*, well rubbed in, should sometimes be alternated with

ceruleo. Even self-manipulation with hands wet in ceruleo, may be made highly effective for animating the scalp and making the hair grow. After the head is treated, the patient should turn over and have the back well manipulated with transverse and descending, and sometimes circular passes. Not only can the spinal nerve be reached by passing the fingers on each side of the spinal column and holding them there briefly, between the vertebrae, all the way down, but the interior viscera can be affected through the ganglionic system which connects with the spinal nerves.

16. **To Quiet Excitable Nerves** make slow passes in all directions *from* the brain, to prevent too great a flow of sensory forces *to* the brain, and press warm hands over the back-head, cervix, lower spine and feet, Fingers wet in ceruleo, would facilitate the matter.

17. **To Arouse Cold Blood and Dormant Chronic Conditions**, and kindle the capillaries and veins into greater movement, make *upward* instead of downward passes and transverse massage movements, and spat and knead the flesh, if the patient is not too excitable,

18. **To Tone Up and Strengthen Muscles**, *make upward passes*; to **Relax Muscles** when drawn up too tight, *make downward passes.* Upward movements in front should not pass directly toward the stomach, and upward movements over the back should not pass directly toward the brain. Thus, to draw up and tighten the muscles that hold the womb in position, and prevent the tendency to uterilapsus, make the passes over the womb upward but outward toward the sides, and to strengthen and tone up the back, make passes from each hip diagonally upward, crossing at the small of the back, and bearing gradually toward the opposite side or opposite shoulder.

19. **For Varicose Veins and Bruises**, upward passes are more important than downward, as they help capillary and venous action.

20. **For Hot or Inflamed Portions of the Body**, especially at the epigastrium or small of the back, the fingers should be wet with ceruleo, or at least in cold or acid water, and passed outward from the hot place. For inflamed ovaries, wet fingers should be passed upward from them, and curve around downward along the thighs.

21. **For Feverish Conditions,** manipulate the whole body with the hands thoroughly wet with ceruleo, or with ceruleo combined with some acid. In case the skin is yellow with jaundice, or a bilious condition, take a couple of teaspoonfuls of acetic acid, and dilute it with at least, fifteen teaspoonfuls of ceruleo or purpuro, and dip the fingers in it for manipulating, as it will tend to neutralize the alkaline element of the bile

22. **For Hot and Cold Conditions,** place the right hand over the hot, and the left over the cold place. **To Soothe The Brain,** place the thumb and fingers of the right hand on each temple, and the left hand on the back head. **To Induce Sleep,** hold a hand over the cervix, or, still better, place the right hand over the cervix and the left over the lower spine; also hold the feet with warm hands; also manipulate the back and sides of the brain with wet fingers, avoiding the front portions. The brains of some persons are so sensitive that it may not be best to touch the head at all, especially if the operator's hands are very warm.

23. **To Animate the Stomach and General Nutrient System,** rock the stomach back and forth, and hold the left hand over the stomach, and the right hand over the spine directly opposite the stomach. Another important point is to animate the stomach through the pneumogastric nerve by pressing the ends of the right fingers in front of and below the right ear, and the ends of the left fingers in the same way on the left side.

24. **To Cure Constipation,** make the hand pass in circles for some minutes over the bowels, carrying it up on the right side, across to the left side just below the stomach, and down on the left side, and then cross over and repeat the strokes continually for five minutes or more. In this way the ascending, transverse and desceding colon is reached. **To Cure Diarrhea,** make the passes in just the opposite direction. Also prescribe ambero for constipation, ceruleo for diarrhea

25. **Aged People** find that long and forcible treatments are too powerful. Their treatment should be gentle and brief.

26. **For Unbalanced Conditions,** in which one part of the body is too hot and another too cold, the forces can frequently be equalized by making passes from the hot to the cold parts, or sometimes by placing the right hand over the hot and the left over the cold portion. It has already been shown that the right hand is the colder, and answers to the positive pole of an electrical battery, while the left hand answers to the negative pole. If the patient's system is considerably charged with impurities, it may not be wise for the operator to place both hands on his body at once, as this completes a circuit, and may carry some of the diseased elements of the former into his own body.

27. After and during every treatment, the operator should place his hands in water to conduct away any imperfect conditions which he may have absorbed, or still, better in some acid or perfumed essence.

Other methods of applying magnetic massage to the cure of different diseases, will be referred to in after parts of this work.

XIX. GALVANIC AND FARADIC ELECTRICITY.

1. **Electricity**, as we have seen (p. 4th), is the cold or contractive principle, although in many cases, it is not felt as cold on account of its refinement. It exists largely in cold water, in cold air, in ice, in the blue and violet rays of sunlight, in all acids, and in many other objects, as explained on p. 5. It is aroused by friction, by chemical action, by galvanic and magnetic appliances, by the processes of animal life, and exists in a more gentle or negative form in all things, being a necessary element in all force.

2. Although **Electricity** is in perpetual movement through every possible combination of atoms, being the polarizing and crystalizing principle, it is only those streams that are greatly increased and intensified by means of friction, or by chemical or mechanical action that are usually known as electricity.

3. Electricity may be developed in smooth flowing or **Continuous Currents**, or in **Broken Currents**, in which the stream becomes dammed up for an instant and then bursts over with greater energy. The former is more quieting, the latter more rousing. When I speak of currents of electricity, I, of course, mean actual currents of ethereal substance, in harmony with the fact that in nature all forces flow forth as real fluids (see p. 1).

4. A process of developing electricity through **Chemical Action** may be explained by the following diagram:

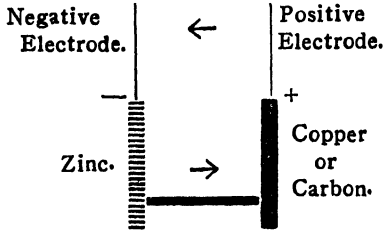

Fig. 38—Galvanism.

A certain fluid, most commonly dilute sulphuric acid, is put into a vessel. This, of itself, is exceedingly electrical, but to give direction to this electricity it is necessary to insert in the fluid one end of two contrasting substances called *elements*, such as zinc on the one side and copper or carbon on the other. The bluish white zinc is more electrical, the reddish copper is more thermal, as the color signifies, consequently we have a true contrast of forces. As thermism always attracts electricity, we may know that the leading electrical current will be drawn into the copper, and this current will become powerful as soon as the upper ends of the two elements are connected in some way, either by a wire or by a human being, who may

hold one electrode* in one hand and the other in the other. In this way a complete circuit is formed, the electrical current sweeping from the electrolyte (liquid of the battery) into the lower end of the copper, through the upper end and out through the connecting wire or person, and back through the zinc and the electrolyte to the copper again. Where it emerges from the copper it is *positive*, and is generally designated by the sign plus + ; where it enters the zinc, it is negative, and is marked minus —.

5. **The Terms Positive and Negative** are often used so vaguely that it is proper to state that a strong *efflux* force is more often *positive*, while an *influx* force more often negative. Electricians, with some confusion of idea, usually speak of the copper or carbon as the positive element and the zinc as the negative, simply because the current which is drawn through these elements is efflux at the upper end of the carbon, and influx at the upper end of the zinc. This is now being changed, however. Zinc is one of the most electrical of solids, and is so positively so that its efflux streams, where it is in contact with the liquid of the battery, carry off and disintegrate its substance with great rapidity.

6. **The Nature of the Two Electrodes is as follows:** The positive is cooling, consequently it is quieting, anti-inflammatory and sedative, but as thermal currents always move in the opposite direction to the cold forces in a line of atoms, the negative electrode is heating and animating. Electricians have an indistinct idea of these two departments of force, but have approximated quite nearly to the correct nature of the electrodes. They describe the *anode* as "sedative," which of course is in harmony with the *cold* idea and the *cathode* as "stimulating." Professor Ranney of New York uses the following language :

"The negative electrode is the more painful to the patient, and produces the greatest chemical action. . . . It is not uncommon to see a reddening of the skin, and even vesication, produced by a strong current at the negative electrode, if kept too long in contact with it. The cathode is the 'stimulating' or 'irritating' pole of a galvanic battery. The anode is, by contact, the 'sedative' pole." *Electricity in Medicine p. 44.*

Our scientists would understand the causes of these effects all the

* The ends of each wire or cord connecting with an electrical battery are called *electrodes*. The cords themselves that lead to the battery are called *rheophores*. The positive electrode is called *anode*, the negative, *cathode*. *A commutator* is an arrangement by which the polarity is changed without moving the electrodes, the positive current being thrown into what was before the negative electrode and *vice versa*. *Electrolysis* takes place when, in a galvanic current, particles of one of the elements are carried away and deposited on another substance, as in plating, or at least separated from their original position. In this way currents passing through a human being may conduct away certain foreign elements, like mercury, etc., and thus relieve the system.

better, if they could realize that heat and cold rule everywhere, although in many cases their grades of fineness may be beyond the power of thermometers to measure. It is always incorrect, in speaking of positive and negative forces, to say that one class is more chemical or powerful than the other, as either side is powerless without the other. It is too much like the old method of saying that the violet end of the solar spectrum is *actinic*, but the other end not, or like affirming the superiority of man as a whole over woman, or of woman as a whole over man. The cathode is simply more powerful in rousing up or warming cold and chronic conditions, while the anode is more powerful for balancing hot, acute or inflammatory conditions.

7. **But Electricity moves in both Directions.** I have shown elsewhere that lines of atoms are usually placed side by side conversely, so that the electrical currents pass both ways, and heat currents both ways Why should one direction then be considered especially positive or electrical, and the other negative (thermal), both in magnetism and galvanism? In the magnet we know that the north pole is positive, but we also know that an electrical current passes out at the south pole, or circulates around it, otherwise, it could not attract. The fact is that a stronger grade of electricity passes in one direction than in the other, and gives character to its own pole, while a correspondingly strong thermal current passes in the opposite direction, and causes a predominance of heat force. Sensitives can feel the coldness of anodal forces, and the warmth of cathodal ones. Reichenbach's sensitives saw a predominance of the cold colors around the positive pole of the magnet, and of the warm colors around the negative pole, although the contrasting colors were seen in a less degree at the same poles.

8. **Galvanism**, sometimes called **Voltaism**, is the *constant* or *battery* current developed in a way similar to that described in connection with the diagram. It has a special and distinctive polarity with power of *anode* and *cathoed* as already described. For this reason it can be used more scientifically for the cure of disease than Faradism.

9. **Faradism** is an *Induced or interrupted current* produced by the magnetizing and demagnetizing of a core of soft iron. It is developed by aid of a battery, but its force does not come directly from the battery. Unlike Galvanism it has no distinctive polarity, which changes with each "make" and "break" of the circuit so that one pole is the same in its effect as the other. This fact prevents its having any power of electrolysis. The broken current of Faradism is especially animating, some thing like percussing the flesh in massage, but is less quieting to the nervous system than the primary current. The galvanic current pene-

trates more deeply into the tissues of the system, than the Faradic or Static current.

10. **Static Electricity** is developed by friction, and being one of the coarsest of all electrical currents does not penetrate much below the surface of the body. Being thus rousing to the periphery it tends to make the skin active, and drawing outward some of the excitable conditions of the interior system, has proved useful in spasmodic and hysterical difficulties.

11. *We have already seen that electricity is a fluid as well as principle of motion, and this fluid must partake of the more refined elements through which it passes; consquently it is a safer way of conveying medical elements to the system than it is to take crude drugs into the stomach.* I would advice the use of two cells or two sets of cells, the one to be more thermal and rousing in its fluid, and the other more electrical and soothing. For the *thermal cell*, the following would be, appropriate: 6 oz. water, 1 oz. sulphuric acid, 2 oz. bichromate of potassium, 3 pwt. sulphate of quinine, 6 drops tincture of iron, and 4 grs. salicylic acid. For the *electrical cell* put in 8 oz. of water, 1 oz. sulphuric acid and 12 drops of indigo. Be careful not to get the cells interchanged.

12. In the future it is probable that **New Elements** will be used. For the thermal side, gold must be more refined than copper, and carbon which is already in quite common use, must also be superior to copper. Is there not a more refined element than zinc on the electrical side ?

13. **Electricity and Sunlight Compared.** According to the law of power sunlight must be more potent than electricity of the battery, being more refined, and, when aided by a proper instrument with reflectors and colored glass to adopt its power to every part of the body, millions of rays, modified scientifically, penetrate into and vitalize the whole body at once. Nevertheless electricity has its important uses and may be carried by proper electrodes into channels where the sunlight cannot so directly enter, such as the uterine organs, the rectum, etc. Cataract of the eye has often been cured by a sort of an eye cup, to which the positive pole is attached, and other ingenious processes are adopted. *Birth marks* are cured electrically, but as these can be cured ten to twenty times as rapidly by a burning lens, the electrical methods should go out of use. The needle electrode is often used to destroy the roots of hairs on female faces. It is probable, however, that the burning lens, if made to thoroughly blister the parts, would accomplish the same purpose much more rapidly, and by the aid of cocaine, with much less suffering. This, however, has not been tested.

Solar *cautery* is better than electrical cautery, and is sure to leave no scar. The power of diagnosis is an important feature of galvanism.

14. **Brief Rules in Electro Therapeutics.**

The following is condensed from Prof. Ambrose L. Ranney's rules on the subject.*

To enable the electricity to penetrate the system far more readily, soak the electrodes in a weak solution of table salt, not in simple water.

Begin treatment with weak currents. In a majority of cases weak currents are indicated rather than strong ones.

Do not change the polarity of a current during application oftener than circumstances demand.

Use very gentle galvanic currents for the brain.

The cathode should generally be larger than the anode.

Treatment for five or six minutes is generally sufficient: should be more sometimes.

It is seldom necessary to treat oftener than once a day, and three sittings a week will suffice in most cases.

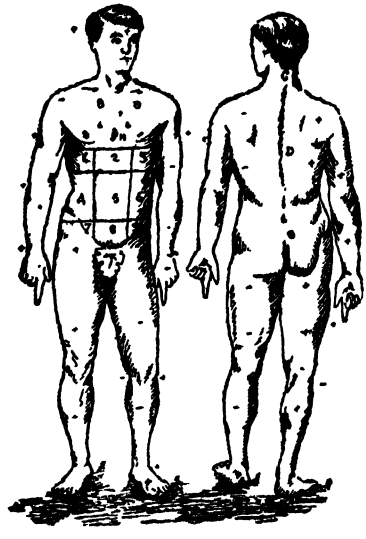

Fig. 39.

1, 3, right and left hypochondriac regions; 2. Epigastrium; 4, 6, right and left lumbar region; 5. Umbilicus; 7, 9, right and left inguinal regions; 5. Hypogastrium. The Thorax lies above 1, 2, 3; B, B, the Bronchi; L, L, Lungs; H, Heart.

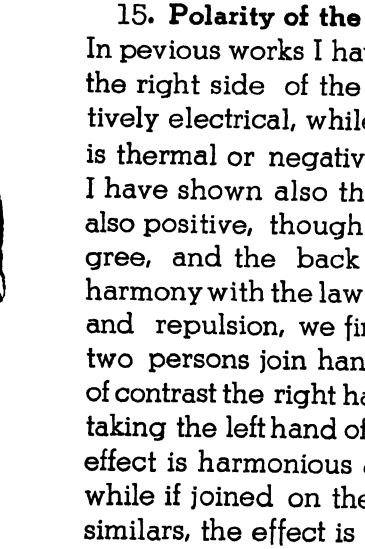

Fig 40.

C, includes the Cervical D, the Dorsal, L, the Lumber, and S, the Sacral region of the spine.

15. **Polarity of the Human Body.** In pevious works I have shown that the right side of the body is positively electrical, while the left side is thermal or negatively electrical. I have shown also that the front is also positive, though in a less degree, and the back negative. In harmony with the laws of attraction and repulsion, we find that when two persons join hands on the law of contrast the right hand of the one taking the left hand of the other, the effect is harmonious and quieting, while if joined on the principle of similars, the effect is arousing and exciting, and to sensitive people painful. The same general effects are produced by the galvanic battery, when applied to the human body and the general law for harmonizing the conditions, is to *use the anode over hot portions of the body, and the cathode over the cold, chronic portions.*

Electricity in Medicine, by Ambrose, L. Ranney, M. D., D. Appleton & Co., New York. (14)

Professor Durville of the Library of Magnetism, 5 Boulevard du Temple, Paris, has mapped out different parts of the human system with the signs + and − in a way which corresponds at almost every point, with the results of my investigations. I have copied from him the diagrams represented by figures 39 and 40 giving his exact signs, and adding the divisions of the abdomen and other parts of the body, for the convenience of young students.

The following words I translate from Professor Durville's little work called "Application de l' Aimant," and refer to the poles of the Magnet the north pole acting as the anode (+) and the south pole as the cathode (−):

"The poles of the magnet directed upon the poles of the same name (isonomous application) produce *repulsion, heat, excitement;* the poles of the magnet directed upon poles of the contrary name in the human body (heteronomous application), produce *attraction, coolness* and a *pleasant quiet.*"

XX. THE MIND CURE AND STATUVOLENCE.

1. The **Human Mind** is a mighty factor, possessing, as it does, the ability to measure and weigh the worlds of space and to take cognizance of an interior universe, which seems to take hold of infinity. On the one side it includes a portion of the deific essence which we term the *soul,* while on the other, it includes a physical brain working in connection with it. Between the two and acting as a connecting link to both, are those exquisite ethers, which, though combining both the material and spiritual, kindle the brain, and sweep through all parts of the body, as well as, to some extent, into the external world around us. While this ineffable soul or spirit is thus the refined portion of mind, these wonderful ethers being fine enough to draw the spirit onward,* animate the cells of the brain and nerves and thus constitute the more material side

* To say that these ethers can *draw* spirit onward, may seem a blind expression to some of my readers who are unacquainted with the laws of force. I have shown that all atoms have a powerful suctional force; that ethers are very fine atoms which attract still finer ethers throught their channels. When the finest of all ethers is reached and atoms have come to their ultimate limit, then, underneath the whole, must dwell that *unparticled essence of Divinity,* which we call pure spirit, the great *Intersoul.* The finer ethers as well as the finer channels of some larger atoms would probably be of so exquisite a character as to respond to this spiritual essence, and while attracting it onward would themselves be kindled into active vibrations. While spirit thus moves forward, as the positive side of power, into the whole universe, it dwells in an intensified and organized form in every human system. Is it not a soul-exalting thought, that we are all thus sons and daughters of God, endowed with an unatomic and hence immortal principle, and though dwelling in the midst of unripe conditions for a while, must eventually evolute more and more toward the infinite Perfection?

of mind. This is a marvelous union of spirit and matter, a quality of forces which can never work separately, any more than any other combination of correlative forces can work independently of each other. The soul essence, almost infinite in its elasticity, expands and kindles the mental ethers which, in thier turn, are drawn forth into the cellular portion of brain and nerves, and, to a lesser extent, through the coarser parts of the system. The forms, colors, sounds, odors, flavors and other forces of the outer world, flow in upon the brain and nerves, rousing these mental ethers in a way to call forth the soul essence and produce those effects which we designate *thoughts, emotions, volitions,* etc. Nature thus throws her images and impressions upon the sensorium, but having done this, mind, by aid of the frontal and other portions of the brain, reasons about them, perceives their relations and creates a world of her own.

2. Certain **One-Sided Theorists** affirm that spirit is all in all; that spirit controls matter, but matter has no influence on spirit. To be logical we should say that there is no need of fire to warm us in winter, or food to ward off hunger, or sleep to rest brain and nerves, while alcohol, opium and similar chemicals have no power to intoxicate or affect the mental forces. As ten thousand facts oppose such theories, it would seem unnecessary even to mention such absurd beliefs, only that so many mind cure people of to-day are proclaiming such sentiments. "My experiments," says Mrs. Eddy, of Boston, "have proved the fact that mind governs the body not in one instance, but in every instance." And yet there are conditions of paralysis, convulsions, St. Vitus's Dance and a host of other things in which the unaided mind is helpless, in spite of such reckless assumptions.

Mr. W. F. Evans, of Boston, who has taught so many useful and excellent things in his earlier works, has of late gone to some of the wildest extremes of the German mystics. He writes as follows:

"There are no external sounds, for sound is a sensation, and that exists only in mind. If the music is not in us it is nowhere. Light and color which is a modification of light are not outside of me, but in me. I am the light."—*Primitive Mind Cure.* (*p.* 50)

In this Mr. Evans has mistaken the *perception* of light, color and sound for the things themselves. If this theory were true and we were all blind and deaf, there would be no such thing in the universe as light and color, no glories of music, no warbling of birds, in short, no sun in the heavens. Would the sun cease to vitalize the world just because we may happen to become blind? Sunlight and vision are very different things.

These extravagant conceptions, though held by many excellent people, would blot out the whole realm of nature and make mind all in all. For us to believe such theories is to ignore all facts of the outer world, all laws of things, all science, and settle down upon an imaginary universe of spirit which we have concluded to call omnipotent, although we can prove nothing of the kind.

Having said this much to guard against a dangerous error, it is now proper to state that mental force, volition, imagination, impulse are capable, under certain conditions, of becoming mighty factors for human upbuilding, and this because they deal with refined materials as well as spiritual forces.

3. To attain to the greatest **Mental Control**, it is necessary to use not only mental and psychological forces, but such fine material forces as sunlight and animal magnetism, also, nourishing food, pure air, etc. Once get the system powerfully charged with magnetic and spiritual energies, and it has a healing and ennobling power upon every one in proximity to it, a power which will flow forth into other people's brains and make them more effective in using their own volition in the process of self-cure.

4. **Mind Healers** who are magnetic are more successful than those who are lacking in magnetism, as they radiate a vitalizing force to their patients. The *will power* itself, requires a fair amount of magnetism before it can work properly. There are persons, who, when in health, can control not only their own forces, but those of people in their vicinity, but when they become demagnetized, negative and feeble, are powerless to control others.

5. The **Mass of Mankind**, as yet, are not sufficiently sensitive to receive the fullest power from another, excepting through the medium of touch, hence magnetic massage and sunlight will have some advantages over the *mind cure* system as commonly conducted. Nor can patients wield their own mental forces fully in a way to cure disease until their bodies have been quickened by receiving the refined forces, of nature and purified by perspiratory baths.

6. **Satuvolence**, (state of willing), or a system of *self psychology* in which the mightier psychic forces are brought into action, is the true system of mind cure, compared with which all other mental forces are feeble. The method of applying and calling into action these wonderful forces for the cure of disease, the relief of pain and the development of clairvoyance, has been developed most practically by the late William Baker Fahnestock, M. D., of Lancaster, Pennsylvania, a gentleman who thus accomplished a good for mankind, but who, like Dr. Braid and other

experimenters in mesmeric forces, was totally unacquainted with the philosophy of their action. This method of self-psychology has the great advantage over the psychological force that comes from another person, that it gives one an innate self-control which can be exerted at any time after once getting thoroughly into the condition. It enables one to control not only mental conditions, but to hold the sensory nerves in such subjection, that all sensation can be removed from any or every part of the body, and any kind of surgical operations performed without pain.

7. **Explanation.** Statuvolism or Statuvolence, is a method of bringing the more refined psychic ethers of the interior brain into predominance over the system, in the place of the grosser animal ethers, which ordinarily rule. As the *Law of power*, which I have already explained, consists in *refinement*, we may see why it is that these lightning forces are so potent in their action, when the will power is able to send them to any part of the system.

8. **How to develop statuvolence.** I will give some leading points of Dr. Fashnestock's method combined with my own conceptions and experience. Let the subject rest in easy position, with head to the north, if convenient. To draw these interior ethers outward, he should fasten his thoughts intensely on some object outside of himself, or especially on some house or locality at a distance, which both he and the operator may know something about. The operator should sit as much as six feet away from him, so that his coarser animal ethers should not mingle with his subject. In order to keep the subject's attention riveted every moment upon the place, he should occasionally speak to him and call his attention to the different features of the place, taking it for granted, that a portion of his spirit is actually there. He can address him as follows: Go into the parlor and see what objects are on the mantel. Notice the color of the carpet and go close up to the sofa. See what pictures are on the wall and how the chairs are arranged. Look through the house and see what persons are there. (After pausing awhile). Go outside of the house and see if any changes have been made. Look up and down the street and see if any one is passing.

In this way the mind is directed to a distance for a half an hour or an hour at a sitting. Often the condition may be entered into at the first sitting, and some times a number of sittings may be required. Dr. Fahnestock believed that every one could enter the state sooner or later. One who became a very fine clairvoyant and statuvolist required twenty sittings. I have had subjects who saw clairvoyantly hundreds of miles at the first sitting, and on writing, ascertained that they saw

correctly, although they were not so fully in the state as to lose ordinary consciousness. The subject should be assured that no harm will come to him even if his soul seems almost to be leaving his body. Even when I have got subjects, only partly in the condition I have enabled them to brace themselves against bad influences, and permanently to gain a new power of self-control. Dr. Fahnestock had a boy, while in this condition, willed his club foot to assume a straight position and it did so, and he enumerates cases of Rheumatism, Scarletina, Chorea, Epilepsy, Hysteria, Amaurosis, Labor pains, etc., which were cured in the same way. I will quote one case of intermittent fever, as he describes it.

"Mr. S. P. B., had been subject to Ague every third day for six months. He entered this state, but imperfectly upon the first sitting without any relief. On the second sitting he entered it more perfectly about half an hour before the chill was expected. He remained in the state about two hours, during which his mind was diverted by directing him to cast it to distant places, and to see clairvoyantly what was going on. At the end of that time, no chill or fever appearing, he was requested to awake, after his making a resolution that he would forget his disease. I met him five months afterward, when he declared that he had felt nothing of the ague since he had been in the sleep. Many others have from time to time been relieved in the same way."—(*Statuvolence or Artificial Somnambulism, p. 290.*)

Miss J. R. Elliot of Washington, a student of Dr. Fahnestock, has induced the condition in many cases. Of one of her cases she writes as follows :

"One gentleman got into the condition last March, after sitting three times.....He has the power to become entirely insensible. He has more physical control over his organism than any one I have taught. He can throw his body into the condition, or bring it out by piece meal, and leave one little finger in, or he can begin with the little finger and drop the whole body in. In this he has become an expert. He said a few days before he reached here lately, he had been travelling day and night, until he had become so fatigued and nervous, he could not sleep, and he lay tossing in bed. All at once he thought of statuvolence, and concluded that if ever it could be of any use now was the time, so he *started somewhere*, and in a very few minutes he was off in a delightful dream. He now thinks this of itself is worth all it cost him."

The power to uphold both mental and physical conditions, by statuvolic and other mesmeric processes is truly marvelous. Suppose the person has acquired a love for liquor, tobacco or opium or some other hurtful thing. While in this state get him to agree that he shall be made sick every time he takes it. On awaking he may forget all about his resolution, but there seems to be an ever wakeful interior brain that forgets nothing, and as soon as he touches any of these things, he will be surprised to find himself getting sick, until he becomes disgusted with the habit, and leaves it off.

In all cases the patient's attention should be directed to his disease, or to the condition of mind to be changed and then asked to will it away.

He will wield these mighty interior forces, and psychologize himself all the more successfully if he can realize that what he wills will take place. He must not be allowed to come out of the state in a distrustful and timid condition. He must positively determine that some important purpose shall be accomplished, otherwise his sleep may be useless.

Self Psychology can be practiced with more or less success, by every human being, even if the full statuvolic state should not be reached. Let one get into a quiet state for a few minutes before rising on each morning, and then *will* to be self-possessed and cheerful all through the day; *will* to be strong against any besetting weakness, and he will soon be surprised at the new power he has gained. Some persons are in an intuitional or psychic conditon much of the time, and can wield their own forces with fine effect, if they but use their will power.

XXI. HOMEOPATHY

My investigation of atomic and chemical forces has led me to perceive, aside from all discoveries of Hahnemann or his followers, that Homeopathy has developed an important side of truth to the world, and that the common sneers with reference to it are largely founded on ignorance of the fundamental principles of force.

1. **A Popular Sophism.** It is supposed to be an overwhelming argument when it is said that a high dilution destroys all traces of the original drug, even the tenth centesimal attenuation, for instance, diluting the original drug 100,000,000,000,000,000,000 times. A knowledge of atomic law shows how the process of triturating a drug communicates a certain principle of force, which attracts a special grade of matter from the atmospheric elements. I have shown (see "Principles of Light and Color," p. 172) that a refined form of all earthly substances floats in the air, and we may readily see that the electrical excitement caused by the shaking or grinding processes of trituration will develop a chemical action that is absorptive of these surrounding volatile elements.

2. **The Philosophy of Trituration** is not understood even by physicians, and Homeopaths themselves are still considerably at sea with reference to their favorite principle of *similia similibus curantur*. Hahnemann defines his leading principle thus: "Select for every case of disease a medicine capable of calling forth by itself an affection similar to that which it is intended to cure" (Organon). But we have seen that the law of harmony requires *contrasting* rather than *simliar* elements—that similars repel and excite each other, a thing which is some times useful to do, but that in the general treatment of disease, which is a one-sidedness of condition, the great thing to be done is to find the elements

that make up the other side of force, and so bring about the balance that constitutes health. Is not Homeopathy then at war with the great principle of harmony which requires *contrasts* rather than *similars?* I answer yes, if we take it as Homeopaths too generally do, but no, if we build upon a true system of trituration? It is a process of shaking, or crushing, or agitating a drug at each dilution, which awakens its chemical activities in such a way as to attract affinitive elements from the atmosphere. But chemical affinity never deals with similars, but with contrasts, an acid affinitizing with an alkali, a blue element with a red, etc. We come then to this rule, which, if understood and practiced upon, will prevent a great many mistakes, and lead to many grand results, namely :-*Find a drug that will produce a disease similar to that which you wish to cure, then triturate and dilute it until it is raised to a high attenuation, and you will thus have obtained, by chemical action, the contrast of the original drug and consequently the true element for producing a cure.* Hence, the Homeopathic law finds some of its greatest results in high attenuations rather than in the original drug or in low dilutions. Besides this, the high dilutions have a more refined potency and avoid the crude or poisonous nature of the original drug. Hahnemann preferred the 30th attenuation, and so was a high dilutionist.

3. **Dissimilars.** True Homeopathy then cures on the principle of *dissimilars* rather than that of *similars* and thus follows out the eternal law of things. And yet *the law of similars affords a scientific pathway for reaching by means of trituration, the principle of dissimilars, so that cures may be achieved.* In a few cases where delicate conditions rule, however, we may introduce similar elements unchanged with their repellant action to advantage. Thus: if a frozen finger should be thrust into hot water, this coarse grade of heat might prove almost ruinous to tissues already nearly ruined; but, if the fingers were to be held for a moment in ice water, the coldness of the water would have some repulsion for the coldness of the fingers, and the refined element of vital heat rushing forward to fill its place, would succeed in rebuilding the almost shattered tissues. But even this is but another method of calling forth contrasts. Again, although it is almost the universal practice to remedy ordinary inflammation by cold water, cool air, blue light, etc., yet, in certain cases of negative inflammation, which is really a cold congested condition, we apply hot water, or hot substances to the part affected. So the ultimate end, after all, in healing, is always to gain contrasts. But even in the case of the frozen finger, I believe that a warm magnetic hand could be applied at once without the aid of the cold water.

4. But **Facts**, as well as **Chemical Principles**, show that this theory of trituration is correct; in other words, ***high attenuations give an opposite***

style of power to that of low attenuations or to the original drug. I have room for only a few verifications of it, as follows :—

The late Dr. C. A. McChesney one of the prominent Homeopathic physicians of Cincinnati wrote me thus :

"The Homeopaths use yellow medicines, which, in material doses, cause diarrhea They use the same medicines in attenuation, to cure diarrhea. Are the rays of light more material than homeopathic attenuations?" (No; the solar rays average a little greater degree of refinement than homeopathic preparations.) Dr. McChesney also stated that high attenuations of opium are given to awaken persons from the sleep caused by taking opium in the ordinary crude form.

Dr. J. H. Fulton, a skilled Chromopath and Homeopath, at No. 11 Victoria Street, Montreal, writes me as follows :

"Why is it that sulphur (yellow principle) in its crude form, will physic, and its highly attenuated (200th) will cure diarrhea? I have seen this repeatedly. Again, phosphorus in its crude state or low dilutions, stimulates the sexual function to a great activity, but in a high dilution (200th or more), it depresses sexual feelings? I have proved this many times."

Dr. Samuel Swan, an accomplished Homeopath of New York, informs me that he has charged substances with red light, and then, after raising them to the millionth attenuation, has found them to act finely as nervous sedatives, while with a high attenuation of blue charged substances, he has produced an exciting effect; in other words, each color has been made to attract its chemical affinity, or contrasting principle, by means of trituration. If the learned Doctor had understood chromopathy and this law of trituration, he could have saved much time by taking the blue and violet power directly from the sunlight, without any trituration for the sedative effect, and the red for the stimulus.

The late Dr. Volney P. Slocum, Eclectic physician of New York, gives an account of a remarkable cure of a terrible case of spasms by a high attenuation of Lobelia, although it is well known that, in its crude state, it will produce the spasmodic action of vomiting. A high attenuation of mercury is given to cure salivation caused by the crude drug.

5. **Is Homeopathy Successful in Healing Disease?** Success is the test to which all systems must be brought. Dr. Joseph Hand, M. R. C. S., of London, speaking of Homeopathy, says: "So efficacious has it proved, according to statistical returns given by various hospitals in England, Scotland, and other places abroad, that whilst the mortality from all diseases was 10½ per cent under Allopathy, it was only 4½ treated homeopathically." He says, also, that domestic animals, such as horses, cattle, fowls, etc., are cured to an extent of 74 per cent. greater than under old school practice. A number of American Hospitals show two or three times as many cured under homeopathic practice as under allopathic.

If some one shall say that diet, or leaving the patient to nature, make these cures, how about the multitude of cases that have dieted and allowed nature to work without being cured until the homeopathic remedy has been given? Take the single case of gall stones, which are considered so difficult to cure under the old methods. Dr. Fulton, of Montreal, states that he has had great success in curing this disease, by giving elements similar in nature to the gall stones themselves namely, *calcarea carbonica*, after it has been raised to a high attenuation. How many other diseases yield in the same way? The following letter from the well-known and able clergyman, the Rev. G. H. Corey D. D., announcing an almost magical cure wrought by the 40,000th attenuation of Nitric Acid, will seem astounding to those who are ignorant of these marvelous forces:

In 1870, I was one day walking down Broadway, when my right knee suddenly failed to perform its functions. An excruciating pain ensued. The pain passed away for some days, when another attack came with increased severity. At last, I put myself in charge of a physician who thought it Arthritic Rheumatism. Receiving no benefit, I changed my physicians several times. Not one of them succeeded. I then turned to the books, myself, and read and studied constantly, and really thought myself fully acquainted with the case. I concluded it was a case of *spontaneous luxation*. But I did not improve. The agony I endured at times was something terrible. One day, an eminent Homeopathic Physician was at my house when I was hobbling around on crutches. He said "what ails you?" To which I answered, That is what I would like to know. I gave him the case, when he said, "You ought to be able to cure that difficulty," and added, "with one dose of medicine." He asked me to cease taking remedies and write out the symptoms of the case. I gave him the full record, and added, that I had received old school treatment of the most heroic kind until I was a man. When I took the record to him he simply said, "Humph! one dose will fix you. Take this and nothing more." I enquired what he was giving me, and he said "Finke's 40,000th Attenuation of Nitric Acid." I ridiculed what seemed to me the presumption of the doctor, and clamored for something stronger. But I took the medicine, one dose, and waited for the return of the trouble, and have waited since 1873! I am waiting still, and hope to wait forever without any sign of its return. This trouble covered a period of about three years, resisting all treatment until I took the remedy above prescribed, and there has been no return of the trouble.

Now, Doctor, I have hastily sketched this experience. It does illustrate the power, the dynamic energy of the finer forces when properly applied. Faithfully yours,

July 7, 1887. G. H. Corey.

6. *But Homeopathic remedies are often said to be* **poisonous** and hence must be hurtful. Here, again, comes in ignorance of chemical law, for even poisonous drugs, if well diluted, triturated or succussed against the air; in other words, if raised to a high attenuation, may so absorb the contrasting elements by chemical affinity, as to lose all their poisonous character. We call chlorine poison, and yet, if combined chemically with sodium, it forms the substance called salt, which is not a poison. *Oxygen*, and especially its more powerful form, *ozone*, is distressing if

used in an absolutely pure state, but if combined chemically with hydrogen, it forms the indispensable substance, *water*. Knowing the tendency of all medicines, to gain more and more of the contrasting principle in proportion as they are triturated, we may therefore modify our treatment accordingly, and work on the safest and most scientific principles. *The common expression that what is poisonous to a healthy system is equally poisonous to a sick person, is quite false, as seen in these higher laws of chemical action*, for what is poisonous in one case, may be the highest harmony for another condition. Do I encourage the use of poison, then, by these principles? By no means; I would show how to banish poisonous effects by revealing the correlation between the parts of the human body and the chemical elements of the external world, also of the psychic world.

7. Some **Mistakes of Homeopaths**. We have already seen some of the mistaken ideas of homeopaths concerning *trituration* and the law of *similars*. Having reached a grand law, they tend too much to be satisfied with it to the neglect of other laws of nature. Having found a great advantage in the law of *similars*, they fail to sufficiently grasp the great law of *dissimilars* or contrast. They too often commit great blunders by applying the principle of similars directly, *i. e.*, when little or no trituration has taken place. How common it is, for Homeopathic works to prescribe remedies without the least reference to whether they are to be given in high or low attenuations, although the difference in results is heaven wide. Some Homeopaths prescribe very low attenuations of deadly poisons, and thus pervert and injure human systems, as truly as do the Allopaths. Homeopaths should remember that their whole system is founded on falsehood, unless trituration or succussion is practiced. Dwelling so much upon the principle of similars, they do not become as deeply versed in the principles of chemical affinity, which deals in dissimilars, as would be desirable, and are in the habit of declaring that the forces of *life, spirit, vital dynamics, etc.*, are not to be classed with the principles, of chemical affinity, and are not directly correlated with material conditions. I have adduced in many other places, facts and principles to show that the universe, both spiritual and material, possesses an absolute unity of law, and that neither spirit nor matter can ever act entirely apart from each other, and it does not require any more words on this point here. (See pp. 1, 2, 3, 4; also Prin. of Light and Color, Chap. I., IX and X.) The following one-sided conception of disease is taken from Hahnemann's Organon :

"Diseases will not cease to be (spiritual) dynamic aberrations of our spirit like life manifested by sensations and actions; *i. e.*, they will not cease, for the sake of those foolish and groundless hypothesses, to be *immaterial* modifications of our sensorial conditions (health)".

As a result of this theory in which bodily forces are neglected, he is led to make the following points, some of which are admirable, and some, which I have put in italics, would be disastrous in practice :—

Homeopathy sheds not a drop of blood, prescribes no emetics, purgatives, *laxatives or sudorifics. It removes no external diseases by local applications: it orders no medical baths or enemas,* and makes no use of blisters, sinapisms, setons, or fontenelles; it objects to salivation, and does not sear the flesh to the bone by moxa or heated iron. The Homeopath needs no opium to soothe pain, etc."

Some of these are noble utterances to have been given so long ago as 1833, but his condemnation of "local applications," etc., is unfortunate, as it would do away with fomentations, compresses, pads, magnetic appliances and the like. While some homeopaths are outgrowing these conceptions of Hahnemann, and becoming more and more eclectic, others cling to their idols, and are incapable of large conceptions. Others, still, depart from their founder in the wrong direction, by using crude and poisonous elements too freely. Medical men, like theologians, are not sufficiently cosmopolitan in their grasp of truth. The homeopath who consciously neglects Chromopathy, with its grand power to bless mankind, or ignores manipulation, or water cure, or air cure, is criminally neglectful of his opportunities, for he is simply letting patients die who might be saved. It is cheering to know, however, that many broad and accomplished minds that rise to the grand possibilities of Homeopathy and kindred methods of cure, are to be found in the Homeopathic ranks.

8. **Office of a Physician.** "The physician's highest and only calling, "says Hahnemann," is to restore health to the sick, which is called healing." It is somewhat singular that this large-souled man should be contented with this conception. The true physician, especially the *psychophysician,* should not only minister to bodily ailments, but treat those mental and spiritual perversions which result from imperfect physical conditions, and thus help humanity upward into harmony and power.

9. How **to Modify and Potentize Drugs.** Every drug is capable of being intensified, or softened or vivified in its action, by means of trituration, or sunlight or vital magnetism. Suppose we have capsicum, and wish to warm the blood of a patient, without causing too much excitement; put a decoction of it into a glass bottle and shake it briskly, leaving a minute opening in the cork to admit the air, or at least opening the bottle occasionally. The effect of this red substance, as we have seen, will be to attract the blue elements of the air, and thus to soften the effect of pepper itself. If diluted and shaken briskly, its power will be much in resemblance to that of a purple substance, and if shaken still longer,

perphaps fifteen or twenty minutes in all, the blue potency will begin to predominate. If shaken in the sunlight, the change will take place much more rapidly, and if agitated in the atmosphere of magnetic persons, it will become also very effective as a medicine. Dr. Arthur Lutze, a celebrated homeopath of Germany, who treated multitudes daily, declares that " animal magnetism is the vivifying, efficient power of our potencies." But triturations are now generally performed by machinery, and so may well be considered less effective than if performed in the presence of a magnetic person, though the forces of the ordinary surrounding atmosphere are very potent to heal. A medicine which is shaken or stirred briskly a little while, especially by a magnetic person, before it is given becomes much more effective than it would otherwise be. An improved method of potentizing a fluid drug would be as follows: Dilute the fluid so that it may be thousands of times as weak as before, if you desire, then place it in a glass jar, in the sun, churn it or dash it into a foam by a revolving attachment, meantime opening the jar every few moments to let in fresh supplies of air. The chemical action will be so intense as to potentize it very rapidly. If you wish any special color force, place a colored pane so that its light will cover the jar.

10. **Chromo Homeopathy.**

Several Homeopathic physicians have found their drugs possessed of a new and remarkable efficiency when color-charged in the sunlight or when combined with color-charged substances. I will here give a few of the important homeopathic medicines and aim to indicate a scientific grade of attenuation, together with the real color forces that should be used in connection with them, according to the foregoing principles. When colored vials can be had, the medicines can be ceruleanized in a blue vial, amberized in an amber vial, and so on with other colors by simply having the vials exposed to sunlight. The first part of the name of a drug can be attached as an affix to the color root itself, thus: *ac* for aconite, *bel* for belladonna, *arsen* for arsenicum, etc., can be added to *rubi* or *cerule* or *amber*, etc., The words *high* or *low* signify that a high or low attenuation of the drug is recommended. Thus the term ceruleac high signifies a high attenuation of aconite charged with blue light or combined with a blue-charged substance. Purpurbel 3, signifies belladonna raised to the 3d centesimal* attenuation and purpurized. Amberphas 5 X signifies phosphorus raised to the 5th decimal attenuation and amberized. Decimal attenuations are generally thoroughly triturated or succussed.

* In homeopathic parlance a 1st *centesimal attenuation* is one in which only one part of the original drug out of a hundred remains, the other 99 parts being diluted by some other substance; the 2d *centesimal* retains only a hundredth of the first, or a ten thousandth part of the original drug, etc. When the dilutions are by tens they are called

Purpurac high would be fine for fevers, cholera, etc.

Ceruleac low, say 2X works marvelous cures of diarrhea, gastritis, cancer of the stomach, dysentery, inflamed bowels, insomnia, etc. I suggest the 2d attenuation of the aconite, for, being a poison in its crude state, it would not be wise to get much lower. In this case, too, it would not be wise to have a high attenuation of aconite, for, being fundamentally more on the blue and violet order, its higher power must be somewhat rousing in its character. I prescribe the higher potencies of aconite for fever, because fever heat comes from over-active pulsations of the heart, which latter, comes from a surplus of electricity in the form of carbonic acid sent to the right auricle, on account of the torpidity of the liver. The low attenuation, then, while cooling the blood and seeming to have a direct effect on the fever, would be less fundamental and enduring in its character than the high attenuation, which, by its animating power, would waken the liver into action. Ceruleo alone, is remarkable for curing diarrhea and excitable conditions, and ceruleac low would not be necessary excepting in violent conditions.

Cerulebel high, belladonna in its crude state, causes a congested brain, eyes and face, an intense throbbing headache, insomnia, sore throat, etc., so that the high dilution of this drug, say, from the 20th upward into hundreds or thousands, if one chooses, would cure these excited conditions, and *ceruleo* would, of course, do the same, hence the great power of cerulebel high.

Amberphos low, say 1X, or even 5X. Phosphorus is especially strong in the yellow and yellow-orange of its spectrum, hence, its nerve-rousing character, especially the nerves of the kidneys, sexual organs, brain and respiratory system. In its low attenuations, aided by yellow-orange light, it must be especially animating.

Rubephos low, rousing to both nerves and blood; aphrodisiac.

Cerulephos high, quieting to nerves, brain and sexual system; anaphrodisiac; desirable for spermatorrhea.

Rubefer low (Ferrum, iron): warming; rousing to arterial blood; fine for rheumatism and anaemia.

Purpurfer rather low, say 1X or 2X. Animating, but less exciting than rubefer low; fine for inflammatory rheumatism or weak digestive functions.

***decimal*, the first decimal being styled 1X, the second, 2X, etc. A liquid substance is said to be *diluted*, and it is succussed a while against the air at each dilution. A solid is *triturated i. e.*, agitated, by a grinding process, at each step, into greater refinement. We speak of 1st or 2d *dilution* of liquids, the 1st or 2d *trituration* of solids, or the 1st and 2nd *attenuation* as applied to both solids and liquids.**

Cerulearsen high. Crude arsenic causes great burning of the stomach, vomiting, etc., hence, the high attenuation, aided by blue light, will cure these conditions, also, cancer of the stomach, as has been done.

Ceruleham 5 X or 1. Hamamelis (witch hazel) is very soothing, like ceruleo; ceruleham is fine for internal bleeding, burns, pains. etc.

Cerulenux high. Nux Vomica causes nausea, vomiting, vertigo, colic, heartburn, etc., hence the antidote for these would be cerulenux high.

Purpurnitracid high (nitric acid), for rheumatism, syphilis, ulceration of the bone, etc.

Size of dose, 2 grains, or if in liquid form, 2 teaspoonfuls at a time for adults. In violent conditions, take every 15 or 30 minutes and double the quantity.

11. **Perfected Homeopathy** has brought to the world three great points of excellence; 1st a scientific method of gaining those potencies of nature, which exactly balance the one-sidedness of disease and by dealing directly with the functions of the human system itself, regulating causes; 2nd, it deals with refined forces, and thus as attained to the real law of power, and 3d, it has lessned the size of doses, recognizing the fact that it does not require large doses to set in motion waves of dynamic power. It is quite possible that the doses are often made too small in many cases, as some systems require a greater power to reach them than others.

14. *Homeopathic* and *Chromopathic medicines* are much more effective, if not perverted by positive **foods** such as strong acids, strong coffee, etc.

XXII. HYDROPATHY.

Sunlight is the most beautiful object of external nature, and water is next to it among the great forces. Cold water and ice are mediums for electricity, hot water or steam is a fine vehicle for thermal influences, while both are great solvents for cleansing purposes, and for carrying on the processes of animal life. Although water is the native element of fishes, and conducts away too much of the vital electricities of human beings when long applied, it is of value as a curative agent. While not so refined and potent an element as sunlight or magnetism, it is, on the whole, quite superior in safety and remedial power to very many drugs in common use, and for some purposes unequaled by anything. In later parts of this work some of the fine healing powers of hydropathy will be presented, but here I shall have space for only the leading methods of cure, or instruments connected therewith.

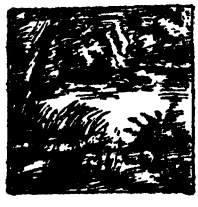

Figure 41. One of Nature's Healings Forces

1. **Turkish Baths and Russian Baths** are highly valuable for throwing off internal impurities by the sweating process, and external impurities by the washing process, while its kneading and other manipulation give some activity to the blood. The fact, however, that all parts of the body, whether too hot or too cold, are submitted to the same grade of heat, is physiologically unscientific. The heat of these baths tends to congest the brain and to overheat points that are already too hot. The sweat-bath of the future must consist of luminous heat with head in cool air as it is far more refined, vitalising and curative than the ordinary coarse styles of thermism. The luminous bath, also, will admit of hot or cold forces on any part of the body, by means of different colors, and proves upbuilding instead of exhausting to thin, nervous people.

Care should be taken to get the system well cooled after the Turkish bath, and the pores well closed by cool water and cool air before leaving, to prevent taking cold. Those who are quite delicate, or whose hearts are sensitive, should not have violent applications of cold water, and those whose brains are sensitive should have a cool, wet sponge on the head while in hot rooms.

2. **A Wet Compress** consists of a cloth wrung out of cold water, then placed over some part of the body. This is kept in place and prevented from an undue chilling effect by putting a dry towel over it and around the body. A compress wrung out of ceruleo is still more effective for cooling inflammable places.

3. **A Fomentation** consists of cloths wrung out of hot water, placed over some dormant, stiff or troubled part of the body, and covered with a towel or other bandage. These fomentations are made sometimes of *hops* or *boiled mush.* A jug filled with boiling water covered with cloths is admirable for the feet in cases of headache, menorrhagia, etc., and a soft gutta percha bottle with hot water in it, is still better, and can be placed under the spinal vertebrae of the lumbar region to great advantage during the passing of calculi, or over the lungs in case of pleurisy.

4. **A Pack.** Spread out several blankets and comfortables on a bed together. Wring a sheet out of water, either hot or cold, wrap it around the nude person and let him lie down on the blankets and be wrapped up in them. If the feet are cold, place hot bottles to them, and if too much blood is in the head, place a cold, wet cloth over forehead and temples, but not on the back of the head and neck, which should be kept warm. For a good perspiration it may require 45 to 60 minutes.

5. Very **Cold Applications** should not be used much with pale, nervous people, nor on tender organs of even stronger people, such as

the eye, the uterus, or a very excitable heart. It is dangerous, too, in all rabid, eruptive diseases, as it tends to drive the impure virus inward toward the vital organs in a way to produce fatal effects.

6. **Chromo-Hydropathy.** By the aid of the color forces, water becomes immensely more effective for the cure of disease and greatly more permanent in its effects. Thus, hot water drank on rising, is found to produce an animating effect on the stomach and bowels, but its effect is not permanent and so has to be repeated every day. By amberizing water and drinking a small amount each morning for a while, the stomach, liver and bowels will frequently become permanently animated, or at least, will not need a repetition of it for some time. Cold water is pleasant to an inflamed stomach, but acts as a mere palliative and must often be repeated to give relief. Ceruleo will work a positive cure. Purpuro, as a wash, will cure dandruff, and baldness; Ceruleo, as a wash or compress, will also cure dandruff, baldness, burns or red eruptions; as a compress over the lumbar and sacral region, ceruleo or verdo will cure spermatorrhea, also, sciatica; as a vaginal enema will cure uterine inflammations, etc., etc. For fuller applications see Chromopathy.

XXIII. THE OLD SCHOOL SYSTEM

Our allopathic friends embrace men of profound erudition, men of great research in the line of the coarser material elements, surgeons of great skill and thorough scholars in the direction of anatomy. In the nomenclature and technicalities of chemistry, etiology, pathology and therapeutics, they are well versed, but in the refined workings of the invisible forces which constitute the soul of these sciences, I fear they are deficient, for which reason they have been led into some very serious errors. It is unfortunate, too, that any attempt of others to reveal to them the processes of mental, or vital, or psychic, or chemical action, is so generally repelled by their materialistic bias of mind as mystical or empirical.

But why have these medical men failed to reach a true science of life, or a true philosophy of disease, or the principles of chemical action by which to cure disease by definite system? They do not pretend to have attained to these things. "Medicine," says Bichat, "is an incoherent assemblage of incoherent ideas. It is not a science." "There is as much quackery in the medical profession as out of it" said Prof. Barker, of Yale College. "There is scarcely a sound physiological principle among us," says Dr. Magendie. "Of all sciences, medicine is the most uncertain," said the late Dr. Willard Parker. "So gross is our ignorance of the physiological character of disease, that it would be better to do nothing," says Dr. Magendie. "Who knows anything of the character of disease,"

says Prof. Mcintosh. "We know nothing of the cause of disease," says Dr. John Mason Good. "Disease," says Dr. Whitney, "has never until lately, been investigated. Who knows anything about disease?" A multitude of other expressions and confessions could be given. The philosophy of fever, of inflammation, of congestion, of nervous action, of muscular action, of mental action, of psychic action, of phrenal action, of sensation, of the systole and diastole of the heart, of respiration, of positive and negative poles and numberless other phenomena of life seems to be a kind of terra incognita to the medical profession.

Why have medical men, many of whom are persons of extensive culture, thus failed to find a firm scientific basis on which to stand? Their investigations have been truly important, and the amount of labor performed, immense, but from the false educational systems of the past they are prone to run in ruts and are almost alarmed at the thought of new things. So far as basic principles are concerned, what do they know of heat, or light, or electricity, or magnetism, or chemical force, or vital action, or the sublime mysteries of immortal mind? I will speak of three great errors which our Old School friends seem to have committed:

1st, they adopt coarse elements and violent processes instead of the more refined, for building up man, himself the finest part of the universe. They make frequent use of lancets, blisters, moxas, red hot irons, setons, leeches, bandages and the like. *Coarse elements and poisons in medical treatment, like coarse and despotic enactments in civil government, are the weakest and least enduring in their good effects, the most dangerous and lasting in their bad effects, and on the whole are rude, costly and unwieldy.* It is not necessary here to mention the fearful devastations, the multitudinous wrecks of human constitutions and the countless graves caused by such drugs as mercury, opium, alcohol, potassium, antimony, digitalis, ergot, and a host of others, or to enumerate the very many cases of tumors, injured limbs, swollen joints, hemorrhages, etc., in which surgery or rude appliances have been unnecessarily used.

2dly, their favorite theory of producing one disease to cure another is wrong and dangerous and all severe counter irritations are to be avoided. The old idea was that disease is a kind of a devil and needs some other devil to cast it out, whereas, the true conception is that it is nature's kindly alarm which shows that things are out of balance, and that contrasting forces are needed to promote harmony. I will quote a few out of almost innumerable cases to illustrate the above principle:

A young man in Brooklyn commenced bleeding at the lungs. The physician immediately put a powerful blister over the lungs, which, drawing blood from all parts of the body to the part affected, made the hemorrhage far worse. A lady who was present, seeing the mistake, had

his feet put into hot water, which drew the blood away and relieved him.

Dr. Brown-Sequard applied a white hot iron to Charles Sumner's spine to rouse action. The tendency of such a counter-irritation is to destroy the nerve action all the way to the bone, and without doubt, the eminent senator's life was shortened thereby. How much wiser it would have been to have had the parts roused by either of the following processes: 1 st, the thorough friction of a magnetic hand over the whole spine, or 2 dly, the gentle rubrication of the part by having light focussed upon it through a reflecting apparatus. These methods would have vitalized instead of destroying the nerve action, and would have saved terrible suffering.

3dly, they are ever prone to deal with effects instead of causes, and this comes partly from the fact that they do not know what the causes are, or knowing, do not know how to remove them. Some examples in proof are as follows :

Cutting out cancers and tumors instead of purifying the blood or destroying the pathogenic germs which cause them. In very many cases these tumors can be destroyed by focussing the sunlight upon them through a burning glass. In other cases the dormant and impure elements of a tumor are fired up and scattered by magnetic manipulation, and then thrown off by sweat baths, etc.

Binding up weak and diseased limbs and weak muscles instead of making them strong in themselves by rousing nature's forces. Prominent physicians worked over a stiff rheumatic knee for nearly a year without effect, until finally they determined to force it into straightness and hold it in place by splinters and bandages. The physicians had not the least idea of how to rouse the blood into action and reach the cause of the difficulty. Before submitting to this terrible ordeal which, under the circumstances, would probably have proved fatal, the patient heard of the sun bath system, and, after taking two baths with the red light over the knee, the leg became entirely straight of itself.

The too frequent use of trusses for hernia or supports for the bowels or womb, instead of vitalizing the muscles so that they can do their part properly, which in many cases is all that is needed.

The too frequent amputation of limbs forms wounds or tumors, when with proper knowledge, the inflammatory conditions could be done away with so that nature could heal the parts without this sacrifice.

The tapping of dropsical persons, which often leads to gangrene and death instead of throwing off the water through the natural channels by perspiration. Even Turkish baths have cured dropsy, but severe

cases would require the luminous sweat bath, in order to vitalize the liver, kidneys and blood, properly.

The use of mere *palliative* instead of *curative* medicines in very many cases. Thus, for sour stomach, bi-carbonate of soda is given, which absorbs the acids, but does not heal the condiiton of the stomach which generates the acids, and which is ever recurring. Opium is given to cause sleep, but it does it by congesting the brain and lowering the tone of life, instead of animating the whole body and producing harmony of the physiological forces on natural principles as should be done. Many other cases could be given in which seeming present relief, but future damage results from lack of a true philosophy of disease. The chromopath, the homeopath, the hydropath and the true masseur deal with the functions themselves, and aims at constitutional upbuilding.

There are great geniuses and skilled physicians in the allopathic ranks who rise above their schools, and in many things, follow nature, but the points I have made are absolutely true, and will not be denied by candid minds. Standing then as these *regulars* do upon a basis of principle which is very *irregular*, and having "the most uncertain of all sciences" as their own Dr. Parker says, would it not seem that they should be very modest and very tolerant of those who have a different basis? Alas! this is not the case, for in many of our states they have had despotic laws enacted, virtually to protect the people, but really to protect themselves, so that no one can practice the healing art even in the most harmless and simple form, unless he has graduated at just such medical colleges, and been examined by a state board, the majority of whose members are allopaths, under penalty of fines and imprisonment. Thus are the people treated as mere fledgelings who do not know enough to choose their own doctors and healers until state law has declared whom they may patronize. In religious matters the battle of freedom has been fought and won more than a century ago, and the people would indignantly repel the attempt to force them to hear just such a class of preachers, or to force all preachers to graduate at just such seminaries. "But the matter of life and death rests in the physician's hands," says the objector. "So," said the old theological bigot, "the life of the soul depends upon following in our pathway, and so the people must be forced to live up to our schools." What would be thought of the preacher now who would adopt the high handed course of the medical men? A higher philosophy of cure is dawning upon the world, and schools more true to nature and far more successful in results, are coming forward. Shall Heaven's truth be crushed by this juggernaunt of medical legislation? "But," I am asked, "shall we have no protection against quacks?" I answer, first, that many people who are called *quacks* cure

various cases in which the regulars have failed, and in the second place, every state has laws against *malpractice* and this is sufficient protection. Education, true and broad education, is a superb thing, but if any person should prove to be endowed with those divine gifts by means of which he can set bones or make cures more skillfully than another man who has studied for years, is it not childish folly to prevent him ?

XXIV. MISCELLANEOUS ITEMS

1. There are numerous **new methods** of treating human ailments ever arising, some of the leading ones of which I have already presented or will briefly speak of below.

2. **Terrapathy** or the *Earth cure* is sometimes highly useful. Mud baths or poultices are often effective in drawing off some of the coarser grade of poisons or impurities by chemical action. What is sometimes called the *mad stone* has a chemical affinity for hydrophobic poisons, and a mud poultice would doubtless extract much of the virus communicated by the bite of a mad animal. To cover the body with sun-charged sand is both vitalizing and purifying. Dry earth is good for ulcers. Blue clay as might have been expected from the foregoing principles, has proved remarkably healing to red inflammations, while red and yellow soil are best adapted to dormant conditions.

3. **Musical Tones** have sometimes a wonderful power to quiet excitable nerves and bring peace to a stormy brain. At other times they will rouse a dormant soul into a triumphant cheer and set the blood and nerves into a brisk and harmonious flow. The waves of a musical tone flow in beautiful and regular curves like the line of beauty, while the abominable nerve-injuring rattle of wagons over the stone-paved streets so common in American and many European cities, dashes the air into rude and piercing angles. When we become sufficiently civilized to get smooth pavements and run our vehicles by electricity instead of by steam or horse-power, the happiness and health of humanity will be increased. Bands of music in parks as well as on excursion boats have a restful, refining and elevating influence on many a weary person.

4. **Drugs** would have a more intense, refined and penetrating power if allowed to stand more or less in full light in glass bottles whose colors act in harmony with the character of the drug; thus *acids* could appropriately be placed in bottles of mazarine blue or blue-purple; *alkalies*, in yellow or red bottles; purgatives or laxatives in amber colored bottles; astringents, refrigerants, etc., in blue bottles; rubefacients, escharotics, etc, in red or orange bottles. Slight exceptions to this rule would have to be made at times; as, for instance in the case of hydro-

chloric acid, which, being constituted of hydrogen and chlorine, possesses such active red and yellow power as well as blue, that a blue bottle containing it would be shattered by sunlight.

5. **Red Lamp Shades** are not only opposed to a refined taste, but tend to inflame the eyes. Blue translucent shades with white inner surface are soothing to nerves and curative to weak eyes.

6. **Blue Spectacles** are admirable to protect weak eyes in the midst of snows or white sands. Smoked glass will answer if blue cannot be had.

7. **Electric Lights** should be softened with ground glass, or glass with a bluish tint. The French engineer who recommends yellowish glass to protect from electric lights is ignorant of the therapeutics of color. Gas and lamp-light are hurtful from the yellow and orange character of their rays, hence the necessity of greenish or still better, of bluish shades.

8. **Physicians** or teachers who manifest a pedantic character in an excessive use of Latin or other languages, or who offer some assumed great discovery, or a book at an enormous price, as being something mysterious and marvelous, not only manifest a selfish disposition, but ten to one their ideas themselves do not amount to much. A grand soul is all aglow with his desire to teach and bless the suffering people without unduly taxing them for such knowledge.

9. The *Swedish Movement Cure*, the *Muscle Beating system*, the *Vacuum Cure*, the *Compressed Air Treatment*, the *Lifting Cure, the friction* of *Flesh Brushes* or *coarse towels*, *Callisthenics*, *Gymnastics*, *Manual Exercise*, *Baths* of various kinds all tend, when not excessive, to equalize and stimulate the flow of blood and destroy morbid conditions. The use of *Magnetic Garments* when not so heavy as to smother the pores will often prove vitalizing and curative. To deny that *Faith Cures* and *Prayer Cures* have at times wrought remarkable results is to show ignorance or bigotry and these results are effected, 1st, by the magnetic aura that flows from some earnest co-worker who may be present, or 2nd, the belief that a blessing is about to occur, places the subject in a most favorable psychological condition, and 3rd, this psycho logical condition and earnest aspiration, renders the subject receptive to the baptisms that come from the higher spiritual realms.

10. **Physical Culture and Science** are constantly developing and improving our race excepting in some overcrowded cities where proper conditions are impossible. Human life is very much longer than it was two centuries ago. Statistics show that women are several inches taller and a number of pounds heavier than they were a generation ago, and athletic, hygienic practice will account for this. The people are learning

that whiteness in a loaf of bread and whiteness in human countenances are not beautiful. Extreme blondes are lessening in number, while brunettes are increasing, and this is the result of daring to face the sun, and air more than formerly. A strong sun gives greater darkness to skin, hair and eyes, and greater beauty. Almost eleven million school children were examined in several European countries and it was found that Germany has 31.80 per cent of pure blondes, while Austria which is farther south has only 19.79 per cent., and Switzerland 11.10 per cent. Sunny Spain, of course, has a still darker people, who, were they not so ignorant of the laws of life, could make a magnificent race. Dr. Beddoe found in England that among 726 women whom he examined, 369 were brunettes and 357 blondes, the tendency being towards brunettes. Of these about 15 per cent. more of brunettes were married than of blondes, which looks as if the men were getting tired of choosing pale faces. Blondes are necessary but not pale ones.

11. **If long continued nude Sun Baths** should be taken, the skin would tend to become somewhat parched unless it should be oiled occasionally. Olive-oil would be excellent for the purpose and a ceruleo bath could sometimes be used in its place to fine advantage. The nude races are in the habit of oiling or greasing the skin by which method they keep it soft and pliable.

12. **Slender People** who are deficient in the flow of oily substance to the skin are liable to give off their magnetic force too freely, and become especially depleted if they use water very much. For such, the application of pure oil once or twice a week would be excellent. Swimmers who spend a long time in water should, of course, oil themselves, as fatty elements are non-conducting.

13. **People** living in **Hot, Sunny climates** receive quite as much benefit from sun baths and the solar instruments as elsewhere. Those who take the sun on the bare body gain such a vital power that they can endure the greatest heat or cold with impunity.

14. *The* **paper** *on which this book is printed* is white. It is sufficiently white to make black letters show distinctly and yet blue enough to soothe weak eyes and enable one to read a long time without weariness. Pink paper is inflaming to the eyes, and even cream color is objectionable. The true, pleasing colors for book work are *silver gray*, a lilac white or a pale greenish white. Next to these is the pure white.

Fig. 42. ABORIGINES OF ENGLAND.
Published by J. Wilkes, London, in 1804.

A specimen of manly and womanly form, unperverted by fashion and developed under the vitalizing influence of nature.

HUMAN CULTURE & CURE

PART SECOND

MARRIAGE, SEXUAL DEVELOPMENT AND SOCIAL UPBUILDING

PART SECOND

Marriage and Sexual and Social Upbuilding

1. MARRIAGE

1. In approaching the subject of this sacred and beautiful relation, I shall aim, not so much to give a great mass of technicalities and details with regard to reproductive processes which have been elaborated by scientific men, especially by German investigators, who, in some departments, have been the most profound of all, but to give the general result of the discoveries of the whole, together with the light thrown upon the same by my researches in chemical, electrical, and psychological forces. I want my reader to join me in an intense study of this subject of the marriage or mating of the sexes, so that we may ascertain how it can be made triumphantly successful in leading the human race to a happier and grander destiny.

2. Is **Marriage a Failure**? This subject is being extensively discussed on both continents, and not a few are answering it in the affirmative. If marriage is a failure, then the universe is a failure, for duality is the everlasting law of things, and without the union of the positive and negative forces, all life must perish and even matter itself become disintegrated. Human judgment and human development, in their present unripe conditions, are often great failures, especially when they try to combine discordant elements in a legal union.

3. **"What God hath joined together"** consists of a couple whose magnetic and sympathetic forces are united harmoniously, but what man hath joined together in a mere legal way is, in many cases, no true marriage at all. Yet, until humanity becomes far more just and loving than it is now, some legal restrictions should be connected with every marriage.

4. But **The Legal Bonds of Marriage** *should not be made tyrannical* in a way to curse both husband and wife as well as any children that may be born to them. A couple contemplating marriage should study most concientiously and earnestly each other's temperaments and sympathies and motives, and should understand the principles of a harmonious union so far as it concerns themselves, and the health and character of any children that they may have; and then, if satisfied, should undertake the union with an earnest desire to continue it through life. If, after earnest effort to live together happily, they find they have failed, that their own health is being destroyed, and their children proving to be the perverted results of discordant conditions; or, if either

party has become badly perverted in principle, or abusive, cruel, or dissipated, then, by a correct divorce system, the legal bonds should be severed in a manner which will give justice to both parties. To refuse a divorce, under such circumstances, whether from religious or any other motives, is to promote wickedness and misery in the world. New York State is woefully behind the age in its despotic marriage laws, and some of the leading European nations are still worse. Such laws encourage free love and promiscuity. Several of our states, however, have adopted liberal marriage laws, about which many of our fossiliferous editors are greatly distressed. The London *Telegraph* has lately been publishing a long series of letters on marriage, and, having received 27,000 letters from every class of people, has come to the following large-minded conclusions on the subject :

" The consensus of letters is overwhelmingly strong against early marriages. Our law ought, we think, to forbid marriage to young men under twenty-one and to young women under nineteen. Among the working classes, especially, this would produce, we believe, an excellent effect. Then also, it is clear to our mind, that the law of divorce must be enlarged to permit dissolution of marriage for desertion, for lunacy, for confirmed inebriety, for conviction of disgraceful crimes, as likewise for established incompatibility of temper and temperament, such as a just and prudent judge would admit to be adequate. That the marriage service, as it stands, calls also, for alteration, has been abundantly demonstrated by these letters, and the sooner, his Grace and Primate finishes with the Athanasian creed and turns his attention to passages in that service which shock young minds and disconcert older ones, the better."

It is proper now to enquire what are the distinguishing characteristics of the two sexes, after which we must ascertain what are the conditions, both physical and mental, which shall bring about an harmonious and ennobling union.

II. DISTINGUISHING CHARACTERISTICS OF THE SEXES.

1. **Distinctions in Form.** The perfect manly character and the perfect womanly character have an immense number of points of diversity in form, size, motion, tones of the voice, mental traits, and flow of the vital magnetic currents ; while, on the other hand, they have an immense number of points of similarity in all of these things. In a crude or imperfect condition of social development, the sexes are too much alike, woman being devoid of that sweetness, delicacy, and beauty which makes femininity so fascinating and man being devoid of that majesty, force of thought, and strength of character which makes masculinity so noble. But femininity should never develop into effeminacy in woman, nor masculinity into rudeness in man. Perfected nature thus develops a beautiful contrast, but never contrariness in sexual characteristics, for true diversity itself admits of the greatest unity. In the

Principles of Light and Color, I have shown that nature develops her effectiveness and harmony on two distinct plans, the one of which is that of gentle progression or *Gradation*, constituting the central law of grace and beauty, while the other is that of bolder features and *Contrasts*, constituting the law of spiritedness and power. While both sexes should combine more or less of both styles of perfection, still gradations of every kind should be more distinctive in woman and contrasts of every kind in man.

2. **Gradation in Woman**. Woman's form throughout is a continual succession of curves, and curvature is a gradation of direction. It also presents many gradations in size, as well as in colors. The voice of a refined woman is sweetly graded and curved, and has no violent outbursts of tone, and all her motions are yielding and graded, her very joints being seemingly inserted upon cushions and her flesh being softer than that of man. Watch a lady as she moves along the streets, and her head will be seen to be passing through a graceful and constantly waving motion, while nearly every man in the world carries his neck stiff. Her body, too, is willowy and pliable. *As Nature has thus made gradation the law of femininity, it is an indisputable fact that the same principle should rule in woman's dress, which should consist of flowing and yielding skirts rather than stiff bifurcated-garments.* The outlines of a stiff corset are a violation of nature's gradations, and an immense deformity, while a bustle, shooting out in a huge, angular hump, is a hideous burlesque on woman.

3. **Contrast in Man** is seen in the more angular projection of his muscles and general features, for angularity is contrast of direction. Man's voice, too, is bold, his motions positive, and his beard contrasting and picturesque. The ordinary method of parting the hair on one side, for men, is in harmony with his contrasting style, and the dudish method of parting the hair in the middle is distasteful to a majority of mankind. Some years ago a railway train was wrecked in Illinois and the conductor lay dying among the ruins. Looking up, he said to his attendant:

"Have any of those men been killed who part their hair in the middle?

" Yes, three, sir ".

" Thank God ! then I die contented, " was the answer.

This is but one of the examples to show how womanly man is disliked as much as a manly woman.

4. **The sexes are the Complements of each other,** and they long for this complementary character. A man desires a pet-like being, smaller than himself, with round, soft, smooth features, beardless face, willowy form, a sweet, high-keyed voice, and one who conquers more

by attraction and gentleness than by aggressive boldness. The woman fairly reverences a strong, manly form, with deep toned voice, bold features, and a masculine energy in case the whole is softened down by refinement.

5. **Femininity does not mean weakness.** Burke says that beauty requires that one should be feeble and tottering in her walk etc. Beauty requires a willowy grace of motion, but this in woman may be consistent with health and power. Woman, in spite of many imperfect habits, outlives man, and sometimes endures what would prostrate him, the explanation of which will be given hereafter. The highest beauty, elasticity of motion, sparkle of the eye, freshness of color, roundness of feature, as well as brilliance of mind and joy of life, come from the highest health, such as is gained especially by outdoor exposure to nature's forces, and to exercise and pure food. Many ladies aim at a ghastly whiteness of hand or complexion, supposing it to be beautiful, and resort to paints and all kinds of artificial processes, which injure both health and beauty. A correspondent of the New York *Herald* writing from Saratoga, in 1875, speaking of these practices, says:

"Middle-aged women, and those who are *passee*, are often addicted to the same folly the world over, but here the young girls—who ought to be innocent, blooming buds of womanhood—ruin their complexions, their eyebrows, and their lips by these abominable artifices. There is many a girl here who would look fresh, pretty and wholesome—and these qualities constitute three-fourths of beauty—if she would only leave nature alone, and she goes to work by every possible means to destroy it and to even completely change her figure to an abortive specimen of womanhood, most appaling to look at. If this crying evil is not corrected, where shall a coming generation look for its sweet, domestic, natural women for mothers to be revered, for wives to be loved.?"

6. **The Mental and Spiritual Qualities** the sexes differ widely, and it is well they do, for thereby humanity can receive an all-sided development which would be impossible if only one sex existed. Many of the dreadful imprefections of medicine which have cursed the world for centuries could have been obviated if the intuitive mind of woman has been a co-worker in the medical field. The same is true in the departments of law and statesmanship. Woman's mind would have been a great help in dealing with the problems of social life, education, the temperance question, and many other things. But most minds are sluggish, and, having got into a rut, it is difficult for them to get into new and better ways. Some points of comparision between the sexes are as follows:

Man follows out definite chains of reasoning more accurately than woman; woman arrives at truth by the swifter psychic processes, usually termed intuition, though she may not be able to explain the steps in these processes.

Man has a higher front brain than woman, and has more benevolence, as a principle, than she, but she makes up for this by being more sympathetic, which comes from the fact that she is more sensitive and receptive to all conditions around her. The explanation of this will be given hereafter.

Man is more executive and powerful in the external world; woman is the central power in family and social life, and has a keener preception of their relations.

Man has a greater keenness of smell and taste and amative impulse; woman a greater keenness of vision, and probably of hearing, which senses belong more to the realm of refinement. In London, fifty men and forty seven women were tested as to their relative power to perceive odors. The men could perceive odors when ten times more diluted than those which women could perceive.

Man can surpass in science and philosophy and humor, but woman has a wider range in her sympathetic and spiritual nature, reaching down to childhood on the one hand and upto angelhood on the other, taking man on the way.

Man is more cool and self-controlled in his nervous forces, and should tenderly sustain woman, who is a more high-strung being. Woman is less extreme in the lower impulses, and should give man courage to rise above suicidal and violent deeds. Woman both laughs and weeps more than man. Why are her nerves so sensitive? Three principal reasons occur to me: 1st, she has a uterine system which is internal, and causes some extra pressure upon the surrounding nerve plexuses; 2nd, internal organs, if not attended to with care, are liable to become more inflammable than external ones; 3rd, woman's indoor life, in our American cities especially, together with some recklessness in dressing, is responsible for much nervous excitability. In this way woman, who in her higher estate is an angel of sweetness and joy to all around her, may become a torture to herself and to others. Knowing this fact, every noble and thoughtful man who has to deal with her will try to bear, tenderly with her, so that her condition may become better instead of worse.

7. **To Sum up many points in one,** man has greater casuality, self-esteem, firmness, concentrativeness, combativeness, physical courage, amativeness, locality, and organ of number, while woman has greater love of pets and children, love of home, love of approbation, veneration, language, ideality, color, and the refining influences of social life. I award to the male side number and the perception of geometrical forms, because the lightning calculators and the greatest mathematicians have been men; and, of course, color belongs to woman, there being according to some statistics, not one-sixteenth part as many color blind

females as males. A Kashmirian girl is said to be able to arrange 300 distinct tints and hues in a textile fabric. In the line of language and quick movement, Miss M. E. Orr, of New York took the gold medal as champion typewriter of the world at a world's typewriting contest in Toronto, Her average rate was 98.7 words a minute,* which is nearly the rapidity of any ordinary speaker.

8. **Contests for Females.** Among the males of insects, fishes, birds, wild beasts, and the barbarous portion of mankind, contests, sometimes to the death, for the possession of the female, are quite common. When the contest is ended the female generally, though not always, mates with the conqueror. A higher grade of manhood aims to conquer *self*, and the higher classes of womanhood love and admire those men who are engaged in such a noble contest.

9. **To gain the Admiration of the Female,** male birds will often expand their feathers in a gorgeous way, and strut and dance before them with all kinds of exciting manoeuvers; male fishes will spread their fins and kindle their colors into the greatest brightness; some insects and birds will sing their love songs to call the female, and man will put forth his greatest energies and attractions to win the lady of his love. Realizing her power then, let the human female show her male admirer that she requires associates of good habits and high aspirations.

10. **Male and Female Brains.** Dr. Austin Flint, Jr., Gives the average weight of encephalon, as computed by fifty-three males and thirty-four females as follows :

Males :—Cerebrum, 43.98 oz., Cerebellum, 5.25 oz., pons and medulla 0.98 oz.

Females :—Cerebrum, 38.75 oz., Cerebellum 4.76 oz., pons and medulla 1.01 oz.

Average weight of the whole male encephalon, 50.21 oz., of female ditto, 44.52 oz.

This is nearly one-seventh greater weight for the male than the female. According to the table below this gives woman slightly more brains proportionately than man. Woman's brain makes up in fineness what it lacks in size. In Institutions where the sexes recite together woman proves herself amply able to compete with the other sex.

11. **Weight of Males and Females.** *Boston* (20,000 persons)—men, 141½ lbs. ; women, 124½ lbs. *Cincinnati*, at *Exposition* (22,155 persons)

* Since this contest 126 typewriters of England competed, and the most rapid writer accomplished only 79 words a minute. The quickening forces of our bright sun and electrical winter render our people more active in all their movements than those of of England, Germany, etc.

—men, 154·06 lbs. women, 130·87 lbs. *Southern Indiana and Illinois*—men, 158·32 lbs.; women, 133.55 lbs. *Kentucky*—men, 158.43 lbs.; women, 133,76 lbs. The western people get larger frame work of bones from the super-abundant lime there. What is quite remarkable in these estimates, however, is the fact that the men of Boston are not quite one-seventh heavier than the women, while in all western statistics the men are more than one-sixth heavier. Does this signify that males develop more in bones than females in sections where the bone-forming elements are abundant? In our older states it is estimated that men average about three inches taller than women. Some late statistics have given the average height of American men as being 68 inches and of an American woman four inches less.

Man's lung power is greater than woman's. Lurline, the water queen, remained under water in the Oxford Music Hall, London, 2 minutes and 51 seconds, and Peter Johnson, on April 6th 1882 remained under water in a tank at the Royal Music Hall, London, nearly 5 minutes.

12. **Which sex is superior**? This question is about as absurd as it would be to say, which is the superior, a positive or a negative force? Which is the more important, heat or cold? Which is the better, unity or diversity? These are all equations, and each side of the equations is correlative with the other and entirely worthless without the other. Their spheres overlap each other and yet are different from each other. Their pathway converges at times, runs parallel at times, and diverges at times, and when each shall love the other so unselfishly as to tolerate individual liberty, both together will work out a beautiful harmony and unity of effect.

13. **The Study of the two sides of Humanity** is a world of itself only a few glimpses of which can be given here. As mankind grow and expand in their natures, there will be an almost infinite richness of diversity and yet unity made known with reference to the two sexes. The beautiful manner in which nearly all woman's heads are poised above the shoulders in a direct line with the body is quite surprising, especially when we see a majority of men carrying their heads in more or less of a stooping posture. Man's breadth of shoulders gives power; women's breadth and graceful swell at the hips give both beauty and utility, as parturition requires its fullness.

14. **Male and Female Prerogatives.** Man being the more positive side of humanity in which aggressiveness is the stronger, is most naturally the one to *pop the question*. Woman conquers man most surely by her attractive grace and delicacy of style, though at times when a man really loves a woman, but is over bashful and fearful about making it known, she may properly help him on and open the way for him to come to the

point, should she reciprocate. A lady can sufficiently propose without direct words. A preponderance of one sex in a community is always bad. A gentleman who lived in a city where there was surplus of ladies, stated that eight of them had shown an over anxiety to win his favour, and he became disgusted with them all. He was finally captured, however, by a young lady of a more retiring disposition. The caps that ladies set should be made of an invisible network. Man's more direct prerogative, then, seems to be to take the external initiatory step, while woman's prerogative is to veto unsatisfactory advances. In saying this I am not advocating any despotic rules, as woman's fine intuition sometimes makes her more skilled than man in choosing a mate.

15. **False Ideals.** It is considered entirely lady-like for a woman to sing before thousands in a public hall, but many people think it too brazen-faced for her to speak in public. Lucretia Mott, Lillie Devereaux Blake, Elizabeth Cady Stanton, and very many others have shown that woman can retain all her feminine refinement in her method of addressing the public. The Viragos that come out before an audience, challenge the men to answer them, and shake their fists in their faces, are rarely seen at the present time. We need the pathos of woman's voice, and her earnest and practical way of showing up social and family conditions seems almost like a new revelation to the people.

16. While human females excel the males in beauty, **Male birds and often the Male fishes are more brilliant in colors than the Female.** Most male animals are larger than the females, but Carbonnier says that female fish are usually larger than the male fish, and that some females of the carnivorous variety occassionally eat the males.

17. While speaking thus favourably of woman, the man of the world, and, especially, the woman of the world, may say: Are you not one-sided in your estimate of woman? Is she not often fickle and sometimes whimsical in her ideas? Does she not dislike to reason, and consider it almost an insult, or, in fact, a breach of politeness, if you hold an argument with her? Is she not extreme in her feelings, and often ready to fly off in a tangent at a small provocation? To this I would answer, that under the present imperfect methods of female development, in which her studies have been too superficial; in which she has been kept indoors, away from sun and air and physical culture; in which she has often been taught to avoid all useful labour and cultivate those arts of display which will enable her to capture a husband, there is no doubt a side of truth in these assertions when a part of the female world is considered; but the ideas of culture are rapidly changing; woman is becoming stronger, healthier, keener in intellect, very often carrying the prizes for mental skill away from man, and in her higher estate reaching

that self-control, self sacrifice and power which allies her to angelhood. Says S. F. Hershey: "Woman lives longer than man, goes insane less numerously, commits suicide one-thirds as often, and makes one-tenth of the demand on the public purse for support in jails, prisons and almshouses."

III FREEDOM IN WOMAN'S DEVELOPMENT

1. **All Natural and Beautiful Growth requires Freedom**, as well as good conditions. Unimpeded nature works on the law of perfection. Man himself is the highest department of nature, and should be allowed to expand in all directions. In all communities and countries where the people are taught that they must not lean on their own innate manhood and womanhood, but be guided by kingly or priestly power, or a superabundance of laws and customs, they lapse into inferiority, produce a large quota of beggars or banditti, and can be easily wrought up into mobocratic action. "What nature demands, God commands," says Mr. Wright of Boston. This is mainly correct, but I would modify it as follows: *What nature in its healthy and unperverted condition demands, God commands, and a Healthy Condition is where the higher faculties guide but do not suppress the lower.* Just so far as human beings have a single faculty undeveloped, just so far paralysis and a death like sleep exist in their natures.

2. **Suppression of Women's Liberty**. Through all climes and ages woman has been treated as an inferior being, or a mere child who cannot be trusted with her own aspirations and desires, but must be placed in some iron mould of conventionality, especially through all the formative period of her life. She must be shut out from a great deal of the knowledge which she most longs for and requires for the practical duties of life; from nearly all society of the other sex; from general literature, for fear she might learn something about love, and is considered too stupid to choose her own life companion in marriage, or to know whom she really loves or ought to love. She is thus brought up in the dark, like a plant which is left to grow in a cellar, and of course must be both weak and stupid under such a system, which smothers the God-like part of her nature. This system prevails very extensively over Europe, and in other forms in Asia, Africa, South America, Cuba, Mexico and many islands of the sea.

3. **Beauty**. When woman has received her full-orbed development, mentally, morally, socially and physically, and acquired that self-reliance and power that comes from true liberty, she will add a new charm to human society. A masterly English work on "Romantic Love and Personal Beauty," by Henry F. Finck, has lately appeared. Mr. Finck shows the

great advantage of personal liberty and even of flirtation in its higher character. A New York editor condenses some of its points as follows:

"He says, that only the English and Americans possess the word flirtation, and this because no other nations give the same freedom to their young people to do their own prematrimonial skirmishing. He considers the American young woman, even more than her English sister, an adept in the art, and he defends her method on sociologic and scientific grounds. It is her proper and legitimate mode of playing at courtship until she discovers through its harmless and agreeable medium, the partner best suited to her needs, and desires.

"This leads Mr. Finck, by natural steps, to the sub-title subject of his book personal beauty. To love and to free choice of the mate he attributes personal beauty. That in America women are influenced towards marriage only by their preferences is due to the fact that American women are so famous for their beauty. England comes next in this list, and France, where marriages are arrangements of convenience finds her natural penalty in the low average of loveliness. French women are *bel esprit chic* and coquettish, but they are confessedly lacking in physical charms. The matter acts, and reacts, too because, as the American woman grows more beautiful, the American man becomes more gallant, until it is a common saying that there are only two absolutely autocratic sovereigns in existence, the Czar and the American girl. The whole average of beauty, he claims, has become much greater since the development of romantic love Men no longer engage in ten-year wars, or throw away a kingdom for a woman's smile; because a beautiful woman is no longer the rare and the remarkable object she was in the days of Helen or Cleopatra."

"I have sworn upon the altar of God," says Thomas Jefferson, "eternal hostility against every form of tyranny over the mind of man."

4. **The Czarina of Alexander II.** The following fine rebuke of the silly notions of the day by a Czarina, I quote from the *youth's companion*:

"A pretty story is told of the late Czarina, who, as is well-known, was a most faithful wife, in spite of the long continued harsh treatment and neglect of the Czar, and a wise and a devoted mother. Although a strict observer of the rules of the Greek Church, she always opposed the tendency to substitute forms and ascetic ceremonies in religion, in place of true feeling and domestic everyday duty.

"While visiting the Smolnoje Institute for girls, some years ago, the Empress, during the examination of the pupils, suddenly asked, 'what is love'?

"The young ladies blushed as though an improper question had been proposed, became greately confused, and were silent. Madame Leontieff, the directress, kneeling, begged leave to state to her Majesty that all knowledge of this dangerous subject was prohibited by her, and that, in all probability, the pupils did not even know the meaning of the word."

"The Czarina frowned. 'So far from being a dangerous subject, madame' she said, 'love should be the pure mainspring of a woman's life: 1st, love for her parents; then, love for her husband; lastly, love for her children; and love for God always. If your pupils have not this, they are badly prepared for the duties of life.'

"The Empress left the institute, and the next day Madame Leontieff was removed as incompetent by the Imperial Ministry of Education."

5. **Woman in America.** Although woman is more free in America than elsewhere, the old despotisms prevail here still far too much. Parents in different cases determine that their daughters shall marry persons who are repulsive to them, and we have accounts of daughters committing suicide or pining away and gradually sinking to their death from being deprived of those whom they love, and in other cases the daughter is forever banished from her home because she may dare to marry one who is distasteful to her parents. In our rural districts, especially, woman is expected to be a slave and to drudge early and late. According to the *Medical World* every farmer wares out two and a half wives on the average. In Eastern New York, a heartless man having lost his wife, made his thirteen-years-old daughter do all his work and gave her only harsh words and abuse. This loveless life of drudgery became insupportable, and one day she was found dead with a bottle of poison near her and a slip of paper on which was written: "My heart is broken". The father began to realize what he had done when too late.

Of course these are extreme cases, and woman here is rapidly rising to her true destiny.

6. **Must not parents guide their daughters?** Certainly, in a multitude of ways, cultivating ever a loving frankness with them, teaching them self-control; showing them all sides of human nature, so that they may reason keenly and search into human motives, and kindling in their souls a high moral purpose. The daughter must remember, too, the superior wisdom and experience of parents, and should confide in them. She should remember how many years of loving care she has experienced from them who are building up so many hopes upon her. If a gentleman should pay attention to her, she must study his motives and must guard against being psychologized by him, so as to act contrary to good judgment, and it is proper also that she should talk freely with her parents about him. She must remember that a good match is not one of mere money or titles or even reputation, but rather one of deep sincerity and earnestness of soul and compatibility of temperament and temper. She should pay great heed to the opinion of parents about him. On the other hand, the parent, remembering the sovereignty of the individual, should realize that a daughter can understand the chords of her own inmost being better than anyone else, and has a more intense life interest in the matter than even a parent can have. If a daughter should see that her parents are manifesting a selfish desire for family aggrandizement instead of that soul union, which is the most heavenly thing on this earth, then will she be right in differing even from them and walking in the diviner pathway. If a selfish father shall threaten to cut off her money allowance in such a case, it will be doubly noble for her to persevere in it.

7. But **woman is impulsive**, I hear some one say: she is liable to do unreasonable things. On the other hand, give a woman liberty and education; make her feel that she is responsible for her own conduct, and she will become so self poised, acute and strong that she will engineer her way through the world with a great deal of skill. American ladies, with all their freedom, are among the most chaste and self-controlled, and will become still more so as their culture advances. Mrs. Willard, of Troy, instituted a new era for woman by establishing a higher standard of female education. Woman is not self assertive, and so does not manifest her power to the superficial eye. Many a man has married a young woman whom he has deemed merely handsome and playful, but has been surprised to find that she could outdo himself in a real emergency, and has often wondered at her keenness of perception.

8. **Feminine rights in married life.** The sooner woman is set at liberty, the sooner man himself will be ennobled. If woman in married life is not allowed to have supreme control over her own body and to determine when she shall enter upon motherhood, it will react not only upon herself but upon her husband and her offspring. It is unmanly to insist upon connubial rights at any time when it will give pain to his partner. Rights, did I say? One has no rights that do wrong to another.

IV. MAGNETIC CONDITIONS OF SEX.

1. **The Vital Magnetic Curves.** I have shown elsewhere that magnetism is electricity thrown into curves, or rather into whirlwinds of refined ethereal forces which have an attractive power on all surrounding elements that are of the right grade to receive them, just as any other eddy, whether of water or air acts upon or draws in surrounding objects. My reader should remember that fundamentally all things are like all things, and that vital magnetism moves in just the same kind of curves that ferro magnetism does, as shown by experiments with iron filings, the principal difference being that vital and psychic magnetism are more refined and far reaching than that which courses through iron and steel. I have found that the human body, as Faraday remarked, is diamagnetic, in one sense of the word, that is, the magnetic curves pass through the body transversely, entering at the left side, passing out of the body at the right side, and sweeping around again to the left side, so that the circuit is completed and the action becomes constant. These curves are common to both sexes, and give all the right side of the body a positive or afflux character, and the left side a negative or influx character. Besides these, however, there is a great system of magnetic curves belonging to each sex.

2. **The Special Magnetic Currents of the two sexes** are longitudinal instead of transverse, in woman it being influx at the sexual system and efflux at the bosom and its vicinity, while in man it is exactly the reverse. This fact, I ascertain partly through clairvoyance and partly through a knowledge of basic principles, and it will explain many mysteries. In order that this great mystery of life may be the better understood, let us review briefly the nature of magnetism itself. I have shown that magnetism, electricity, etc., are actual *streams* as truly as currents of water, air, etc., and as water will carry the sand and other particles of matter in the direction of its current, so will streams of magnetism tend to carry particles of blood in the direction of their currents, so that at one point flesh and tissue will be built up and made to project outwardly, while at another point they will be drawn inward. This gives the philisophy of growth both in vegetable and animal life. Let us apply it in a few cases. Physiologists agree that the sexual system in woman is the same as that in man, only inverted. Why the magnetic currents should draw the organ inward in embryonic female life and outward in the male life will be spoken of further on. · The ovary is a head centre of electrical forces in the female sexual system as the testis is in the male. Before the age of puberty, when the ova are not yet ripe, the magnetic circuit is comparatively feeble. At puberty the magnetic circuits become intense, draw in the bosom outward in woman and the sexual organs into greater prominence in man. In woman would not the magnetic currents become warmed in passing through the whole chest and emerging at the bosom, and to some extent at the neck, and is not this the reason why woman does not need a beard to protect her lower face, and can seemingly stand more exposure to the cold than man on the upper part of her chest ? Would not the process be exactly reversed in man, and is not this the reason why he has greater warmth than woman at the sexual system ? Some may say that man is warmer and more active at the sexual system because he has alkaline elements there. But I have already shown that warm forces would repel similar forces, and alkaline elements themselves have probably been driven there on that principle.

3. **The sexes are intended for each other**, and the highest perfection demands that they should frequently be in each other's atmosphere, so as to gain those balancing and animating forces with which nature has so beautifully provided them. Powerful influx forces at the sexul system of woman, and efflux forces at the sexual system of man, contribute to femininity on the one hand and the masculinity on the other, and both intensify each other in these characteristics. Fig. 43 will show how the currents of the two sexes will exactly blend so that each will add power

and vitality to the other, the female at the left being attractive just where the male at the right is propulsive in the same direction, and vice versa. An agitation or excitement is often felt at the womb sooner than anywhere else, as the influx currents there seem to draw in the surrounding disturbed vibrations. Seeing, then, that when the sexes are thus brought into proximity the strong electricities of man are made to course through woman's system and the refined electricities of woman through man's, it is evident that both gain a new power, and health, and harmony, and that in all schools, churches and lecture-rooms, the sexes should be in each other's near presence as far as convenient. Contrary to the highest physiological principles, the schools of New York city, following the European system, educate the boys and girls in separate buildings, for fear evidently, that brothers, sisters and playmates might destroy each other if they should sit in the same room. Happily, the American system in the public schools generally allows the co-education of the sexes, but the great majority of all our colleges are still uni-sexual or one-sided. Oberlin, Antioch College, Michigan University, and various other institutions have had co-education for many years with admirable results. Some of the advantages of educating the sexes together are as follows: 1st, a greater harmony and development of the vital forces; 2nd, superior deportment; 3rd, a greater ambition to excel; 4th, a doing away with the false glamour that surrounds the sexes in each other's eyes, and giving them a correct understanding of each other; 5th greater happiness to both sides for the sexes naturally and rightly love to be in each other's presence, the only exceptions being in case of disease or perverted conditions; and 6th, greater purity, as the counter-flow of forces to each other in the long run will prevent those morbid amative conditions which occur when the sexes meet only at long intervals.

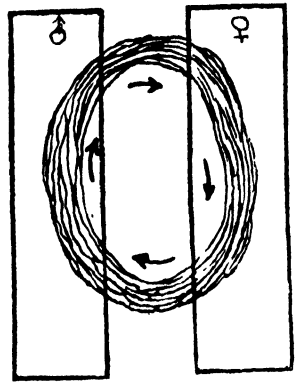

Fig. 43. Magnetic currents between male and female.

4. **Is this Liberty of the sexes Dangerous?** No, excepting in a few cases during the transitional period. All transitions from slavery to liberty are liable at first to cause an occasional disaster, for a too sudden burst of light upon eyes that are accustomed to darkness is liable to be blinding. In Russia people have been so long accustomed to religious and civil bondage, that when they wake up, their first impulse is to rush into the extreme of nihilism and anarchy. Does this prove that freedom

is dangerous? The great world at large is always liable to look on the mere surface of things. I will quote one of Burke's brilliant passages:—

"There is only one cure for the evils which newly acquired freedom produces, and that cure is freedom! *When a Prisoner* first leaves his cell he cannot bear the light of day; he is unable to discriminate colors or to recognise faces. But the remedy is, not to remand him into his dungeon but to accustom him to the rays of the sun. The blaze of truth and liberty may at first dazzle and bewilder nations which have become half blind in the house of bondage. But let them gaze on, and they will soon be able to bear it. In a few years men learn to reason. The extreme violence of opinion subsides; hostile theories correct each other. The scattered elements of truth cease to contend, and begin to coalesce. And at length a system of justice and order is educed out of chaos. Many politicians of our time are in the habit of laying it down as a self-evident proposition, that no people ought to be free until they are fit to use their freedom. The maxim is worthy of the fool in the old story who resolved not to go into the water till he had learned to swim. If men are to wait for liberty till they become good and wise in slavery, they may indeed, wait for ever"!

Let me quote one daring thought from Emerson:—

"For He that worketh high and wise.
Nor pauseth in His plan,
Will take the sun from out the skies,
Ere Freedom out of man."

Let it be sounded through the whole world that the higher the social freedom, the civil freedom, the religious freedom; the medical freedom, the greater will be the beauty and power and perfection of mankind.

Freedom can never be excessive if regulated by self control and a regard for the rights of others.

5. **A High School.** Many years ago while stopping at Aurora, Illinois, I visited the high school there, which was under the direction of an eminent teacher, who, as I learn, since became Superintendent of the public Schools of Washington. The students in connection with their teacher had formed their own rules of government, by which their deportment and general manner of doing things was to be regulated. As the bell rang for the students to assemble, I stood talking a few moments with the teacher in the school-yard. Presently we went up to the main school-room, and there I found the students seated with all the dignity of a senate, a young lady and a young gentleman, side by side at each desk. I say lady and gentleman, because their deportment justified the terms. I do not remember the plan adopted as to the position of the male and female, but as a general rule I would consider it a good plan to have the young woman sit at the right of the young man so that her negative side should be near his positive side. If she should be extra sensitive, however, and find the positive magnetism

too strong for her, as is sometimes the case, the position should be reversed. It might be well, too, to change desk-mates each month.

6. **Monasticism.** The system which leads monks and nuns to seclude themselves from the opposite sex is supposed to be attended with extra sanctity, but from the principles already given it will be seen to be the most impure of all conditions. The purest of all states is a true marriage. Did not God and nature implant in man the sexual instinct for a high and divine purpose? and is it not impious to thwart this purpose and treat it as something impure? In the vaginal passage of the female is the cooling acid element, while the male organs secrete alkaline elements to form a chemical affinity with it. During the sexual embrace there is a thorough interchange of electricities, which, if not repeated too often, tends to animate the whole system of each and to moderate and harmonize the forces. A case in point will illustrate my meaning and show the danger of violating nature. A fine, true-souled, elderly man once came to my office for treatment. He had been labouring all his life under the delusion that all use of the sexual system is wrong and impure, and in his struggle to live up to his ideal had made his system nearly a wreck, and several times was on the point of insanity. His unnatural life had made his passional demands all the more intense, and he admitted the terrible struggle he had had to control the fire within. Looking into his case clairvoyantly, I saw that the prostate gland and other parts of his sexual system were badly inflamed, and had communicated their inflamed condition to the spinal cord in a way to make him exceedingly weak there — also had sent its diseased condition to the back brain where dwelt the abused and starved amative organ, and this amative organ, containing the negative poles of the frontal brain, had developed a distressing condition there. He admitted that he often had such a pain in his front and back brain that he feared he was going insane. I explained the whole philosophy of his condition to him, and tried to make him see how wrong it is to violate God's laws in nature; but he had been building on his false ideas of what constitutes purity for a whole life time, and he declared that he would rather die than commit any sensual act. Such is one of the errors that have come down to us through centuries of ignorance and false teaching, owing to the narrowness of human intellects that gaze upon the orb of truth somewhat as earthly dwellers gaze upon the moon, never seeing but one side of it. For instance some people will say that because certain people carry sexuality into licentiousness, all use of the sexual system must be wrong. It is the same as saying, that it is entirely wrong to eat because some persons become gluttonous. It is the same kind of one-sided-ness that some persons fall into, who, noticing that some fine

cures can be wrought by mental action, conclude that all cures can be made in the same way, and finally come to believe there is no such thing as matter in the universe.

7. **Nature's Methods.** Nature tries in every possible way to teach man common sense, but man in many cases thinks he knows better than nature. Nature has both sexes born in the same family, thus showing that they should be together; but hundreds of millions of people in Asia and elsewhere put the females off in one part of the house by themselves and the males by themselves. Nature places a beard on the ceaf and throat of men, and facts show how much less of throat and lung difficulties people have who wear it; but millions shave it all, or nearly all, off clean, as though it was a contemptible thing. Nature puts hair on the head to answer as an insulating and protecting element to the brain; but certain religious sects impiously shave it all off, until the head looks like a gourd-shell. Nature develops an equal number of both sexes thus supplying one woman to each man but Mormons and other Polygamists violate nature by taking more than one woman to a man.

V.—DRESS.

1. **Dress for the Sexes.** We have seen that a central law of woman's being is gradation; hence, to correspond with this, curvature and yielding forms should be a leading feature of her dress; while man, having bold and contrasting features, should deal more with straight lines and angles. For this reason, flowing robes and skirts harmonize best with woman's nature, and stiffer, bifurcated forms with man's. Both styles will be used more or less by each, but in the main the dress should be in analogical harmony with the individual. Diaphanous floating outside garments would be especially beautiful for woman, but disgusting in a man. Curls and wavy forms of the hair are always graceful in woman; a flowing beard and hair parted on one side give a fine

Fig. 44. Henry III of France.

Fig. 45. Lady of the Court of Queen Catherine de Medici.

Fig. 46. Lady of Queen Elizabeth's Court.

contrast in Man. Certain soldiers of modern Greece dress like ballet girls, and are sickening objects to look upon. The dress of Henry III., of France, Fig 44, is sufficiently ridiculous, with its corsets, frilled collar, curved hair, plume and ear rings, and, altogether, he looks like a feeble being for a man.

2. **Dress should not depart widely from the Human form itself.** The perfected human form is the highest type of beauty in the external universe. It is proper that fashions should vary somewhat, so far as they can without outraging common sense and healthful conditions, for the human mind loves diversity. It is well, also, that different individuals should vary the fashions to suit different conditions, forms and complexions, but not so widely as to introduce grotesqueness into a social circle, for unity must not be violated, and we should not unnecessarily treat the tastes of our fellow beings with contempt. The Bombastic beings represented in figs. 45 and 46 outrage every beautiful line of the human form, as well as important principles of health, by their dress. Take their heads away, and their chests resemble some strange bugs, but have no similarity to the beautiful curves of woman.

Fig. 47. Fig. 48. Fig. 49. Fig. 50. Fig. 51.

The reader will see at once how the figs. 47, 48, 49 pervert the human form, though fig. 47 is much the best; and he will also see that an ancient fashion, as in fig 47, and the Elizabethan in costume, fig. 48, would look very ridiculous if worn side by side. The old English dress fig. 49, is not only absurd in itself, but would look worse than any clown's dress if worn simultaneously with the modern styles. The lower part of fig. 50 is especially stiff, and the upper corseted form of fig. 51 is not so pleasant to the eye as the lower form.

Fig. 52. A modern deformity.

The deformed creature in fig. 52 is taken from one of our fashion magazines of 1883. Compare this ruined waist with fig. 42 or with Grecian sculpture. It is a wasp-waist in two ways: 1st, it resembles a wasp; and 2nd, It compresses the lungs and other vital organs, until one becomes feeble and waspish. This fashion is copied from three sources: 1st, the wasp; 2nd, the ape, whose hair comes down to the eyes; and, 3rd, the Hottentot beauty, whose lower spinal column bends directly back something like a foot beyond the rest of her body. I admit that she is a sweet-faced ape, and quite preferable to the Hottentot, if she should not faint dead away from the fearful pressure.

3. **Chignons** or any large mass of hair or other confining substances about the head, lead to congested and unhealthy conditions of the brain. Fig. 53 gives a view of Queen Victoria when the fashions were to have the hair over the temples and side cheeks, which method is neither very beautiful nor very hygienic being somewhat heating to the temples and the optic nerve.

4. The **Bloomer Dress** gives all the organs such a free play that it has saved the lives of various persons who were in a dying condition under the ordinary oppressive fashions of the day, but it is unbeautiful and somewhat extreme, and can never become a general style. Mrs. Jenness Miller, of New York, in her excellent magazine and in her lectures, is advocating a much more graceful style, and one which is hygienic and easy without departing too far from the modes of the day. I have before me the circular of the "Rational dress association," the Honorary Secretary of which is Mrs. E. M. King, 34, Cornwall road, Bayswater, England. The following is their excellent compend of principles.

Fig. 53. Queen Victoria and Prince Albert.

Requirements of a Perfect Dress.

1. Freedom of movement.
2. Absence of pressure over any part of the body.
3. Not more weight than is necessary for warmth, and both weight and warmth evenly distributed.
4. Grace and beauty combined with comfort and convenience.
5. Not departing too conspicuously from the ordinary dress of the time.

5. **Garters or other Ligatures** are very injurious to the circulation. Everything should either be hung from the shoulders, or at least should be drawn very lightly around limbs or body.

6. **The Lower Limbs** of woman should be encased very warmly in cold weather to prevent uterine troubles. During the menstrual period this is especially important, as too much cold air or dampness of feet and ankles is liable to drive the blood upward upon the stomach or lungs in a very dangerous way. While it is true that there is often so much clothing over the pelvis as to cause inflammatory conditions, it is also true that the drawers are apt to be too light. Manufacturers should make them fully as heavy as men's best drawers, a matter which is at present a great desideratum.

7. **Too much dress** is worn by both sexes. As I have already shown in part first, those races who wear little or nothing are the most powerful and healthy, while those who bundle up very heavily with furs are the weakest. So, very fine wool or silk or buckskin next to the skin tends to shut out the external electricities and to confine the poison emanations of the body. Dr. Jaeger's theory that wool must be worn always and everywhere for underclothes, sheets, shoes, stockings, etc., and that the whole world of cotton, linen, etc, which nature furnishes us so bountifully and cheaply, must be thrown aside, is one of those one-sided propositions that people are always getting up. Elderly or delicate or cold-blooded people will do well, no doubt, to use woollen under clothes which are not too finely woven, especially that which has camel's hair mixed in. Let the people become toughened and vitalized by sun baths on the bare body, and the amount of clothing they will need will become greatly lessened. In cold weather, even, people of fair circulation and warm underclothes will not need an overcoat at all for ordinary out-door life, excepting when they ride in the open air.

8. **Color in clothing.** In warm climates what little clothing people wear is generally white or light colored. This transmits the vitalizing power of the sunlight to the body better than any other color, while the fabric itself remains cool. If we were in the Arctic regions, where it is more important to shut in the vital heat than to transmit air and light to the body, then white would also be the best if we have our clothing of immense thickness like the fur of the white bear. For ordinary winter wear, however, it would doubtless be better to use light colored underclothing to repel and shut in the vital heat, and dark external clothing, which, though it will not transmit the sunpower directly to the body, will yet grow warm by absorbing its rays. To say that we should wear dark clothing in hot regions because the people there have dark skins is a great mistake. The carbon of the sun's rays darkens the skins of the people in the torrid zone, which is an advantage to them, as black absorbs all the sunlight and makes the skin so active that it can radiate off the miasma that is apt to be contracted there. If

black clothing were to be used in such climates, it would be disastrous, as it should shut off the whole chemical power of the sun from the body and zymotic diseases would become more prevalent.

Red is generally very warming on or near the feet, and red under clothing is excellent for dormant and Rheumatic conditions, or for pale conditions generally if persons are not too nervous. It should never form any part of hats or be worn near the head. Judge—a congressman, who is familiar with my works, on passing along Washington avenue, one day saw a nurse wheeling a baby carriage. The babe's head was enveloped in a red hood and a red cloth was hanging down over its eyes from the carriage top. Already the babe's eyes had become badly inflamed and they were blinking in distress. The judge followed the carriage all the way to its home and took pains to tell the parents of the danger of the child's going blind under the influence of such inflaming colors. Would that there were more benevolent souls to teach people of violated law. A lady told me she was wearing red underclothes and they distressed her. Of course they would, I remarked, for you have already a superabundance of redness and a florid skin. Red undervests should not be worn over an excitable heart.

Blue or Blue-Gray underclothing is excellent for erysipelatous or any inflamed conditions, and is fine for the lining of hats. Blue spectacles are best for inflamed eyes and for softening the glare of snow or of water when sailing. *Yellow* undergarments are fine for animating the nerves especially if there is tendency to constipation, paralysis etc.

When in doubt about the color use *white.*

Esthetically speaking, white heightens and black lowers the tone of all contiguous colors. Brilliant colors may be used for children, but are too flashy for adults; purple develops yellowness and will not do for brunettes; red for outside dress is flashy and untasty, and the white diaphanous material which ladies wear over their arms and necks in summer is beautiful and would be most useful for enabling them to take a sun bath when they walk out, if they would put away their parasols.

9. **The dyeing of Hair** is a wretched habit and dangerous to life and health. When hair is too red it will gradually grow darker by repeated bathing the sclap with ceruleo; if too dark, by bathing in ambero and rubio; if tending to baldness, rub purpuro or ceruleo thoroughly into the sclap each day, and for dandruff, alternate with ceruleo and purpuro. These are nature's methods and will conduce to health as well as beauty.

10. **All Padding** of the **Bosom** with air-tight substances will tend to flatten the bosom itself and injure health. The natural method of deal-

ing with the parts is to practice daily, for sometime, in making circular passes around each breast, as this, by drawing the blood there, will gradually build up the tissue into beauty and fullness, prevent flabbiness, animate the lungs and destroy the tendency to cancer.

11. **Unnatural Shoes.** Was it not a shame that the eminent sculptor Canova could not find a handsome set of toes among 500 beautiful women, on account of unnatural compression of their feet?

12. **Corsets** which give woman such an unnatural and stiff form have been the death of thousands. They crowd and cramp the vital organs above and below, until they shut off the breath and the circulation of the blood. Sarah Bernhardt, sometimes called the most exquisitely dressed woman in the world, never wears corsets. Mrs. Scott Siddons found that she was losing her health as well as the perfection of her form, by means of corsets, and so abandoned them and soon became greatly improved in both.

13. A predominance of straight lines and angles in woman's dress is unfeminine. An angular penmanship, especially that which is larger and sprawling, that many people have endeavoured to make fashionable for women, is unladylike and unrefined. By this I do not mean to say that woman should adopt the clumsiness of the old round hand, but rather a system of delicate turns slightly rounded, which are more beautiful and legible than the angular. The large sprawling hand that many fashionable ladies affect is decidedly coarse and unfeminine. Delicacy and refinement are great charms in woman's penmanship, and is on a par with a soft sweet voice in conversation or a bird-like, musical tone in laughter.

VI PURITY AND SELF-CONTROL.

1 **Sexual Weakness is not purity.** The most majestic and powerful manhood, the most beautiful and accomplished womanhood, require a strong sexual system. Sexual force throws a fire of life through the whole system. A man may think himself far advanced in the pathway of holiness because he does not become excited with sexual passion, when the truth is that his system is depleted of its vital magnetism. A woman may think herself very chaste when her womb is simply dried up and her womanly force departed. Amativeness gives a sparkle to the eye, helps the mental as well as the physical power, and sends a congenial aura over the opposite sex in assemblages and social gatherings. There are men and women both who are hopelessly feeble and unsocial and will remain so until their amativeness can be aroused.

2. **But Uncontrolled Amativeness is Disastrous.** If it lead to private abuse in either sex, it is a process of self-destruction, for it is

a giving off of the divine fire of life, which, when pursued very far, leads to both physical and mental weakness, and finally to insanity and death. I have known sons of the most upright parents, who have fallen into habits of masturbation, lose all manly self-respect and become mean, sneaking and dishonest. Others will psychologize and seduce women who have always been and always intend to be virtuous, and then leave them to bear without help or sympathy, the severe suffering and the terrible disgrace of having illegitimate children to be reared and cared for without the help of any responsible father. Such ones should be cured, not killed, as many thoughtless people would recommend, for satyriasis, as well as nymphomania, is a condition of insanity. Others make the marriage-bed a place of beastly wallowing and in many cases destroy the health of their wives, leading them on through suffering to an early grave.

3. **Diseased Amativeness** comes from an inflamed condition of the lumbar and sacral nerves as well as of the cerebellum. Cool water, especially, ceruleo, over the cerebellum and cervix when it is warm, and passes of the hand leading down the arms from these points, are very useful, while a ceruleo compress over the lumbo-sacral region at night will soon work a great change, preventing lascivious dreams and the involuntary flow of semen. It is exceedingly important, too, that the spine should not be heated by lying on the back. To prevent turning on the back in sleep, bind a spool to the back, so that it may awaken one if he should turn over upon it. The horrors of a sexually exhausted or sexually abused system are so great and deep-seated, that only very powerfully vitalizing processes can be of much avail, drugs especially being altogether too feeble and ineffective to reach the cause. The thermolume bath will transcend every possible agency for revolutionizing, purifying, vitalizing and reinstating the system. If there is syphilitic taint, the sweating should be powerful for several times, and when the back is exposed to the sun, blue glass, or, still better, green glass should be placed over the lumbar region. If the sexual system is too weak or impotent, red glass should sometimes be placed over the lumbar and sacral region. If in woman an inflamed condition of the clitoris and adjacent organs causes a perverted feeling, a ceruleo compress over the front parts at night will cause a great change in a single night.

4. **A morbid curiosity and impure imaginations** are disastrous in their effects. It is supposed almost universally by the great superficial world, that chastity is best promoted by concealing the human form from the opposite sex, as though the divine workmanship in nature is something quite shameful and not even to be talked about, much less to be seen. So impure have people become under our false system, that

there are many men whose thoughts will take fire at an unusual exposure of the female form, it being commonly so closely veiled as to have become a great curiosity. This curiosity leads multitudes to houses of ill-fame who would not otherwise go there. It is said that when the ballet, especially the **Black Crook**, became common in Paris, the licensed houses of prostitution became partially deserted. The most impure people of the world, where harems exist, veil, even the ladies' faces. The purest people in the world, such as the Dyaks of Borneo, the Kaffirs, the New Guineans, etc., who stand immensely above Christian and Mohammedan communities in this respect, appear naked in each other's persence without the first thought of impurity. All prurient imaginations are done away with, besides which the sun, striking their bare bodies, draws outward the internal heat and congestions which lead to much impurity of feeling with us. In Japan the sexes bathe together in a nude state with never an improper manifestation toward each other. Commodore Perry speaks in high terms of Japanese purity and says :

"They are the most moral and refined of eastern nations..... It must be said to the credit of the Japanese women that during all the time of the presence of the Squadron in the Bay of Yedo, there was none of the usual indication of wantonness and license on the part of the female sex in their occasional relations with their miscellaneous ship people."— U. S. JAPAN EXPEDITION, p. 397.

Mr. William T. Hornady speaks of the nearly nude seaside Dyaks as having "the most dauntless bravery," combined with gentleness to their women, whom they love and regard as their equals. He says that Dyaks believe in strict chastity before and after marriage and lapses from virtue are considered highly shameful, the man being held as strictly as woman. Another great superiority to ourselves is that, "under no circumstances, does a Dyak woman attempt to produce a miscarriage." He says, they possess an absolute integrity under all circumstances, and "their morals are as much superior to ours as our intelligence is beyond theirs." Their strength and health are greatly superior to ours, and he calls them "the happiest people under the sun." —*Two years in the jungle.*

The nude Kaffirs of South-eastern Africa are represented by a well-known physician of New York, who has lived among them, as being far more pure than any of the so-called civilized nations, the people coming together sexually generally at a certain season of the year and abstaining the rest of the time. The British made a law that each of the Kaffirs should wear a certain sized blanket. They procured the blankets and one day five hundred of their men and women paraded through the

town with the blankets over their backs only, so utterly unable were they to understand that one part of the body is more impure than another.

The Archbishop of Montreal, Canada, made a rule forbidding all ladies to wear low necked or pull-back dresses, and Anthony Comstock sees impurity in so many things, that art works and sellers of art works and writers on physiological science are subject to his persecution, on the plea of conserving the purity of the public. One great need is that these people themselves should be made pure so that they may see out of pure eyes.

5. **Impure Actions and Low-lived Representations** are of course degrading, but humanity should be made pure as fast as possible, so as not to see impurity in the human form. Brothers and sisters of the same family should ever be familiar with each other's forms as they grow up, so that a morbid curiosity may be done away with. Pure art representations would be elevating and refining. Modesty and true purity are grand, but sickly modesty is only skin deep and impurity lies underneath it. Accustom the sexes to self-control in the midst of liberty, and they grow up into a noble manhood and womanhood, which can withstand all temptations, just as a wind-swept oak becomes firm and strong.

6. **Spartan Methods.** The wonderful development of manly power and bravery and of womanly beauty and chastity in that part of ancient Greece called Sparta, during five hundred years, is one of the marvels of history. They worshipped beauty and physical perfection, wore their small amount of clothing loose over their bodies, so that the air could get to them, both sexes practised gymnastics together in a nearly or quite nude condition, while baths, open air and light, and natural methods were the regular system. The following I quote from Dr. M, L. Holbrook's *Marriage and Parentage*:

"The youths were almost continually out of doors; every boy learned how to plant and to harvest the crops, every girl how to do household work. The beautiful Helen was perfectly at home plying the loom; every girl could do every kind of labour required in a Spartan home. Nothing came amiss to them; but their work was done principally in the open air, exposed to the light of the sun, and not over stoves and in heated apartments They washed their clothing by the river's side in trenches made for the purpose. Washing day was a gala-day; not, as too often now, a day of severe trial. Such a life produced the highest degree of health, and out of this health bubbled and blossomed a sweetness of temper which charmed all who came in contact with it. How could there fail to be a multitude of beautiful women in Sparta? The whole country of which Sparta was the centre was famous for them. Their beauty was not of the kind which we too often admire; in them there could be no beauty unless it was founded on perfect health, and this beauty continued long. Helen, celebrated in all times as being one of the most beautiful women in Greece, was as handsome at fifty as at twenty, and this was

almost the universal rule with all women. The Greek women were the finest that ever existed, not only physically, but intellectually.

"It may be thought that the perfect freedom of girls to go where and live as they pleased, their free intercourse with the boys in the gymnasium, with only the slightest clothing, would favour looseness of morals and a tendency to licentiousness; but history teaches us that in the halcyon days of Sparta, such a thing as adultery was almost unknown. Its frequency was as nothing to what it is when the sexes are separated in education, and an almost impassable barrier erected between them in social life. In this all history agrees, that Spartan women were pure. Plutarch tells a story of a stranger who inquired of a well-known Spartan citizen, what punishment there was for adulterers. To this the citizen replied: "there is no adulterer in our country." The stranger said: What if there should be a case?" The citizen made a proud and remarkable answer 'He must pay a bull so large that stooping over Taygetus he may drink out of the Eurotus." The stranger said : ' But how could such a bull be found? ' The citizen replied : 'As easily as an adulterer in Sparta.' "

Considering how greatly these exalted and more natural styles of life transcend European and American standards of the present day in purity and self-control, is it not a great rebuke to our artificial and corrupt methods ? We need not be discouraged, however, for there is now a great progress towards simplicity and naturalness between the sexes, and subjects are often discussed freely and intelligently that were tabooed by our ignorant predecessors. The criminal neglect of parents to teach their children the laws of life, on the silly supposition that there was some thing vulgar in it, allowed millions to grow up in a perverted way or to go absolutely to ruin. This is now being changed, and thoughtful parents are realizing the terrible responsibility that rests upon them with reference to their children.

7. **To Men** who desire that woman shall become more free and natural and not hold them at such a distance from her, let me say: See to it that your treatment of her is so high-toned and correct that she shall dare to treat you with freedom and confidence. If you want her to have a sister's trust in you, manifest a brother's sense of honour toward her. Is there any language that can portray the baseness of yielding to passion so far as to try to mislead a woman and perhaps blast her whole life, just for a few moments of pleasure ? And suppose that under the present false system of life, a young woman with whom you associate, should, in an uncontrollable impulse, endeavour to persuade you to take an unlawful liberty with her, could you be noble enough to lead her thoughts gently into a higher channel and hold yourself up to the dignity of self-control ?

8. **To Women** who wish to cultivate social freedom and help emancipate society from a slavish conventionalism that so destroys the pleasures of life, I would say: See to it that you gain from nature and

exercise and a correct mode of living, that health and strength and will-power which will enable you to be free as the birds, yet, when necessary, to hold yourselves firmly under control against all blandishments and artifices of cunning and accomplished men. Be gentle, loving, sweet-tempered and merry-hearted and yet high-toned, so that triflers and unprincipled persons may recognise the sacredness of your womanhood and thus be educated into some better conceptions of social life.

VII. TEMPERAMENTS AND CHOICE OF A PARTNER.

1. **Stirpiculture** refers to breeding systems and includes the best methods of generating superior human beings. Men give vast study to the breeding of cattle and other animals and to the perfecting of fruits and flowers, but man himself, for whom the universe was made, and whose life embraces time and eternity, receives but little attention. Our high schools will often use works on Botany of 600 or 800 pages, but man is evidently considered as being very inferior to plants and flowers, and some simple work of 200 to 400 pages on physiology and Hygiene will be quite large enough for such an uninteresting subject. In fact, how can they get time to study man? Do not the dead languages have to be learned? An eloquent oration was delivered at Winchester, Kentucky, by Mr. John E. Garner, in behalf of the higher education of the young. Said he:

"It has been remarked by an observing stranger from a neighbouring state, that the people of Kentucky educate their cattle and turn their boys out to grass. History relates numerous instances where a horse was celebrated for having been the property of a distinguished master. Kentucky affords numerous examples in which the master is celebrated for being the owner of a distinguished horse."

2. **The Central Principle of Temperamental Harmony is Contrast**, the contrast of forms, colors, chemical affinities, etc., (see p. 17). But this contrast must not be contrariness or an entire opposition of style and temperament between husband and wife, as is often advocated, but rather a diversity in unity. Thus while they should not both have black hair or both red hair, as similars repel, neither should one have extreme black hair and the other extreme red hair, for there must be a sympathetic as well as a diversified condition. All chemical affinities require a harmonious contrast (see p.9), and the very vital forces of human beings work on exact laws of chemical affinity. For this reason while the blending of different races, who are diverse but not too far apart, is highly beneficial, the mixture of black and white persons or of a very large with a very small person, is a process of discord.

3. **Dr. William Bird Powell,** * of Kentucky, studied human temperaments for forty years, and became so skilful in their application that on seeing a young man and woman together who proposed to marry, he would generally tell correctly about how many children they would be likely to have, how long they would live, whether or not they would be idiots or lunatics, or what diseases they would have. Some times he would see an old married couple for the first time and tell how many children, he thought they must have had, and that he presumed they were all dead, which proved exactly true. He ascertained that five-sevenths of all marriages were more or less incompatible! His work *"Natural History of the Human Temperaments"* is out of print, but his leading points I will give here. * He uses the old imperfect terms, sanguine, bilious, encephalic, and lymphatic, but I will use the more correct terms, *Vital, Muscular, Mental, and Lymphatico-Nutrient,* in their place. I have already described the temperaments somewhat in part First of this work, and the reader will have a pretty good idea of what they would be if combined. Thus a large front brain and slender neck and body would be the *mental* temperament; the same, with a broader, fuller head, face, neck, and body, would be the *mental-vital* temperament; this last, combined with dark hair and large muscles, as in Daniel Webster, would be the *mental-vital-muscular* temperament etc. What Dr. Powell calls the Xantho bilious has the bold, muscular features, and red or yellow hair and fair complexion, and is evidently a combined *vital-muscular* temperament. He considers the vital and muscular the true *vital* temperaments, while the mental and lymphatic are *non-vital.* As we have already a vital temperament, I will call the former the *energizing temperaments* and the latter the *weakening temperaments.* He says that the marriage of two persons, both having a weakening temperament, or both having the same temperament, are incompatible. The following synopsis I quote:

I. When both of the parties to a marriage have the vital-mental temperament, their children will die young, of dropsy of the brain or tubercular inflammation of its membranes.

II. When both parties have the muscular-mental temperament, their children will be idiotic.

III. When both the parties have the muscular-mental-lymphatic temperament their children in the proportion of five to seven or nine to eleven will be dead born, and the

* I have been able to give a synopsis of Dr, Powell's system of temperamentology from notes kindly lent me by the late lamented Prof. R. F. Humiston, a gentleman eminent as a chemist, and for twenty five years professor of chemistry in medical colleges. This gentleman was a great advocate of the sun-healing movement, and paid me several visits with reference to introducing thermolumes, etc.

others will live but two years. These three cases illustrate marriages of the same temperaments. The following have a weakening temperament on each side.

IV. When one party is muscular-lymphatic and the other a vital-muscular-mental, their children will all die young of tubercular consumption of the lungs or abdominal glands, although neither of these forms of disease was ever in the ancestry of either party.

V. When one party is vital-mental and the other muscular-lymphatic, the progeny will die young of tuberculous disease.

Dr. Powell classifies fourteen temperaments as follows:

1	Vital	8	Muscular-lymphatic
2	Muscular	9	Muscular-mental
3	Lymphatic	10	Vital-muscular-lymphatic
4	Mental	11	Vital-muscular-mental
5	Vital-muscular	12	Vital-mental-lymphatic
6	Vital-lymphatic	13	Muscular-mental-lymphatic
7	Vital-mental	14	Vital-mental-muscular-lymphatic

"In all marriages," he says, "contracted with a view to, or a hope of, a soundly viable progeny, one of the parties must have the constitution of 1, 2, or 5, and the other party must as certainly have the constitution of some one of the remaining temperaments." In other words, the three temperaments that are wholly energizing or compatible with any of the other temperaments named, which always, as will be seen, include one or both of the weakening temperaments.

The *Mental* temperament has a fine animating principle, if not used excessively, but when it is intense, it tends to draw the animating nerve ethers from the body to the brain, and hence may be called weakening in a physical way. The lymphatic, too, when large, tends to clog the vital organs, and so is weakening.

4. **Modifying Forces.** Persons already married who discover by the foregoing that they have, to some extent, run counter to physiological law, should not be unduly worried, for the cases presented are evidently those of extreme temperamental conditions, and many a good family has been reared when the above laws are not absolutely observed. Besides this, since Dr. Powell's time, three far-reaching and fundamental methods of human upbuilding, which greatly modify even hereditary and physiological mistakes, are being brought before the world, namely, magnetic massage, the sun bath, and hypnotism. Refined elements are so searching that they go through the whole interior and exterior being and start new life forces. Nevertheless, let every one, by all means, live up to the highest law of temperamental and social harmony, for it is always dangerous to war against nature, and the grandest manhood and womanhood require perfect conditions.

5. **Mental and Spiritual Conditions** must by all means have an important place in a harmoniously-united couple. It is very unsafe

for a couple to be totally devoid of religious and intellectual sympathy with each other. To yoke a mind which is materialistic and pessimistic, and skeptical almost as to his own existence, with a sympathetic and enthusiastic soul, that realises the grand destiny of man here and hereafter, is somewhat like combining fire and water. While Milton was soaring to his sublime heights of poetic thought, he was made miserable by having a wife who cared nothing for it, but who deliberately left him and sought the social round of pleasures at her father's home. Such an example would show plainly that if one party has a large religio-mental temperament, the other party should have more or less of the same, although this may run counter somewhat to Dr. Powell's theory. Husband and wife should have a joy in each other's presence, a sympathy of soul, that comes from similarity and also from being complementary to each other, and their honeymoon should grow brighter instead of waning as the years roll away. This harmony intensifies love, and love develops the most perfect progeny. Shall not each, then, enrich the mind by study, by thought, by cultivation, by high and true associations, so as the better to be worthy of his or her mate, and the better to develop any children that may be given to them.

6. **The Woman's Choice** should be a manly, sincere, true-souled man; one who is faithful to his duties; impulsive, perhaps, and warm hearted, but self-controlled; free from the use of all liquors, and, if possible, from the use of tobacco; aspiring and aiming at, some high purpose in life, rather than mere selfish aggrandizement; playful and fond of sports, but using them only as subsidiary to his higher development; tender toward a sister or mother; refined in language, avoiding all profanity; healthy and sufficienty diverse in temperament from herself, and one withal whose very atmosphere and touch conveys a sense of pleasure to her. If she cannot have just such a person, let her come as nearly as possible to it.

7. **The Man's Choice** should be a refined, self-controlled, womanly woman; one who may read novels of a good character sometimes, but who is well versed in solid and instructive reading; who may be musical, or literary, or engaged in art, if she can also be skilled in domestic duties; who does not leave a mother to attend to all house-hold drudgery unaided, while she busies herself with some trivial pleasure or process of self-decoration; who is neat and tasty in dress, but not extravagant; who is bright, healthy and happy, tender of the rights of all and aiming at some high purpose in life. If a man can find "heaven's best gift to man, a good wife," embracing as nearly as possible such gifts as these, with a temperament somewhat

contrasting with his own, and a heart full of love for himself, he will be blest indeed. It is scarcely necessary to say here that a model woman will not adopt the follies of extreme fashions. One who will have compressed waists, has evidently too much limitation of the brain, and one who wears too long a street dress, which gathers up the filth and microbes of the sidewalk, just because fashion says so, has evidently too short a mental apparatus to do the best thinking, however admirable she may be in some other respects.

8. **Before Marriage should be thought of**, the system should be got into a reasonably healthy condition, so that posterity shall not be cursed.

9. **The Age at which to Marry**. M. Korosi, of the Hungarian Academy of Sciences, has collected about thirty thousand data, which brings him to the following conclusion: "Mothers under twenty years of age and fathers under twenty-four have children more weakly than parents of riper age. Their children are more subject to pulmonary diseases. The healthiest children are those whose fathers are from twenty-five to forty years of age, and whose mothers are from twenty to thirty years old."

VIII. CONNUBIAL PRIVILEGES AND RIGHTS

1. **The Motive of Marriage** should be the consummation of a loving companionship; the blending of harmonious magnetisms; the perfecting of character by bringing into union the male and female characteristics; the building of a happy home, and the development of a harmonious and lovely family. Those who marry with a mere passional craving, without the higher love to sanctify their lives, defile the marriage bed.

2. **The Pleasure of the Connubial Embrace** depends: 1st, upon the soul harmony between the two which makes it an affectionate caress; 2nd, upon the refined and active magnetic forces; 3rd, upon a contrast of elements and the temperaments sufficient to develop a true chemical affinity; and, 4th, upon good health in both parties. A man of the world who had partaken of illicit intercourse widely, spoke of co-habitation with the Chinese as being far less pleasurable than with Americans. The Chinese, though naturally a noble race, have been depressed for centuries, and the magentic fires burn low in them. The association with highly developed persons, and the exposure to nature's forces, will develop the vital magnetisms that are delightful to all surrounding friends But the sexual contact should not be too frequent so as to draw off one's life forces too much, and the parties themselves should, most of the time,

sleep in separate beds, so as to prevent the assimilating of their forces, and also prevent one of them from sapping the life of the other, as too often occurs. Electricities that become similar commence repelling each other, and married people sometimes become so repulsive to each other on this account that they apply for a divorce. In others the temperaments are so much alike that they can scarcely endure each other's atmosphere. A lady, who came from Massachusetts to be treated by me, said that she and her husband would scarcely sit at the same table. Said I, "Has your husband dark hair and eyes and skin?" "Yes." She says, 'How did I know?' I was simply describing herself. They were both brunettes. She was weak and afflicted with insomnia. I made a few passes over her, charging her up with my contrasting magnetism, after which she slept all the afternoon and all night. Another case, almost exactly the same, could harmonize with each other and live together for a while after a short course of magnetic treatment. Sun-baths would work in the same way. By leaving up to nature, many distressing divorces can be prevented. By mingling with others at times and gaining the diversified magnetisms of a social circle, a married couple will have all the greater richness of power for each other. Certain unhappy natures, are often always jealous of each other, if their partners pay any attention to the opposite sex, and under our present imperfect system, it is true that occasionally a woman or a man, under the psychological power of another person, will, in the most insane way, desert a fine family and leave a wife or husband to struggle along alone. But in the freer and wiser future such things will almost never take place – 1st, because they will understand these subtle laws of control better and be on their guard against them; 2d, they will know how to keep their own forces intact better and find mutual happiness at home; and 3d, they will be more wisely mated from the first on account of their knowledge of temperamental laws.

3. **Divorce**. If, after patiently trying all devices for harmony and happiness in the marriage relation, it shall be found impossible to succeed, or if the health of one or both is on the decline as the result, or if the children of a discordant union should be liable to be sickly, or vicious, or an injury to the society generally, a divorce should, of course, be procured, and the rights of all should be protected. All laws of states that forbid such divorces are committing a crime and a despotism. To sneer at a state for allowing divorces is to manifest both ignorance and bigotry. To allow a mere separation without permitting the parties to marry again, is also a crime against the best good of society, for the sexes are made to live together, and the best vital harmony and development require more or less of sexual union. Have not my readers seen cases

of ill-mated marriages, in which life had become an infernum, and one or both parties were in a sick or almost in a dying condition? Then, have they not seen a new cheer and a health come to the parties after a divorce has been granted? And again, have they not seen the same parties enter upon a new marriage relation in which they have risen to power and a harmony which is almost heavenly? How despotic and thoughtless, then, to force people to live together up to the very point of destruction! An able and highly esteemed clergyman of New York could not stay in the same room with his own wife, and yet both were lovely people. Law and custom, however, forced them to live together, and years ago he departed to a realm where the customs of a diviner life prevail.

A number of our American states are emerging into conceptions of individual freedom. Illinois has reached a liberal divorce system, but the medical men there have deluded its legislators into enacting a despotic medical law. New York state is despotic in both its medical and divorce laws, but Massachusetts is so enlightened as to have reached freedom in both.* South Carolina has reached the lowest point, not allowing divorce for anything.

4. **Among the Advantages of Marriage** are a prolonged life, a less tendency to lunacy and far less to suicide than in single life. Morselli shows that the tendency to suicide increases with the age much more with the unmarried and the widowed than with the married, there being for each million of inhabitants in Europe, per annum, 205 suicides of married men with children; 470, of married men without children; of widowers with children, 526; of widowers without children, 1,004; married women with children, 45; married women without children, 158; widows with children, 104; widows without children, 238. Nearly three-fourths of the cases of suicide are unmarried.

Naphey, in his *physical life of woman* says: "In France, Bavaria, Prussia and Hanover four out of every five crazy women are unmarried, and throughout the civilized world, there are three or four single to one married woman, in the establishments, for the insane."

It was established from an enormous body of statistics taken during 1853, that the unmarried men throughout France between the ages of twenty and eighty died in a much larger proportion than the married: for instance, out of every 1,000 unmarried men between the ages of twenty and thirty, 11.3 died annually, whilst of the married only 6.5 died. A similar law was proved to hold good during the years 1863 and 1864 with the entire population above the age of twenty in Scotland: for instance, out of every 1000

*Since writing this, Massachusetts after thirty years of medical liberty, in which human life has doubled, has been enslaved by a medical law.

unmarried men between the ages of 20 and 30, 14.97 annually died, whilst of the married only 7.24 died; That is, less than one-half. Dr. Stark remarks on this: 'Bachelorhood is more destructive to life than the most unwholesome trades, or than residence in an unwholesome house or district, where there has never been the most distant attempt at sanitary improvement.'

From the foregoing it will be seen that marriage, even with all its present imperfections, is a vast improvement over all unmarried life as a promoter of long life, sanity and happiness. It will be seen, also, that over four times as many men commit suicide as women, which shows that man has greater violence of impulse and physical bravery, but that woman has a higher quality of endurance and moral courage. Greater than all this, however, is the fact that marriage makes men and women purer, wiser and better, and establishes the sanctity of home life, without which the state itself is liable to fall to pieces.

5. **The Marriage Vow.** The ordinary form of the marriage vow is a thoughtless and imperfect thing, and should be abolished. For the parties absolutely to promise to love and cherish each other "until death do them part" is absurd, for the conditions connected with one or both of them may become so perverted and monstrous that they would be quite unable to love each other, while it might be criminal and even dangerous to live together. To require the wife to *obey* the husband, and not the husband to obey the wife, or to call the man alone the head of the house, is a relic of the old masculine despotism that has been handed down to us from the barbaric conditions of the past. To put thus the stamp of inferiority on woman is simply to imitate all the savage nations of the world, in which the men have a conceit of their own superiority from having a greater brute force.

I would recommend a form something like the following. Addressing the man, the one officiating would say:

Do you take this woman to be your lawful, wedded wife?
Then, after he assents, he says to the woman:
Do you take this man to be your lawful, wedded husband?
Having received her assent, he then addreses both as follows:

Do you both hereby agree to be kind and true to each other in prosperity or adversity, careful as to your mutual rights and interests, tender of each other in time of sickness or trouble, and using your earnest endeavours to dwell together in loving harmony and peace during your natural lives?

As both assent to this, he closes by saying: 'I pronounce you man and wife.'

IX. THE DEVELOPMENT OF A NOBLE PROGENY

1. **The General Requirements for a True Stirpiculture** are temperamental compatibility, as already explained, mental and spiritual sympathy of the parents, a sound physical condition of both, a harmonious social condition of the parents before and at the time of conception, and happy circumstances and exalting influences in connection with the mother during the nine months of pregnancy.

2. **Before Conception.** Oliver Wendell Holmes, being asked when the training of a child should commence, replied, "A hundred years before it is born." If a series of ancestors have been well mated and healthy for generations back, it is all the better; and if both husband and wife seek for a lovely and superior child, they should for weeks or even months, before conception keep their minds in as placid, a superior, and aspiring a state as possible, and full of high ideals. A very intelligent breeder of skilled horses remarked that an improved character could be permanently imparted to horses by training; for instance, it required from fifteen to twenty years, at first, to teach a horse to trot with great rapidity, but after a few successive generations in the same line, the colts would learn the art almost without teaching, and did not require more than from one to three years to gain the skill of movement which has made the American trotters so famous. If horses can be thus perfected, how much better can human beings impart noble characteristics to their progeny by means of high ideals and superior training!

3. **At Conception.** In starting the life of an immortal being, both parents should be in a happy state of mind and an animated condition of the body. It will be all the better if they can come fresh from nature, from a walk in the sunshine, and by all means before the duties of the day have made them weary, for the exact psychometrical impress of the man will be made upon the sperm-point which he contributes, and of the woman upon the ovum which she contributes. A parent should impart to the new being all the enkindling force possible.

4. **During Gestation.** A wonderful era in the history of a new being has now taken place. Chemical action soon brings the two sides of a human life together, concentrating a portion of the infinite spirit that is diffused through all things as the soul part of the new being. When the forces are active and magnetic, it is reasonable to suppose that a much larger amount of this essence of Divinity will be concentrated to form the new spirit than would take place under stupid or perverted conditions of the parents. We naturally speak of some people as *large-souled*, especially if they have active and generous impulses. It is almost a certainty that at conception, the new

life formed enters upon its immortality of existence. To commit abortion, then, would be murder of the worst kind; for, if the new being is forced from its physical tenement, how immensely more troublesome it must be to take it in its crude form, and rear it in the spirit life, than it would be to have it develop under its natural earthly conditions. Abortion, then, is a terrible crime for the parents as well as for the one who may assist in it, and it is a terrible disaster to the embryonic being, as well as dangerous to the life of the mother herself. To prevent the sperm and germ from combining before conception takes place is a very different thing.

As the mother is constantly sending her psychological forces first into the ovum, then into the embryo, and last into the fetus, how important that these forces should be harmonious and beautiful. How important that she should not be over agitated upon any subject, not be harassed unnecessarily and by the aid of reading, fine pictures, lectures, etc., should create a high ideal in her own mind, so that it may be passed to the fetus. Such faces as in Fig. 54, 55 and 56 would be good ideals to gaze upon many times. "The very sight of Sunshine", is enough to give one good cheer.

Fig. 54. An ideal infant Christ.

Fig. 56 I have taken from the representation of an angel who is reaching forward to assist an earthly being in trouble. I have cut off the horrible goose-wings that the artist had affixed to her body, and left the sweet, spiritual, womanly face, which is our highest ideal of angel-hood. Her nose is Grecian, her forehead is sufficiently covered with hair to prevent a bold appearance, without the deformity of bangs to heat the brain, and her hair flows off in a simple, wavy freedom so much more beautiful than any style which the fashion-makers devise. It will be seen by figure 54 how infant beauty approaches the circle in form, while the riper beauty of maturity, Figs. 55 and 56, are on the oval style.

Fig 55. Sunshine.

The importance of starting a human life rightly is beyond all power of words to express or of human imagination to conceive. It goes through the whole of one's earthly existence and reaches onward during untold ages into another world. Exercise and a proper amount of industry is good for the prospective mother, but drudgery and a constant worry as to how a livelihood is to be obtained, or other matters of annoyance, throw permanent shadows over the fetus.

A happy life, full of freedom with proper recreations and the loving care of husband and friends tends to develop a noble and beautiful progeny. How to attain to this harmonious social condition which shall remove the harrowing anxieties from every family, will be considered hereafter.

Fig. 56. The Angel.

5. **Disastrous Antenatal Conditions** produce disastrous results to those born under such conditions. I have room for only a few cases.

Plutarch in his life of Publicola mentions that at a time when superstitious fear overran the city of Rome, all the women that were then prospective mothers brought forth imperfect children and were prematurely delivered. Napoleon's mother before his birth was in the habit of going into battlefields and getting inflamed with the spirit of carnage. Napoleon's whole life showed a restless spirit of warfare, and millions of people were slain and the dreadfully demoralizing influence of war was the result. It would take thousands of clergymen, years of faithful effort to offset such a calamity. Why should they not devote some sermons to God's laws in human life, and thus prevent untold damage ?

Jasse Pomeroy's mother while carrying her child took pleasure in witnessing the butchering process. The result was that the little boy quietly butchered children without seeming to realize that he had done anything wrong. He is imprisoned for life to pay for his mother's thoughtlessness.

The French writer Esquirol says that many children born during the horrors of the French revolution were weak, nervous, irritable and liable to insanity.

The Parliamentary committee in the British House of Commons, in 1834, in their report on intemperance, declare, that the evils of alcoholism are cumulative in the amount of injury they inflict, as intemperate parents, according to high medical testimony, give a taint to their offspring before its birth, and the poisonous stream of ardent spirits is conveyed through the milk of the mother to the infant at the breast, so that the fountain

of life is poisoned at its very source and diseased and vitiated appetite is created. The children of a father whose nerves at conception are perverted by liquor frequently become inebriates or epileptics or idiots or hysterical persons. Tobacco is also perverting to the offspring as well as to the one who uses it.

6. **Mothers should not be unduly anxious** about the effect of all influences during gestation, as this anxiety will make matters much worse. Harmonious conditions of course are very desirable, but nature helps out poor ignorant man and often brings forth fine specimens of human nature even in the midst of many excitements and disturbing conditions. Some of our materialistic physiologists, being ignorant of psychic forces declare that imagination or excitement of the mother has no influence on the fetus but this is ignoring a multitude of facts.

X. PARTURITION

1. **The Suffering in Child Birth** that some women undergo under a false civilization is terrible. This is quite unnecessary, and I will give a few hints leading to a happier culmination.

2. **Exposure to Nature's Forces.** Over the whole world where women go with little or no clothing, or with loose clothing, spending much time in the air and sunlight there is almost never any suffering, in child birth, and where the women bundle up very closely, and confine themselves in the house, in the most of the time, living on rich diet, their suffering is greatest, and their confinement lasts a long time.

I have learnt from several sources that the women of India wear only a single garment over a part of the body, or no clothing at all, that the Buddhist women, who work freely out of doors, have no suffering in childbirth, but that the Mohammaden women, under the absurd and impure custom, which shuts them in the house, for fear some man may see them, have not only suffering in childbirth, but some of the female troubles of so-called civilized nations.

Mrs. Elezabeth Cady Stanton spent her childhood mostly in the open air and gained a fine constitution. She suffered slightly with her first four children, after which she put herself under special discipline, walking, riding, dressing lightly, avoiding spices and stimulants, and then did not suffer at all with her last three children, and was not sick at all. Some thermolume baths, especially for a few weeks before confinement, would be a wonderful help and get the system in a pure and nicely vitalized condition. The sun-light over the pelvic region would so vitalize the fetus that an idotic child would doubtless be impossible.

3. **Vital magnetic influence** is another marvelous power for helping the new being into the world, with but little pain or trouble

to the mother. Dr. Scott, for many years a magnetic masseur of Brooklyn, and an accoucheur, was in the habit of giving his patients a few treatments before their confinement, and he told me that two-thirds of them would not admit that they suffered at all in childbed. My own experience and that of others confirms the same idea. The Masseur in treating the patient should place one hand over the pelvis and the other opposite over the spine, so as to pass a vitalizing current through the fetus. But neither massage nor electricity should ever be used about the parts for several weeks after conception.

4. **The philosophy of this beneficient action** of sunlight and magnetic massage is that they vitalize and make pliable the parts, charge up the circulation and nerve force and give expulsive power to the labour contractions. One lady who had always before had labour pains for a day, had a safe delivery in half an hour by having a magnetic person hold her hands for her to pull against at the time.

5. **Hot hip-baths** for weeks before delivery and at occasional times for months, are of immense importance for giving pliability to the pelvic region, and thus preventing the excruciating pains that might otherwise take place. Even after labour pains have commenced, a hot hip-bath will sometimes prove remarkably helpful.

XI. IS SEXUAL USE FOR PROPAGATION ONLY?

1. **What is the supreme truth and utility,** so far as the frequency of the sexual embrace is concerned? No human being should attempt to settle this question simply by his own feelings in the matter, any more than a person should reason from his stomach in dealing with the temperance question.

2. Animals unite only for propagation, it is said. We may learn much from animals, but in many things we may learn just what we should not do, by watching them. Some animals seem to live to fight and destroy, some can go without food for weeks and months, and not seem to suffer much from it, while cattle spend much of their time in eating. We are not to imitate these, nor the animals that live in water, nor those bees that propagate once and then die. We must settle the matter on some other ground.

3. **Statistics.** We have seen from statistics, concerning various parts of the world, that married people, in spite of many imperfect habits, live much longer and are far less liable to become insane, and comit suicide, than those who have never married, or who have become widowed. Knowing as we do, that the customs of married life, are to unite sexually many times, when no propaga-

tion is intended or possible, it is reasonable to conclude that on the whole it is beneficial, and certainly more so than it would be to unite only once in something like two years for reproduction.

4. **Magnetic Interchange** is the sufficient explanation of the whole matter, although Darwin and Galton and many other writers on the subject seem to be quite ignorant of this law. It is a great quickening process of the thermal and electrical forces of the whole system, the one side giving to the other, what it can well spare, and what the other side needs.

5. **Excessive Copulation** is, of course, very exhausting and sometimes ruinous, leading to nervous debility, paralysis, insanity, etc. I know of a beastly man who made it a point to go from one woman to another without intermission for a day. On the next day he became hopelessly paralyzed. The uterine organs often get into a terrible condition from a wreckless husband, while he by losing phosphorous and other vitalizing sperm elements faster than nature can replace them, moves on toward ruin, though not nearly so rapidly as does the masturbator. Those who would have a mighty power over their fellow-men must regulate these forces wisely.

6. **An Example.** An estimable gentleman, some years since, wrote a work on what he deemed a higher science of life, in which he presented many most useful ideas. The great object of the work, however, was to advocate the total disuse of the sexual organs excepting for reproduction. At times he had three hundred agents selling the work. He was himself unmarried, and as he declared that he lived exactly up to his own doctrines, preserving his full seminal power, it was expected by many, that he would present a superb specimen of physical manhood, as he was naturally a person of good physique. But his system became very inflamable, and I was once called upon to treat him, when I found his whole body badly swollen, his eyes being shut, so that he could scarcely see, and all from a little touch of poison ivy. Not very long after that, he seems to have dropped out of his accustomed place, and after long enquiry for years I was told that he was in a lunatic asylum. His diet having been up to the highest rules of hygiene, his case goes to show that there is something higher than food needed to supply the spiritual and electrical needs of human kind.

7. **A remedy for Sexual Waste** is the connection of sexual organs without motion, or at least without sufficient motion to cause, any orgasm or waste of seminal fluid, on the plan adopted by the Oneida Community. This they speak of as causing an exalted feeling and a far more enduring pleasure than the ordinary connection. It is a method by which the

husband and wife can exchange their vitalizing magentisms without losing their sexual force or without the danger of too frequent conception. But it will need a positive self-control, and in the case of men who have a perverted excitability, cannot be done until they have used some of the cooling forces already spoken of.

8. **The ordinary Wasteful Sexual Connections** should not occur much oftener than once a month.

XII. PREVENTION OF CONCEPTION.

1. **To Commit Abortion,** as I have said, is a monstrous crime and a foul murder, but there are cases in which it is a duty to prevent conception.

2. **Legal Enactments.** Physicians in different countries are finding out methods of preventing conception, but the law-makers in various cases have become alarmed and made enactments against them, for fear the human race may be destroyed. They seem to think the mighty intersoul, that for hundreds of millions of years, has been perfecting this universe, as a habitation for man, is in danger of being outgeneraled, by the devices of puny man himself and the whole face of the earth may be made a ruin unless they bring their petty laws to his aid. Think of the childish folly and the crime that has been perpetrated against good people in England and this country, who have come forward with methods by which multitudes of poor feeble women may prevent conception and thus perhaps save their own lives and prevent the existence of perverted and miserable children. Cannot the reader see that to force children upon some poor distracted mother against her will, when every child almost kills her, must fill her heart with the spirit of murder and have a terrible effect upon the child itself as well as upon her husband? I will quote a part of a fearful letter written by one of the victims of man's unreasoning brutality, and in a spirit which shows that she has already become partially insane on the subject. The letter was sent to a Chicago paper:

"I live on a farm, and we are not able to keep a hired girl. I have five children, the oldest eight years of age, the youngest sixteen months. There would have been one younger but for my own murderous act. I was so weak and miserable and had to work so hard, that I just implored my husband to keep me from having another. He is kind to me in the main, but will make no sacrifice for me to keep me from bearing children. When I knew this last one would come I turned wild. Oh! it seemed as if I would rather die a thousand times than go through that awful, awful torture again. I believe my soul did desert me for a time. I left home; I scoured the country on foot, and bareheaded for days At last I tried desperate remedies to kill the unborn child, and succeeded at the risk of my life. But I did not care for my life. I did not care for the thought that my children

would be motherless. I had just one desperate desire resting on me like a pall. I could not see one ray of light or hope from under it. There was the eternal round of hard duties; no rest for body or mind. There was the unending sickness that precedes childbirth, and the heavy dragging at back and brain. Life was nothing but an acute consciousness of imposition and cruel wrong. I turned away from the thoughts of prayer with a mental curse upon God for making men the lustful creatures they are, and creating women as the tortured receptacles of their lusts.

"I want to leave my husband. I am free now. I have killed that last child. I hated my husband so while bearing it that I wanted to murder him. Why, I tell you, though he is a good man, there has not been a day in five years that I would not have felt it a glorious relief to have him brought home to me dead. He is a reckless horseback rider. Whenever he goes off in the morning on some half broke colt, my mind will run all day on the prospect of his being brought home dead. And yet he is good and so fine looking. He has never spoken a cross word to me. Oh! how I could love him and how proud of him I could be if only he protected me from the result of his lusts."

How long will men thus treat woman as mere plaything got up for their own amusement? How long will they trample wives in the very dust, under the impression that they are their property? Can they not realize that woman is a more finely-strung being than ourselves, and that we should touch the chords of her nature with the greatest tenderness? Let us make her the queen of our household, and regard her wish, as to her own person as law. But man, under his false education, often presumes, he is treating a wife thoughtfully and kindly when he is grossly wronging her. Man naturally loves woman, but he must be taught. When he has learned how to do his part toward woman and when she has learned how, properly, to take care of her body, then shall she become an angle of love and blessing to him and her household. Those who see woman in her unstrung, nervous and sometimes hysterical condition, can hardly realise how angelic she is capable of becoming under a higher condition. She will be able then, to give man a new conception of heaven itself.

3. **Preventives.** Enemas taken immediately after connection have often been recommended, as generally a little time elapses before the fecundating element reaches the womb. The water should not be cold, however, as this is apt to harden the womb. Of course, this is not absolutely certain to accomplish the purpose, as the womb, in an active condition has such a contractive or suctional power as to draw some of the sperm into itself almost immediately. Contraceptives with chemical elements which destroy the spermatozoides are sometimes used. An excellent plan is the insertion of a pessary before the act, which dissolves the next day and passes off. Only careful and conscientious physicians of some experience in these matters should be applied to, as the uterine organs must not be injured by any severe substances.

4. **The World will not be Depopulated.** Many theorists think it is to become too much crowded, though this is absurd as will be shown hereafter. The truth is that the desire for children is one of the greatest longings of the human heart, and will always keep the world supplied. A family without children becomes almost a desolation in comparison with one in which a healthy, happy and affectionate circle exists. Under the head of *social upbuilding* I will show how, by means of co-operative nurseries and Kindergarten schools, parents can be relieved of much of the drudgery of caring for children, and have the children all the more happy besides, and this without robbing the parents of any desired care and interest in them.

XIII. THE PHILOSOPHY OF LIFE

1. **Monads.** In the Principles of Light and Color I have shown that atoms themselves are a kind of an animal, having their internal (electrical) and external (thermal) channels of circulation, having their circulatory fluids or ethers, both coarse and fine, and their spiritual essence quickening the whole. I have shown how affinitive atoms are swept together into polarized atomic lines, and segregated to such an extent, as finally to become visible by means of a microscope in forms which have more or less of motion and are termed *vibriones, Bacteria,* etc., partaking of both the vegetable and animal characteristics. It is not my purpose now, to attempt to trace the vast series of evolutions, that have taken place, under the Deific and natural agencies, before an animal could be developed, that was sufficiently exalted to receive the impress of that higher spiritual life, which combining with it has produced man.

2. **The first steps** in the process for organizing life are as follows: Sexual union develops both frictional and vital electricity. Electricity, as we know, is a contracting power. These waves of contraction carry the sperm from the testis to the seminal vesicles which lie up against the bladder and are thrown by the ejaculatory duct far up into the vagina toward the womb. In woman, the contra cting waves are active also, especially in connection with the ovaries, tending to press the ripest of the ova out of the encasements called the Graafian follicles, into the fimbriated extremity of the fallopian tubes, and some distance along the tubes. The sperm point and the ovum are drawn powerfully toward each by chemical affinity, and it is my opinion that they com bine in the fallopian tubes themselves. In fact embryonic life has been discovered in the fallopian tubes. Peristaltic action then carries the combined form to the uterus.

3. **Explanation of Terms Etc.** In the male fluid or semen, is found under the microscope a large number of sperm points or *Spermotozoa*, which are the impregnating elements. These have a brisk movement among each other, and at one time were supposed to be animals. Acids, even when diluted, and sometimes water, will destroy their seeming life. When they reach the womb they find an alkaline fluid which is favourable to them. They have a flattened oval head, See fig. 57, which is about a five-thousandth of an inch in length, while the tail is about a five-hundredth of an inch. The *Ovum* or the egg of the human female, see fig. 59, even in its larger size, is only about a hundred-and-twentieth of an inch in diameter, and although thousands of times smaller than a hen's egg is yet thousands of times larger than the sperm point of the male. How then can a spermatozoon combine with an ovum if the latter is so much larger? It does not combine with the whole ovum. Near the letter S is the germinal sack represented by the round, dark form. Within this is located the *Germinal point*, the center of vital energy. A single sperm point unites with this germ point and thus prepares the way for the new life.

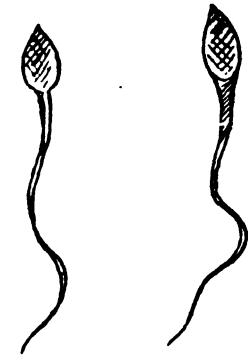

Fig. 57. Spermatozoa, magnified many hundred times (Lusinka)

"The product of generation," says Dr, Austin Flint, Jr., "retains the name of ovum until the form of the body begins to be apparent, when it is called the embryon (embryo is still better.) At the fourth month,

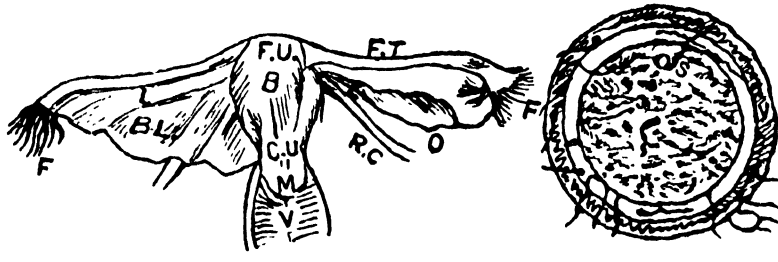

Fig. 58. the Womb. — V, the vagina cut open; M, os uteri, or mouth of the womb; C. U; cervix uteri, or neck of the womb; B. Body; F. U. fundus uteri, or fundus of the womb; O. left ovary; F. T; fallopian tube; F. F. fimbriated extremities of the fallopian tubes; L. L., Ligaments of the ovaries; B. L., broad ligament; R. C., round cord or ligament.

Fig. 59. A human ovum, showing spermatozoa penetrating the vitelline membrane (zona Pellucida V; the darker central portion is the yolk or vitellus; S, a sperm point approaching the germinal vesicle, or sack.

about the time of quickening, it is called the fetus, a name which it retains during the rest of the intrauterine life."

4. **The Mystery of Life**. When the ovum thus combines with a sperm point and comes into the womb, it becomes imbedded gradually in the epithelium of the womb and, aided by the chemical attractions, forms a permanent attachment there, which brings it into rapport with the circulatory and nervous forces of the mother and originates an immortal being. In exhausted or perverted systems the germ and sperm unite but feebly and not having a sufficient attractive life to become attached to the walls of the uterus are carried off and die. In other cases they have so little vitality that they develop into an idiotic being and become the mortification of the parents. But now we come to one of the great mysteries of the ages, namely, *how does the embryonic substance gradually assume the complete form of a human being?* To those who have become familiar with psychometric experiments and the subtile chemistry of the fine forces, I think this can be made quite clear, but to those who are ignorant of these grand studies, the matter may seem visionary and unreal. Some have advanced the absurd theory that all forms that ever have existed or ever will exist have come down through eternal ages. At the outset I will advance a theory which I believe to be entirely true and which physiologists have already suggested, namely, that the sperm point furnishes the cerebrospinal part of the new being, while the female contribution in the form of the ovum furnishes the heart, the vital organs and the sympathetic nerve system. These two great divisions are helpless if taken separately as they act ever in correlation, the interior or female department being probably in more direct communication with the psychic or intuitional ethers, while the exterior or the masculine contribution, is the seat of intellection and executive ability, as connected with the external world. How is it, that man can communicate his characteristics, to the new being, as fully in a moment, as woman can hers, while carrying it nine months? May it not be because he furnishes more directly the organs of the brain? Of course the brain faculties themselves could not be developed, or could not work if they *were* developed, without the aid of the ganglionic system which woman supplies, but they are the positive poles of mentality, and hence this may be the reason why nature can maintain so beautifully the equilibrium of the sexual characteristics.

But how can the almost formless sperm and germ be converted into the wonderful organs and outlines of a perfected human being with their millions of parts? Is not nature a marvelous sculptor? *There must be an absolute mold of both parents in connection with the fecundated ovum and embryo.* Effects must have their adequate causes. Can such a

mold or form exist without being visible ? Clairvoyance shows that there are infinite millions of forms and colors which the outward eye can not see at all. I can testify from my own inner vision that there is an interior universe incomparably more wonderful than the exterior one, which the outward eye takes cognisance of. Is my reader aware of the fact that the forms of all objects are sculptured upon the substance of all things in their immediate vicinity, and that the psychometric power can perceive and describe these forms ? A psychometrist who had never seen me described me perfectly by taking my cane in his hand, and thousands of such things have been done. When the sperm point leaves the man, it has his form and all its details sculptured upon it as really as if it were done in marble, and the germ point with which it combines has the woman's complete from in the same way. If the man is more powerfully positive at the time of conception than the woman, the sperm will be more active than the germ, and the child will resemble the father more than the mother. If the woman is more active, the child will resemble its mother. The two molds, however, blend in one, and form a direct channel, for the electrical forces, which gradually formulate atoms of matter around them. I have already shown, how currents of vital electricity, sweeping in a certain direction through the human system, will carry elements of flesh and bone, in the direction of the current ; for instance, the efflux currents at the bosom of woman, becoming strong at the age of puberty, draw the parts outward into prominence. We can easily see then how this invisible human form attracts the material elements around it until after the lapse of weeks and months every part assumes a visible shape.

5. **The Head of the Fetus**, generally swings downward near the mouth of the womb as the time of delivery approaches. How does nature effect this very desirable position. Evidently by gravitation, the head being the heaviest end of the fetus.

6 **Whence comes Immortal Spirit** ? As I have shown elsewhere, there is much in the study of force which leads to the conclusion that there is an almost infinitely subtile, elastic and unatomic substance, extending, as a positive principle of force, throughout the universe, and constituting, as we may say, the very essence of Deity. As this permeates all things, it is of course a part of embryonic being ; but as the human embryo is the finest and highest department of being, it naturally must intensify and concentrate a larger share of this intersoul than other parts of nature, either animate or inanimate. Matter and spirit, thus uniting form an individual life, and this life is so refined and firmly blended, that it cannot be dissolved at death, except in its coarser elements. We may know this in various ways, only one or two of which

I will take time to mention here, namely, the power of the inner being which we call spirit, in various cases, to stand at least in part outside of the body and see, at the same time, not only its outer body but its spiritual and finer body. Prof. Varley, the eminent English electrician, and hundreds of others have been able to do this, and many clairvoyants have seen this spiritual body rising out of its coarser encasement at the point of death.

7. **Why are not Human Beings Caudated,** *as is so commonly the case with animals?* Some very low grades of human beings in which the spinal column has been prolonged into a tail, have been reported by travellers, and one was on exhibition for some time in London. It is probable that the human animal was originally caudated, but as the brain became more powerful, the nervous ethers were drawn upward toward itself so strongly that they were prevented from the activity at the coccyx which would tend to draw it out into a caudal appendage.

8. **Progressive Development.** To repeat a little, at the age of puberty, the ova becomes ripened and surcharged with electricity. When this electricity bursts over, it sends a contracting wave over the uterine organs, which eliminates the impure blood and other clogging elements in a menstrual discharge. The ovum itself is started loose from its abiding place in the ovary, and by means of peristalitic action, is carried through the fallopian tubes, until it reaches the uterus, usually in from three to twelve days after the menstruation has ceased. If at this time or a little before, the male element with its sperm points is thrown up toward the womb, chemical affinity will soon draw the two elements together, causing what is termed impregnation. When this embryo becomes embedded in the walls of the womb, and thus brought into direct connection with the life of the mother, conception has taken place and an immortal life has, undoubtedly commenced. At this time, and for weeks later, it would be a serious thing to have sexual commerce or disturbance of the parts to detach the new being and pass it off, as it would be murder, or at least the destruction of life. If the ovum meets no spermatozoa it leaves the womb and is lost. For this reason, it is generally, though not absolutely always safe, to have coition during the latter half of the month, or at least two weeks after menstruation.

XIV. HOW TO CONTROL SEX.

1. **Writers on the Subject.** A number of works profess to give something of the causes of sex, though even then, so far as I have seen, they have not attempted to give anything very difinite or tangible as to the control of these causes. There are remark-

able scientists, who work with great perseverance in the investigation of phenomena and accomplish a very useful work, but so long as they remain ignorant of the first-principles of force, as they are for ever exemplified in nature, they must constantly build on uncertainities and work without a basis. They have concluded that the vital forces have not much to do with electricity and magnetism, simply because, they are not of the grade which causes the galvanometer to respond to them very strongly. They talk about positive and negative electricities, in resin and glass and wool and cat skin, but are totally unaware of what positive and negative mean. Under the head of Positive and Negative Electricities on page 142 of the Principles of Light and Color, I have given facts to show that positive electricities are more efflux in their nature while negative ones move more interiorly. I have reminded the reader that both sexes have virtually the same sexual system except that the female has the parts thrown inward and the male outward. Which side of the male, then, would naturally deal with those efflux electricities that would throw the parts of the embryo outward in a way to produce a male child? Of course, the positive or right side, while the left or negative side would produce the female. But does not woman present the same arrangement of positive and negative forces, so that her right side would repel the forces from the right side of man? Yes, in her general system, but not at the ovaries. This must be explained.

2. **The Direction of Ovarian Magnetic Currents.** On the direction of magnetic currents depends the philosophy of life itself and the very chemistry of human structure. What is the direction of these forces at the ovaries, and what causes the outward sweep of the magnetic currents in woman, which work so admirably to draw her breasts into fullness for purposes of lactation? To determine this, both clairvoyance and chemical science must be brought into use, and it will be necessary to enter that subtle realm of forces, which those scientists accustomed only to the coarser processes of nature will be poorly fitted to understand. In the first place, then, anatomy shows that there are diagonal lines of nerves which pass from each ovary to the breast on the opposite side of the body. In forming the left breast, the ethereal current passes from the right ovary through these nerves to the breast, and outward in magnetic curves to the same ovary again, where it is of course influx. The negative electricity of this ovary, probably emphasised by these influx currents, is especially attractive to the efflux sperm points of the right testis in man, and as the male elements generally impart their character to the germ point of the ovum, the embryo thus formed will be efflux in its nature, which throwing the sexual parts outward will form a male, as proved by fact as well as theory. The reader may now presume, that

the right breast is developed by a current coming from the left ovary, up the diagonal nerves out at the breast and then back again to the left ovary, but this is not the case. An influx current of the right ovary passes around into the right ganglionic nerve of the sympathetic system, outward at the right breast to produce its fullness, and thence to the right ovary again, to complete the circuit. The forces of the left ovary are efflux, being the contrast of the right ovary, and must be so to be attractive of the spermatozoa of the left testicle of man, which are influx. These influx currents give character to an ovum of the left ovary, and attracting the parts of the embryo, thus formed inward, produce a female. The magnetic circuits of this left ovary move outward at the ovary, and as far as I can judge come around through some of the nerves of the hypogastric plexus on their way to the ovary again.

3. **But this is not mere theory.** *P. F.* Sixt, of Erfurt, Germany, whose discoveries were first published and mainly approved of by R. T. Trall, M. D., of this country, has given a great array of facts in proof of it. His facts justify the following:

"The organs of the right side, respectively, of the male and female, pertain to the male sex, and the organs of the left side to the female. In other words, the right testicle produces male "sperm cells," and the right ovary produces female 'germ cells.' The semen of the right testicle cannot (generally) impregnate the ovum of the left ovary, nor can the ovum of the right ovary be impregnated by the semen of the left testicle."

4. Before quoting some of the experiments of Dr. Sixt and others, it might be well to remark that several of the ancient philosophers, including Hippocrates and Arisitotle, declared that males are developed from the right side of the body and the females from the left side. But as they could not give the rationale of such a theory, it has remained for the more practical and scientific methods of modern times to furnish experimental proofs. A few of these experiments I will now give.

5. Dr. Sixt gives two cases from the experience of Drs. Belhing and Ruhlmann in which the left testicle was found after death to be shriveled and useless, that neither one had any girls, but one had nine boys and the other five boys.

6. **Experiments with Dogs.** Dr. Sixt cut out the right testicles of three dogs. Three dogs with which they cohabited had respectively eight, seven and four female young ones and no males. Two other dogs which had the left testicle taken out developed respectively six and eight male puppies

7. **Experiment with Ovary Removed.** Two sluts with the right ovary removed, bore respectively seven and five puppies, all females. Repeated coitions with dogs that had only the right testicle proved to be infertile.

8. Dr. Pezold of Muhlberg made a number of experiments with different animals, with the same result.

9. **Dr. Trall's Testimony.** "So far as I have been enabled to make observations for eight or ten years past," says Dr. Trall, "they have, in every instance, confirmed the theory of Sixt. I have known several women who suffered of ovarian disease, and in all such cases all children born subsequent to the appearance of the malady were of the sex corresponding to the sound organ."

10. **Dr. Priestly's Experience.** Sometime since, this gentleman came from England to New York State, and adopted a very practical and simple method of applying the discoveries of Dr. Sixt, namely, that of tying a small cord around a part of the scrotum in a way to shut off the action of one testis so that the other one would operate. Meeting a friend of mine in Saratoga, who was the father of six children, all daughters, he informed him that he could have a son, if he wished, and showed him how, by ligation, to enable the right testicle alone to act. He followed the doctor's directions, and the result was a son. This friend then told five of his neighbours whose children were all daughters, and every one of them got sons in the same way. Dr. Priestly also proved the truth of this law in connection with a number of animals as well as human beings.

11. **Exceptions to this Law.** When I was first informed of this principle, I said immediately, that it is the result of the positive and negative electricities, and hence there must be an occasional exception to it, because some electricities which are usually positive can sometimes be overcome by a stronger force, so under our present imperfect and unequally developed human and even animal life, the electricities from the right side of a strong woman may at times overpower the electricities of the right side of man, thus producing a female. After a long series of experiments an occasional case was found in which a man with one testis, produced both sexes and the same thing has been found to take place in case of a woman in which one ovary was disabled. An occasional experience with animals showed the same result. Such facts led our stupid medical investigators to exclaim, "We are just where we began," and to pronounce the whole matter "a fallacy," from the very features of the case that constituted the best proof of the whole thing to those who have scientific enlightenment. What a pity it is that Sixt did not understand the underlying

principles of his own very important discoveries, so as to have met his detractors still better. Our physiologists have not the wisdom to even publish his discoveries any more, and the world is in danger of lapsing into the old darkness again for half a century to come, unless the true principles of force shall become known. Austin Flint, Jr., M. D., of New York in his able Text Book of Human Physiology, omits even the name of Sixt, and says: "The idea that one testicle produces males and the other females, or that two ovaries have distinct functions in this regard, has no foundation in fact, for men with one testicle and females with a single ovary produce off spring of both sexes." (p, 894). When Dr. Flint says this has no foundation in fact, he perverts the truth, for it has an immense foundation in both fact and principle. The facts of the 14th 15th and 17th paragraphs are in exact harmony with the foregoing principles.

12. *Whenever woman is weak or negative as compared with man*, there will be a greater tendency to male offspring, because in that case the right side of man will at times be positive to both her ovaries. In the country, where the women are more severely confined with hard labour, there are more male births than in the cities. And it is said that in New-zealand and some other islands, where the women are the merest slaves and drudges, most of the births are boys. Galton shows that among the nobility and other classes of people where woman dwells under favourable circumstances, daughters are more common than sons.

13. **The Influence of Prosperity** and a harmonious social life on woman is to prevent her from being too negative, and thereby female children will result more frequently than otherwise. "Ploss was the first to point out that there is an excess of female births in prosperity." Prof. Brooks, in the *Popular science monthly* makes the following generalization with reference to the exhaustive statistics referring to sex given by Carl During: "A favourable environment causes an excess of female births, and an unfavourable environment an excess of male births."

14. **Why is it more difficult to rear Male than Female Children,** as statistics positively prove? Why are girl babies less apt to die under adverse conditions than boys? We might ask, also, why does woman average a longer life than man? Many answers of such questions have been attempted, but the one clear and conclusive answer is, that the female comes under the law of power more directly by possessing greater refinement of elements. The psychic forces in her are more active than in man, although, of course, she is weaker in the coarser physical energies. To say that she survives better because she is protected from the elements by being indoors is absurd, for outdoor life is especially strengthening.

15. **In the Better Future** when the laws of life are understood and practiced upon, there will be no extra negative or feeble persons, and man may count on exact sexual results when he uses the ligating process as already described.

16. **A Louisville Woman**, is the mother of twenty-eight children, all boys. There are two severe calamities in such a case: 1st, the sameness of sex, which could have been so easily controlled by the rule here given; and, 2d., the size of the family, which could have been controlled in two ways: 1st, by preventing conception; and, 2d, by self-control in the parents.

17. **All Facts Corroborate this Electrical Theory** " M. Thury, of Geneva, caused cows to be impregnated, sometimes at the beginning, sometimes at the end of the rutting period. In the first case he obtained female calves; in the second, male calves." In other words, when the female activity was the greatest the male could not be positive to her, but after it had nearly subsided the male was positive to her, and produced males. In coming from a cold climate to a warm one, the female organs become sufficiently positive to cause an increase of female births. When the male is older and more developed in power than the female, male births will predimonate, both in human beings and animals, as proved by various experiments. When the female is older, female births are generally in predominance, other things being equal. The age must not be so great as to interfere with strength.

18. **Among Still-born Children** some statistics have shown that there are twice as many males as females, thus proving again that the latter have an interior and finer principle of life. To prevent idiocy or stupidity and death of the fetus, how vastly important it is that one of two methods should be practiced upon the mother, namely, magnetic massage, with a hand placed on either side of the body, or sunbathing on the bare skin of the abdominal regions, to give the quickening power so much needed.

19. It has been ascertained that only one ovary acts at a single menstruation, each ovary acting alternately. When one ovary has a somewhat irritated condition, the other being well, the irritation becomes increased during menstruation of that side. Hence it can be determined whether the male or female ovum is set at liberty. The male sperm will generally be infertile if passed after the left side menstruation has taken place, just as the female sperm would be on the following month. On this principle nature keeps up the equilibrium of the sexes.

XV. DEVELOPMENT AND ENNOBLEMENT OF CHILDHOOD.

1. **Some General Hints** *for the moral development* of childhood are as follows:

Even when an infant is but a few months old, teach it *self-control* by not always nursing it or taking it up when it cries. A babe may become angry and determined to have its way, and if it conquers one time, it will be still more determined to conquer another time. This will be the beginning of endless trouble for itself and parents, for a strong-willed child will sometimes keep a parent or nurse working with it nearly the whole time, if decision is not used.

Anger should never be manifested in a child's presence, for anger begets anger and encourages rudeness of impulse. A very small child will perceive, when a parent screams at it, or strikes it rudely, that it means something bad in the parent, and its love will be lessened.

If a child is very excitable and nervous, it should be placed nude in the sun, behind some blue glass, for a while each day for a week or more, and some downward strokes over its bare body by a healthy person would also be useful. In sleeping, its head should be toward the north. This course would effect the whole future life, and perhaps prevent much crime and discord. A grown person who is excitable to insanity has been cured permanently by remaining in a blue room with blue window glass for a single day. There are hot-headed persons, the fiery essences of whose brains rush forward so furiously as to take captive their reasoning powers, and lead them to do in a moment what they will spend a whole life in regretting. A boy in New York, in passing the peanut-stand of an Italian, snatched off two or three peanuts in a tantalizing way and commenced moving off. The Italian plunged a dagger up to the hilt in the boy and turned it around, to make it all the more surely fatal. There are various persons who, for almost any little affront, become insane with rage and aim to kill. Such persons, perhaps, are reared by parents who have no self-control, and under a religion which teaches no self-control. By the method I have mentioned, the inflammable condition of their brains can be cooled off, and their whole lives changed for the better.

Coffee, tea, wine, beer, meat, and heating foods and *drinks* generally, are unsuited to infancy and childhood, a period in which the nervous system and brain are especially excitable. Such foods lay the foundation for alcoholic use in after life.

It is wonderfully important that ideas of *kindness* and *justice* should be impressed upon the little ones from early infancy, for impressions then made are deep and almost ineffaceable. This can be best done in the

presence of some little mates of nearly the same age, where the impulse may be to seize some coveted object, or to strike each other. The nursery and the kindergarten of associated life afford an exceedingly good opportunity for beautiful impressions to be made on these young minds. Mankind would cease to trample each other under foot and to live so constantly for self if they could be trained rightly in infancy.

2. **Freedom.** Children should early be allowed a certain amount of liberty, and as early as possible be taught that they must be self-governing and thoughful. If they find that they are watched and held in at every turn, they will eventually lose their individuality and become feeble in their will power.

XVI. PHYSICAL CULTURE OF CHILDHOOD.

1. **Infant Mortality.** It is commonly stated that half of the human race die before the age of sixteen years. This is a shameful result of ignorance. According to the Sixth Annual Report of the Registrar General in England, 146 children out of 1,000 born alive died during the first year, of which 82 were males and 64 females, or nearly a third more of males than females. This shows that males are the tender side of humanity, while the more psychic sex has a higher element of power.

2. **Harshness of Medical Treatment** is responsible for much infant mortality. One newly born babe that came under my notice was dosed with sulpher, and died almost immediately. Blisters for children are dangerous. Crude drugs are entirely improper. A Philadelphia physician informed me that a number of children died under his treatment while he was using Allopathic remedies but on adopting the Homeopathic practice he rarely lost a case. The following take off on the old medical methods is from *Harper's Drawer*:

"You have lost your baby, I hear," said one lady to another.

"'Yes poor little thing! It was only five months old. We had four doctors, blistered its head and feet, put mustard-plasters all over it, gave it nine calomel powders, two boxes of pills, leeched its temples, had it bled, and gave it all kinds of medicine, and yet after a week's illness, it died, notwithstanding all we did for him.'"

"Soothing syrups and other opium sedatives destroy many lives and stupify the brains of infants in a way to injure their whole after-lives.

3. **Children should Generally Sleep by Themselves.** If they sleep with grown people, especially with the aged, their vital energies are liable to become sapped. Even if they sleep with each other, one will sometimes thrive at the expense of the other.

4. **Close Wrapping of the Body** in heavy clothes, and keeping children shut up in tight, shaded rooms, will tend to make them weak-

pale, fretful, feeble in mind, with spinal curvatures, scrofulous, and liable to be carried off suddenly by some children's disease. Wrap up a plant in close garments and put it in the shade for two or three weeks, and it will be nearly ruined. Humboldt, speaking of a five years' residence in South America and Mexico, among tribes where the children receive the enkindling influences of sun and air on their almost nude bodies, speaks of their great health. He says he "never saw any natural deformity amongst the men or women belonging to the Carib, Muyscas, Indian, Mexican, or Peruvian races."

5. **Cretinism.** In part first of this work I have given an account of the terrible cretinism and idiocy that exist among the sunless valleys of the Alps. But there is a good deal of this condition elsewhere in dark, shaded places. The one island of Sardinia, near Italy, which has many deep valleys, "found that it had 7,000 idiots, called Cretins, in its small dominions." M. Guggenbuhl, in a letter to the Earl of Shaftesbury, speaks of the village of Chiselborough, Lancaster county, England, which, he says, "lies in a narrow valley, surrounded on three sides by hills 500 feet high. The great majority of the 350 inhabitants, are affected with the swelling of the thyroid gland, and are remarkable for the frequency with which they are affected with deafness, thickness of speech, and dulness of intellect, which in 24 persons amounted to absolute cretinism. The majority of these unfortunates are three feet in height, thick, and bloated; their head is malformed, their lips tumid, the nose flattened like the negro's."

6. **A Gentleman in New York,** remarkable for physical power of endurance, says he can stand all kinds of climates. He went down into the tropics and worked side by side with the natives in the sun without injury, when his friends told him it would surely kill him. He laid his great vitality to the fact that when he was a boy he and his mates would often go in bathing for a while, and then roll in the sand and play in the sun a half-day at a time in a nude condition.

7. **The Sun Garden,** already described on the 83rd page, if used even for a little while thoroughly, would develop a vital power in children which would be useful for years afterward. If this cannot be had, to let the little ones play together naked in a sunny room would be very useful. The following racy language of Dr. Dio Lewis, which I quote from his magazine, is right to the point:—

"*The best of all baths*:— Our young folks should never sleep in bedrooms, that have not the direct sunshine. They should never sleep in bedrooms the windows of which are shaded by a piazza or a tree; and if they would have the very best health, they must live as constantly as possible in the sunshine. And all who have delicate health must, with their clothes removed, take daily sun-baths during the summer season. Such a

bath will give them very little trouble, and they have no idea how much it will add to their health and happiness. One good bath in the sunshine is worth more than many baths in water, valuable as these are.

"*Pale Girls make good Ghosts.*— Some people admire pale girls. They make very good ghosts, but are not worth much as girls. God hung up that great sun in the heavens as the fountain of light, health, beauty, and glory for our earth. Our young folks, by living in houses with piazzas, shade-trees, close blinds and curtains, and by using in their walks broad-brimmed hats, gloves, parasols, and veils, deprive themselves, in great part, of the blessings which our Heavenly Father would confer on them through the great sun."

For the wonderful strengthening, vitalizing, mind-upbuilding and beautifying power of sunlight, see p. 51 onward. I see no objection to a piazza, which the doctor speaks of, if it is in front of a sitting-room or parlor, as it tempts people to sit out-of-doors, and does not shut off all light from the rooms.

8. **Nature's Forces.** Does my reader think I am talking too much about these forces of nature ? But I am forced to, because they are the grand upbuilding powers of the universe. I am forced to, because the people are ignorant with reference to them, and many of the physicians themselves pay no heed to them but let their patients go down to death when they might just as well save them. I know so well how the terrible evils of scrofula, of cancerous germs, of perverted blood and nerves, and in many cases of a dormant mental development, can all be done away with by solarizing the bare body, especially in childhood. I know that when the blood is thus purified and the vital forces enkindled, it will be almost impossible for a child to have any serious attacks of croup, or worms, or indigestion, or spasms, and if, in some cases, measles or scarlatina, can gain a hold on it, its forces will be sufficiently positive to radiate the virus outward so that not much harm will be done. I am no monomaniac and believe in well regulated-food, in exercise, especially the happy exercise of a merry play spell; in magnetic massage; in plenty of sleep; in loud voices, especially when this loudness can be indulged in, where others will not be annoyed thereby; in loose, free and light clothing, and, of course, in mental culture of all kinds, when it does not carry the vital forces too much to the head.

9. **Going Barefooted.** Children when in the country in the warm season, will receive an immense benefit by going barefooted, at least a part of the time. A pale, sickly little girl in Vineland, New Jersey, became healthy and strong by going barefooted one month in a short dress. Bathers at the seaside, by leaving off their stockings, receive far more benefit than those who keep them on, under the influence of a false conventionalism.

10. **Vaccination.** Nearly all writers urge parents to have their children vaccinated, even in early infancy. It is, no doubt, true that vaccination, for the time being, and perhaps for a while after the operation takes effect, will prevent small-pox in many cases, but it is also true that the vaccine matter is an element of putrefaction or rottenness which begets rottenness in the general system. To my fellow physicians I would say in all kindness, Why have you not tried a little more thoroughly to get at the basic principles of inoculation? Do you not know that when you put a poison into the system, opium for instance, it will tend to repel a similar poison on the principle which makes similars repel each other, and do you not know that a person can keep on taking opium until his system has become so poisoned all through that he may at last take a dose sufficient to kill several men who are beginners, and yet not die from it. In other words, the opium in his system can repel any new doses of opium in a way to save his life. Tell me, do you think it wise for a man to get his system all perverted and poisoned so as to make it safe against similar poisons? Apply the same principle to vaccination. Why have human systems become so impure, so almost universally scrofulous, so subject to diphtheria, cancer, and other terrible conditions, for all our advanced ideas on hygiene? It is even a matter of dispute whether there was any diphtheria at all before the vaccinating mania came into existence. Besides that, there are hundreds of children and grown people who have been converted into almost a continuous blotch by vaccination. England has a law forcing parents to have all their children vaccinated. Many of the enlightened people there are struggling against this despotism and publishing many fearful effects of vaccination. Chicago made a law requiring all teachers to be vaccinated. One of the teachers, a beautiful young lady, greatly objected to it, knowing its danger, but she was told that they would use *Pure* material, just as if any kind of rottenness could really be pure. She yielded and became a fright, one cheek being covered with a great scab and her whole system in a miserable condition. She of course had to leave school, her life being blasted, and the last I heard of her, she was almost in a starving condition. Was the School Board of Chicago noble enough to give her a remittance to atone for the wrong they had done her? By no means. How rarely does any corporation do a noble thing.

Mr. P. A. Taylor, M. P., England, met the Vaccinationists with an overwhelming array of facts against their theories, and published an important pamphlet on the subject. Dr. Gunn, Professor in the U. S. Medical College of New York, has lectured and written very ably on the subject. But what shall we do? Very many of the ablest physicians

and scientists all over the world oppose vaccination, but right in our metropolis, it is very difficult ever to get one of our dailies to utter a word against it. Dr. Gunn says they will not give him a hearing, and the people seem predestined to be kept in darkness by our editors, who ought to be in the vanguard of progress and help the people toward the truth.

11. **Treatment of Small-pox.** Suffice it to say here, that if the systems of children are kept pure and positive, these zymotic diseases will rarely find any soil in them to invite them. If in some rare cases small-pox should be taken, it will not be difficult to master it, if hot baths or steam sweat baths are given in a warm room, say twice a day for the first two or three days, and then less frequently, so that the virus may be thrown to the surface and all danger to the vital organs escaped. Persons treating it in this way have told me that they save every case.

12. **Inoculation for Hydrophobia** on the plan of Pasteur, France, is simply an unscientific and most cruel method of applying Homeopathy. He inoculates a series of rabbits, one after the other, taking the virus of each mad rabbit to inoculate the next one with. This is an imperfect process of trituration, for this virus in going through the ten or twenty rabbits is a method of giving it ten or twenty triturations, the processes of life being methods of chemical action and triturations also working on the law of chemical affinity. But to take hydrophobin and raise it to a high attenuation would be a more scientific method of gaining the exact contrast of the original virus, and this taken freely into the system of a person who has been bitten would absorb the virus chemically and work a cure. To make a case doubly sure, however, it would be well to have powerful sweat baths also given, for with these alone Buisson of France cured eighty cases. Pasteur has saved many lives, but M. Lutand, Editor of the Journal de Medicine de Paris, says that "Pasteur's treatment for hydrophobia is not only useless but dangerous." Dr. Colin of Paris, before the Academy of sciences, concludes that "the Pasteur's system is of doubtful efficacy, and is alarmed for the results of virulent inoculation."

XVII. DISEASES OF CHILDREN

1. **Remark.** As the general treatment of disease is to be considered in other parts of this work, I shall give only a brief treatise on them here. I would remark in the first place, however, that if the parents have employed the natural forces, as already explained, there will not often be any diseases to treat.

2. **So far as Medicines are Concerned,** sun-charged water and highly attenuated homeopathic remedies would usually be absolutely safe even

for small infants. For the preparation and use of exquisite and effective color medicines, such as ceruleo, ambero, purpuro, etc., see, p p, 67. and 68. A teaspoonful or two at a time is sufficient for infants.

3. **Newly-born Babes** should be kept in a softened light for three or four weeks.

4. **Mental Excitement** in the mother sometimes creates such a wild flow of forces through her system as to render her milk poisonous to her child. Parmentier and Deyeux give an account of a woman whose milk became transparent and viscid like the white of an egg, in consequence of an hysterical attack. Dr. Von Ammon gives the account of a woman who became terribly excited as she prevented her husband from being murdered and then nursed her babe. In a few minutes "it became restless, panted and *sank dead on its mother's bosom.*" All fierce and revengeful feelings tend also to poison the blood and the nerve force of those who indulge in them.

5. **Infants** tend to Vomit when they are nursed too much.

6. **Colic**, which so often causes babes to cry all night, is generally the result of indigestion. Ceruleo is generally the best remedy, sometimes checking it like magic. Purpuro is also good. Rub the child gently over the stomach, legs and feet. Avoid soothing syrups* and other poison anodynes.

7. **Summer Complaint, Spasms**, etc., have always thus far been checked and relieved by using ceruleo. It gently, and not violently lessens the diarrhea, checks pain, quiets the nerves, and prevents spasms in teething. It is the great remedy of the world for all such cases. 1,418 babes died of summer complaint in New York, during the month of July, 1887. How criminal to allow such destruction of life when it could be prevented on so simple and inexpensive a plan. For babes, one or two teaspoonfuls of ceruleo every hour or half hour.

8. **A Tepid Bath** for the infant before being put to sleep is fine, or if the child is some what pale or thin, a bath less often would answer, and a gentle rubbing all over would animate its tissues, and be very useful. No movements should be made towards the head.

9. **For Torpid Liver** and **Constipation**, *Ambero* is the all important thing. It is the thing for rousing the nerves in stupid conditions. Give it the teaspoonful each hour in the day time, in severe cases, and not generally at night. It develops brightness in a child.

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* **"The preparations sold under this name (Mrs. Winslow's Soothing Syrup) usually contain opium, said to be the cause of the death of 1,50,000 children a year." Murrell's poisons, p. 208.**

10. **Cradle Rocking**, or the constant jogging of infants to keep them quiet, is out of date in the wisest families. It begets a restless nervousness which calls for constant movement.

11. **Croup** is often a dangerous disease under the old methods, as false membranes are apt to form, and if allowed to continue will tend to clog and smother the child. I am not aware that croup occurs at all in children whose skin has been well sunned and kept active by bathing and rubbing. When the parent perceives that the breathing passages are becoming clogged, the clothing should be removed, the cervix, throat and breast should be rubbed, one hand at times being held over the throat, and the other over the cervix, for a minute or two, and in fact the whole body, including bowels, hips, legs, and feet, should be rubbed so as to get the blood into a brisk movement over the whole system and prevent the clogging of any part. This will clear up the system rapidly and be far more effective than any medicines. A magnetic masseur would be doubly good for all such cases and, combined with sunlight, would rout the croupy and scrofulous conditions out of the system.

12. **Diphtheria** should be treated like croup. Wake up the bowels and liver with ambero Sometimes give a foot-bath in water as hot as can be borne, introducing mustard. Cerulebel high would be excellent for internal use. (See P. 114). Have thorough massage over the whole system. To rubricate the skin over the throat and, bronchial tubes with a chromo disk, (See p. 69) when there is sunlight, would be wonderfully effective in scattering all the disturbing elements and rendering the system positive.

13. **Smallpox**. Bring out the virus by hot baths as already described or by steam sweat baths, but keep the bowels active with ambero giving it every half hour, until they move. Cover the sores which are exposed to the air with flour or pulverized chalk, to prevent itching and scratching, for the scratching is what makes the hateful pits. Remember that the great danger with all eruptive fevers, including smallpox, scarlet fever, measles etc., is that the virus shall be driven inward to the internal organs, for which reason, cold drafts of air and cold water should not be applied to the skin, and it is exceedingly important that the patient should not take cold even when he is supposed to be nearly out of danger. It is allowable to drink cold water.

14. **Scarlet Fever** should have the hot baths and the ambero, and be treated mainly the same as smallpox. Thorough massage at the start is excellent. Run light on food.

15. **Measles**, treated in the same way. A chromopath brought out the eruptions on a child admirably by giving it rubio to drink.

16. **For Scrofula, Erysipelas, Eczema** (Salt Rheum), and general **eruptive diseases**, the thermolume sweat-bath transcends by far all other agencies.

17. **Teeth** should be cleaned twice daily with a brush dipped in ceruleo which is an anti-septic, and will tend to prevent the forming of tartar, as well as canker-sores, inflamed gums etc. The ceruleo should also be gargled.

18. **Inflamed Eyes or Ears and Chapped Hands** are best treated with the blue charged water (ceruleo). Little ceruleo compresses over the parts at night are excellent.

19. **For Diarrhea, Dysentery, Summer Complaint**, etc., ceruleo internally is the remedy - one to three teaspoonfuls every half hour.

20. **As a General System** persue all natural and simple methods of diet, pure air, light, exercise, correct food and friction, and teach the young the true laws of life. While I am free to admit that there are accomplished physicians among the Allopaths, persons of extensive culture, endowed with that higher genius which enables them to rise above their own system, or in fact all other systems where errors have crept in, still their school deals so extensively with crude, violent or surgical remedies and with fierce methods which aim at effects instead of causes, that it is often a most dangerous thing to patronize them, especially in their treatment of the young. The following startling facts I quote from Dr. R. C. Flower, of Boston:

"In pneumonia, statistics show that where the "irregulars" lost only three per cent., the regulars lost eleven to nineteen per cent. Statistics taken at a great deal of expense in Franklin county, Tennessee, show that out of one hundred families visited, just as you would come to them, who had had allopathic physicians in their family for seven years or longer, ninety-two members of those families were suffering from paralysis, nervous prostration, rheumatism or neuralgia; while out of one hundred families, neighbors of these who had employed, for seven years or longer, irregulars " or no physicians at all, there were only twelve out of that one hundred that had ever had any of these diseases. In Erie county, Penn., it showed out of one hundred who had allopathic physicians for seven years or longer, ninety-four were suffering from these diseases while in one hundred families mingling with them there were only fourteen. In Washington, D. C., it showed ninety-one to thirteen; in Boston, ninety-four to eight; in Detriot, ninety-one to eleven. Yet these allopathic doctors want a law to give them the exclusive control of medical practice."

It will be seen from the above that Boston stands highest of all in the freedom from these terrible diseases although having a somewhat severe

climate, and this may be accounted for by their having in their midst a multitude of magnetic practitioners and various persons who encourage sun-baths and other methods of nature. But these *Nature workers*, who often accomplish such marvels of cure, are treated haughtily by the regular profession as a set of quacks or empirics. It should be understood, however, that if a person cannot go sufficiently beyond the great stupid public around him to have the term "quack" or "crank" sometimes applied to him he is still rather low in the scale of progress for people are always suspicious of those who transcend themselves.

XVIII. THE YOUTH OF BOTH SEXES

1. **On Childhood and Youth** hang the destiny, to a great extent, of manhood, and womanhood and the whole being should be developed on scientific principles. Education, in its true sense, means the development of the physical, mental, moral and social being, but our schools, even yet, are conducted under a high-pressure system, which robs the body by calling the vital forces unduly to the brain, and gives but the smallest attention to physical culture. How many pale faces and delicate systems are seen in all our schools. The school-rooms should be ventilated above and below, the heat should not be excessive in any part, and the students should frequently have calisthenic or gymnastic exercises. In part third of this work will be shown a plan for developing both the mental and physical energies by methods far more effective than any that have heretofore been adopted, namely, glass-covered male and female departments on the tops of school-buildings, where the children can undress and disport themselves in the sun, and dash about in pools of water. Let children play two to four hours a week in this way, and before one season is over all headaches, all catarrhal conditions, all tendency to take colds, all scrofulous manifestations, all stupid mental states, when study is so unprofitable and unpleasant, all disorders of the lungs, stomach and bowels, and all morbid nervous conditions will be done away with, and the whole future life will be much more happy and successful as a result of the new cheer and health power thus gained. I never heard of a sunstroke occurring where the whole body is exposed, but if a child has a brain which is especially delicate, a light wet bandage might be worn around the upper brain for the first two or three times.

2. **Colleges**, but a few years since, though considered centers of wisdom, were conducted on such an ignorant plan, that one quarter of the graduates were said to have been ruined in health, and no doubt many of the others were so devitalized by confining studies,

that they were poorly adopted for the rude battles of life. Lately there have been gymnasia with teachers of physical culture, established in all the leading colleges, and much better results have been attained. But there is a higher grade of physical culture than the mere development of muscles, namely, that which takes in the refined forces of nature and kindles the nervous energies that so underlie all the other processes of the system. Plato speaks of the athletes who contended at the Olympian games as "a sluggish set of men, in dubious health and short-lived." Dr. Winship of Massachusetts developed his muscles until he at one time lifted over 2,000 pounds, but he neglected the culture of the nerve-forces, which give life to the muscles and blood, and died at the age of forty-two years. Sunlands like California and Australia develop a quickness and a power of endurance in their oarsmen and athletes that make them triumphant over the most of the rest of the world and when they shall have learned a scientific method of utilizing this light, they will be still more powerful.

3. **Latin and Greek** are good in their place, but the study of man is a grander field. Those who take the full ordinary courses of our colleges have to spend about six years, more or less of the time, in the study of these dead languages, meantime they are very ignorant of themselves. Our anthropological societies give immense labor to historical points as to some obscure races in the past, but they do not understand nervous, mental or psychological forces, and so cannot show how to develop a grand humanity in the future. Colleges, of course, are necessary, but our present system deals too much in external routine, running in old beaten paths, and too little in developing the power and individuality of the student. A very learned young man in England who died from cultivating his brain more than his body, had, on his tombstone, an epitaph, signifying what a great amount of Latin and Greek were buried there. Far better would it have been if he had buried the Latin and Greek books, and studied the great book of nature until he had attained to a fulness of manhood.

4. **Our girls** have heretofore grown up far too much in-doors, and so have paved the way for a great deal of suffering all through life. Walking is much more common than it formerly was, however, and the spindle legs of former times are growing far less in number. The bicycle is also proving a godsend for both sexes. A merchant says he has to supply his female customers with much larger stockings than he did twenty years ago, and Kiralfy, whose business requires female beauty, says that the limbs of American ladies are now equal to those of any other nation.

5. **Puberty**. The era of commencing manhood and womanhood, which in temperate zones is not far from the age of fourteen in boys, and

from twelve to fifteen in girls, is considerably earlier in warm climates. The ripening of the spermatozoa in boys and of the ova in girls is an awakening of the electricities of the system, which gives a new consciousness of power in both sexes, new dignity and new sexual activity. Parents are terribly guilty if they do not early teach both sons and daughters of the destructive and life-exhausting character of self-abuse, tending as it does to pervert all nobility of soul, and gradually to lead to feebleness, insanity and death. The debasement of mankind caused by this practice and by over-sexual use is beyond all power of language to describe.

6. **The object of Menstruation** is not only to loosen up and start off the ripened ova, but to carry off the effete matter, in connection with a certain amount of blood as the washing out fluid. This effete matter is thrown off from the mucous membranes of the ovary and uterus and is apt to be more abundant when the system is dormant, anaemic or chlorotic in pale, anaemic conditions the blood is generally too thin, and flows so abundantly as to be somewhat exhausting to the system.

7. **The Pain of Menstruation** need not be anything if the system has been animated and toughened and made strong in childhood by the methods I have already laid down. It is not a well-known fact that some of the girls that have been called *Tom-boys*, racing out of doors, in the sun, perhaps with their bonnets off; have made happy and healthy wives and mothers. The very running and jumping, if not too violent, strengthen the ligaments that hold the womb in its place, and so uteri-lapsus will not occur. When the system is very weak, the womb will sink down into the vagina, and sometimes project into the air, making a bad failing of the womb.

8. If the ligaments which sustain the womb are weak so that it is

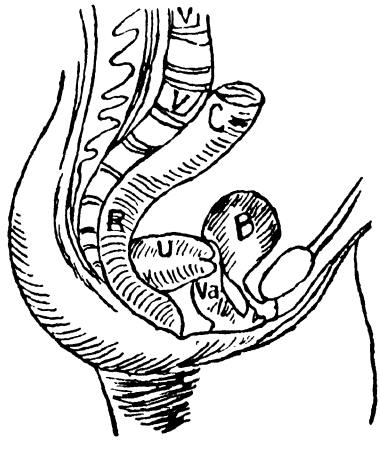

Fig. 62. Retroversion of the womb. Va, Vagina; uterus, thrown back upon the rectum R; B, Bladder; V, V, Vertebræ; S C. Spinal cord; C. colon.

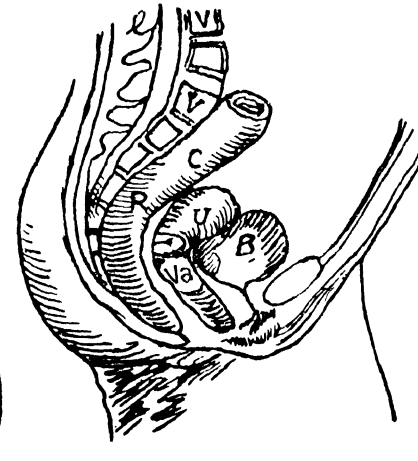

Fig. 61. Anteversion of the womb. Va. Vagina; U, uterus, thrown forward on the Bladder B; R, rectum; C, descending colon; V,V, Vertebræ.

thrown forward upon the bladder, it causes a pressure there and a frequent desire to pass water. This anteversion of the uterus is represented

by Fig. 61, Fig. 62, however, shows how the womb may be retroverted or thrown back upon the rectum, so as to impede the discharge from the bowels. In either case, the womb being thrown into a more or less horizontal position, is apt to lie against both of these organs, and disturb their functional discharges. These conditions cause bearing-down pains, distress in the back and head and nervous system, and that painful menstruation which is termed *dysmenorrhea.* To make matters worse the womb itself sometimes becomes flexed, so as to shut off the flow of blood. Anteversions, retroversions, uteri lapsus and other weak and depressed conditions are very often caused by corsets which press the abdominal organs downward, and impede the free circulation of the blood to the different organs. In case of retroversion, it is, of course, important that the bowels be kept free and the feces soft so that the rectum may not be blocked.

9. **General Treatment.** As regards the diseases of the sexual system I shall now give only some general hints in this place. For prolapsed uterus, a woman can help herself a great deal by passing her hands, at night, on retiring, over the womb, moving upward and outward toward the sides. Magnetic massage would be still more effective. Sometimes the womb is so misplaced that even the magnetist cannot draw it into position, and it will need a physician who has had some practice in this department, to put it in place, after which, the patient remaining in a horizontal position for several days, the womb will be permanently held in a proper position.

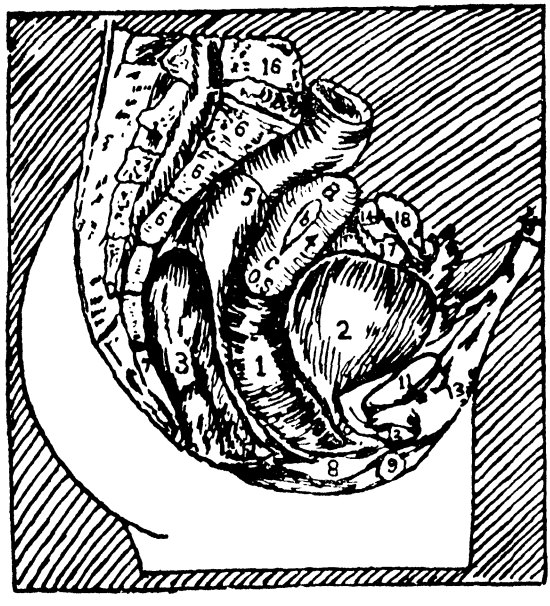

Fig. 60—Viscera of the Female Pelvis in Correct Position.

1. Vagina 2. Bladder. 3. Rectum cut open. 4. Womb. a, fundus; O, os. uteri; c, c, cervix; b, body; d, posterior portion; e, anterior portion; 5, Rectum, here covered by peritoneum. 6. 6. 6. Sacrum. 7. Coccyx 8. Labia minora. 9. Labia majora. 10. Urethra. 11. Symphysis pubis. 12. Clitoris. 13. Mons veneris, 14. Ureter. 15. Section of peritoneum. 16. Lowest lumbar vertebra, 17. Broad ligament 18. Ovary.

For *Amenorrhea,* sun-baths, with red light over the womb a little before they are expected, are unequalled. A hand of magnetic person placed over each ovary, for some time, is also admirable. When the thermolume is used, the steaming arrangement placed under the seat, is so much clear gain. A girl's life from thirteen to nineteen years, is a somewhat dangerous period, under our incorrect civilization. When menstruation is not properly established, the blood is apt to flow back upon the lungs, and either carry the victim off with consumption, or make

the system a partial wreck during the remainder of her life. Severe study or excitement is apt to draw the blood too much toward the brain and imepede menstruation.

Menorrhagia. The too frequent or too abundant flow is exhausting. This can be cured sometimes very wonderfully, by blue light focused over the uterus and ovaries, for fifteen minutes a little before the menses are expected. In the thermolume bath, the steam, if used, should be placed under the feet and blue light over the pelvis. The greatest cause of menorrhagia is not what is called full-bloodedness, but rather anaemia, or impoverished blood, and the system should be toned up, especially with the sun-baths and open-air excursions.

10. **Exercise** in the domestic duties of life, as well as in the open air, is highly useful for keeping the circulation well equalized. Of course, joyous exercise, such as dancing, will kindle the vital ethers, and do great good, if it does not occur in close rooms, or at late hours. The sociables of Henry Ward Beecher's church, which ended in a pleasant little dance, not continued later than eleven o'clock, were admirable for recreation, and social culture. The religion that would condemn these moderate recreations and aim to make life a funeral procession, is at war with God in nature, and fosters the old superstitions. Lawn tennis, archery and other open-air games are especially good.

11. **Forcing Processes for the Menses** are not generally desirable where the health is in good condition. When nature's methods are followed more closely and human systems become more purified, menstruation will become less and less Some ladies have admirable health, with only the slightest menstruation, often skipping their periods altogether. It is my opinion that after a few thousand years the catamenial periods will cease altogether. Their general absence in animals may be in part owing to the out-door life of most animals. It has been found that pet dogs and other animals that are wrapped up closely and constantly housed warmly, become subject to many diseases. I learn that women who grow up nude in sun and air have such purity of blood that they do not menstruate at all. The grosser elements that cling to the uterine walls among people who dress, are unknown. The following very interesting account in answer to some of my questions, was given me by Mr. Alfred Hawes, a naturalist, who spent twenty years in the wilds of Africa, among the natives.

"1st. Did I ever hear of a woman's menstruating who had grown up nude in sun and air?

"No. To the best of my knowledge they do not, or, if they do, it is very slight. But most of them on becoming partially civilized

and adopting European clothing at the Mission stations, and in the towns, do so. I have heard of several cases in which their husbands or others wishing connection with them, have been warned by the women that their menses were on, and on persisting, the man has been infected with a severe case of clap, which I think tends to show the origin of syphilitic diseases. I have been acquainted with the families of European colonists, having grown-up daughters, who, although they wore the usual clothing, but were out constantly in the sun and air, had never menstruated, and had never heard of such a thing.

"2d. Did I ever hear of such having trouble or pain during childbirth ?

"No, Never! I have seen women go out into the country several miles for a load of green fire wood, made up into a large bundle, and weighing perhaps 150 to 200 pounds, which they carry on the tops of their heads. When they went out in the morning they were heavy with child. When they returned at night the bundle of wood was on their heads, the child on their back. The after-birth, if it does not come away of itself, is pulled away by some of their companions.

" 3d. Did I ever see any naked races, who had bad teeth, and bad blood or syphilitic taint, unless it had been brought to them. ?

"No, but the country now in some parts is in a frightful state, owing to the advance of civilization (?). "

I learn that in the interior of India where nudity prevails, the people generally do not know the meaning of any such thing as menstruation, and are true to the marriage relation, but near the coast where Europeans have come, partial dress takes place, and many of the women, sunk in poverty, are bought over into promiscuity of life.

12. **Vaginal Enemas** which can be taken by married people so easily and with somewhat less ease by the unmarried, are exceedingly important for cleansing and toning up the organs. An excellent plan is to use from two to four quarts of warm water while lying on the back, with the hips over a bed-pan or chamber. If the womb is hard and congested, the water should be as hot as can be borne, and it would be well to make two applications a day. Some have used many gallons of hot water at a time, and so relaxed the parts as to cause prolapsus. For *Inflammatory conditions*, ceruleo, warm from the sun when convenient, or warmed some what otherwise, is the safest and most effective thing to use. For *Leucorrhea* (whites), purpuro makes an excellent enema, as it combines the animating red and the antiseptic blue.

13. **The Second Change,** *in woman's life,* when menstruation ceases, generally occurs between forty and fifty years of age. This, as usually managed, often becomes a serious affair, affecting all the rest of one's existence. The blood not passing off in its regular channels, is frequently thrown back upon the internal organs in a way to form congested masses or tumors. To prevent its settling down in one place, the whole body should be well-animated by sunbaths or massage and hot foot-baths. All the extremities should be thoroughly warmed and frictionized, and the skin kept in a glow by rough towels or flesh-brushes. This will generally enable woman to pass her rubicon successfully, and to settle down into a peaceful life, with a general prospect of more years than a man, who has reached the same age, may look for. If not managed properly, this period may terminate a woman's life or cause a great deal of suffering afterward.

Having considered some of the leading principles with relation to marriage and family life, let us aim now to ascertain how all life can be ennobled; how knowledge can be simplified and brought to the comprehension of all; how government can be administered so as to give comforts and pleasures, and exalting influences to every human-being, and how the rasping, crushing, enslaving and degrading civil and social conditions may be abolished. It will be proper then to treat briefly of the correct development of cities, communities and states, as well as to suggest better pathway of language and human knowledge generally.

XIX. HOW TO LAY OUT A CITY

1. *There is not a city or village in the world in which the streets are laid out and named on scientific principles,* in consequence of which there is endless trouble in learning the names and locations and characters of streets. To give the name and number of a street should tell just what kind of a street it is, in what direction it runs, just what is its location, just how far north or south, or east or west it may be, as compared with any other location which may be named, and all this in a moment, without having to make any inquiries of anybody, in case a word has first been given as to the starting-point of the streets. Besides this, there should be such an absolute simplicity of system that a person may learn the name, location and character of every street in the city in ten minutes, whereas the streets of an ordinary city cannot usually be learned in a life time. The names should also be very brief as well as expressive. Think of the absurdity of using five or six words to give the name of a street, as *Rue de la Cour'd Auvergne,* Paris, or *Rue St. Andre des Arts,* Paris and others much worse. Addresses in the

old countries are often very complicated. When I address Prof. Alfred Russel Wallace, I have to say Waldron Edge, Duppas Hill, Croydon, Surrey, England; or Dr. Garth Wilkinson, I must say, 76 Wimpole St., Cavendish Square, W., London, England.

2. **Washington.** But even in our own country, where the streets have been systematized to a much greater extent than in Europe, we may find a sufficient number of absurdities. Take our beautiful city of Washington which aims to be a model city in its streets. There is such a street as B street, northwest on which a friend may live. You ask, where can that be located, and in what direction does it run? As it takes four words to give its name that ought to be enough to give a full description of it. Taking a map, you look in the north-western part of the city, as its name would signify, but find no such street. After a while you discover it off near the southern part of the city. But what does B Street North West mean, then? You come to the conclusion that its direction must be north-west and south-east. Studying the map again you find that the words pervert the whole matter, for the street runs east and west. To put north-west to it, then, is to tell a falsehood, as well as to make the name twice as long as it need be. You now wish to visit a friend on *V Street, North-west*, and you wish to know how many blocks you will have to travel: So, commencing at B, you say C is one, D is two, E is three, etc., through the whole series of letters, including F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, to V and find it is twenty blocks away. But what is the sense in using the cumbersome method of letters when we could just as well have numbers? If it had been put 2d street, instead of B street, North West. and 22d. Street instead of V Street North West, then, in a twinkling, you could subtract 2 from 22 and see that it is 20.

3. **Philadelphia.** Again, we will take Philadelphia. That is supposed to be a very systematic city; and, so far as calling each block a hundred numbers, they have done an admirable thing. You wish to find Greene Street. What kind of a street is it? In which direction does it run, north and south, or east and west or in some other direction? If it is parallel to Chestnut Street, how many blocks away is it? or how many blocks from the Delaware River is it, if it runs parallel with that stream? The very name should signify the whole thing, but the name is an arbitrary, useless thing, without a particle of meaning to it as a street.

4. *What* **a Momentous Thing** *it is to lay out a City and name its streets.* Being once laid out and built up, it is apt to retain its general paln for thousands of years, and millions of people must suffer for false and senseless methods that may be adopted, because not only must they

waste a great deal of unnecessary time in learning names and locations but have their health interfered with by a false arrangement of streets.

5. Many of the **Very Old Towns** of Europe and Asia which were founded in the dark ages have their narrow, filthy, crooked streets, which are mere paths, and still retain their imperfect conditions and high buildings that shut out the pure air and light. People find themselves in the midst of these imperfected conditions, and are too sluggish, too much wedded to the old, to appreciate the new and the true and so they remain. Buckle shows that when the Spanish physicians were formerly appealed to as to whether the filthy streets should be cleaned, they opposed the matter on the plea that their fathers did not clean them, and "their fathers were wise men and must have had good reasons for their conduct. Even the smell of which some persons complained was most likely wholesome. For the air being sharp and piercing it was extremely probable that bad smells made the atmosphere heavy, and in that way deprived it of some of its injurious properties." Some of our American cities seem to work on the same principle. The living spirit of progress, however, would demand that a city should have broad, beautiful, clean, well-systematized streets even if some of them have to be made over new.

I will now proceed to state some of the features which I deem absolutely necessary to a city which aims at perfection.

6. **Avenues.** First, the leading streets of the city should be broad and finely graded and kept, and should run north and south. These should be the principal streets for residences and should be known by the name of *Avenues.* Why should they run north and south? So that the sun may strike both sides of the houses every day. Remember that it has been demonstrated that there is three to four times as much sickness and death in the shaded room of hospitals as there is in those rooms which admit the sun, and remember that Pasteur has shown that shaded rooms become filled with bacteria and impurity. Besides this, houses which are built upon streets running north and south can easily have the rooms arranged so that the heads of beds can be toward the north, to harmonize with the magnetic currents of the earth. These avenues should be as much as 100 ft., in width, to allow a free movement of pure air, and as well as the beautifying and healthful influence of shade trees, which latter however, should not come too near the houses. These streets should be named 1st Ave., 2d, Ave., 3d, Ave., etc. But should these numbers commence at the western part of the city and count upward toward the east or vice versa? Commence at the side where there is some natural boundary, such as a river, lake or ocean and

then go east or west from that. Thus, suppose a city like New York were to be laid out. The North river lies about north and south, and the first street would naturally lie along its shore. This street, however, should not be called 1st, Ave., for the 1st, avenue should measure one block from the west side of the city, the 2d, Ave., two blocks, and so on, each name of the avenue signifying how many blocks it is to the western limit of the city. We could very properly give the name River Avenue to the river street, then 1st Ave. to the first street to the east of it, 2d Ave., to the second street and so on.

7. **Roads.** The streets that cross the avenues at right angles may be called *Roads.* Streets called roads in a city, then, should always be known as running east and west. They need not be so broad as the avenues, as buildings are not to be put directly on them, except, perhaps, in the most crowded business part of the city. These roads should, like the avenues, commence at some natural limit, and number up or down. Thus in a city like New York, the first street would naturally be at the south end of the city, and might be called Ocean Road. Then the first street north of that would be first road (or 1st R'd), the second street 2d, Road and so on. The 50th road would be 50 long blocks from the south end of the city, as the long blocks run north and south, and we should not have the trouble of saying East 50th or West 50th Road, as there is only one kind of 50th Road, and its houses, in this case, would commence numbering at the North River.

8. **Diagonal Streets.** A perfectly planned city must have something more than streets laid out at right angles, for when it is necessary to go in a direction diagonal to these, much time and labour would be lost in the round about way that would have to be travelled. Hence we should have occasional streets running, north-west and south-east, which may be called 1st Way, 2d. Way, third Way, etc., also occasional streets running north-east and south-west which may be named 1st Place, 2d Place, etc. Remembering these terms, one can always tell just which way a Place has its direction and just how a Way runs.

9. *But how are we to commence the streets of a city in case there is no body of water, to form a natural boundary to commence from?* In such a case we will have to establish some starting point for Avenues, either on the east side or west side of the proposed site, and some starting point for Roads either on the north or south side of the same. These points should be so far to the outside of the proposed town, that no streets will very soon be laid out beyond them. When such streets are laid out, however, an additional word will need to be added on only one side of the town either east or west for the Avenues, and only one side, either north or south, for *Roads.* Thus if the Avenues

commence on the west side of a town, and new Avenues are finally laid out beyond this commencement, they would be called first Avenue West, 2d Avenue West, etc., abreviated into 1st Av., W., 2d, Av; W., while if new Roads beyond the point of commencement should be opened, they should be called 1st Road north (or South) 2d Road North (or South), etc., North and South being signified by N. and S.

10. If the Avenues begin at the western side where there is a southern natural boundary, the Ways should commece on the same side, south, the Places commencing on the eastern side, south.

11. **The Numbering** of **Houses** should be undoubtedly be on the paln first invented by Philadelphia, of calling each block 100, that is, commencing each new block with a new hundred, even if the block before it does not complete its hundred houses. In this way we get the exact location on a street by means of every number. If we put the even numbers in the east side of Avenues and odd ones on the west side, as is done on Broadway, New York, we will give an additional clearness of perception as to locations, to the traveller. Our ideal city will have these numbers distinctly represented on every house, and not require a long search to find a number at all, as is the case in most of our cities. On every corner the names of Avenues, Roads, Places or Ways should be distinctly represented. On Roads, Ways and Places, it is not expected that houses will be built, excepting, perhaps, in the crowded business part of the town, but so far as they have numbered houses they should commence with units at the Boulevard and number upward until they reach the first Avenue, then with hundred after the 1st Avenue is crossed and upward until the 2d Ave., is reached, then with 200 at the 2d Ave., 300 at the 3rd Ave., and so on, placing the even numbers on the south side., the odd on the north.

12. **Explanation of the Model City.** Fig. 63 will represent the plan of the model city to the reader's eye and give a better understanding of what I have already said. The plan is suited to a location like New York in which the Hudson river forms a good commencing place for the Avenues on the west side, and the New York Bay a starting point for the Roads on the south side. On the west side I call the first street River Avenue, and on the south side, Ocean Road. Of course these names would be changed to suit different condtions.

It will be seen that every twelfth Avenue and every eighth Road is a very Broad street which we call a *Parkoid*, or *Parklike street.* These Parkoids are finer and broader than ordinary Boulevards, are 196 feet wide, and are just a mile apart.

The ordinary Avenues are just 100 feet wide.

The ordinary Roads are sixty-nine and one-seventh feet wide, or virtually 69 feet wide.

The blocks are 575 feet or about 176 metres long and 332 feet or about 100 metres wide. An alley 20 feet broad running length-wise through the middle of these blocks would leave 156 feet as the actual depth of each lot. Calling a lot 25 feet wide, each block would have 46 lots, or 23 on each avenue.

The diagonal streets are almost exactly five-sevenths or a little over two-thirds of a mile apart, and are formed by passing diagonally through the squares that the Parkoids mark out. These diagonals themselves form squares, the diagonals of which are just one mile. I do not think these diagonal streets should be more than 70 feet wide, as they will mutilate the form of the blocks if too wide.

The diagonal diameter of the square formed by Parkoids is a mile and three-sevenths.

The Roads are one-eighth of a mile apart and the Avenues one-twelfth, so that every two streets one passes in going north

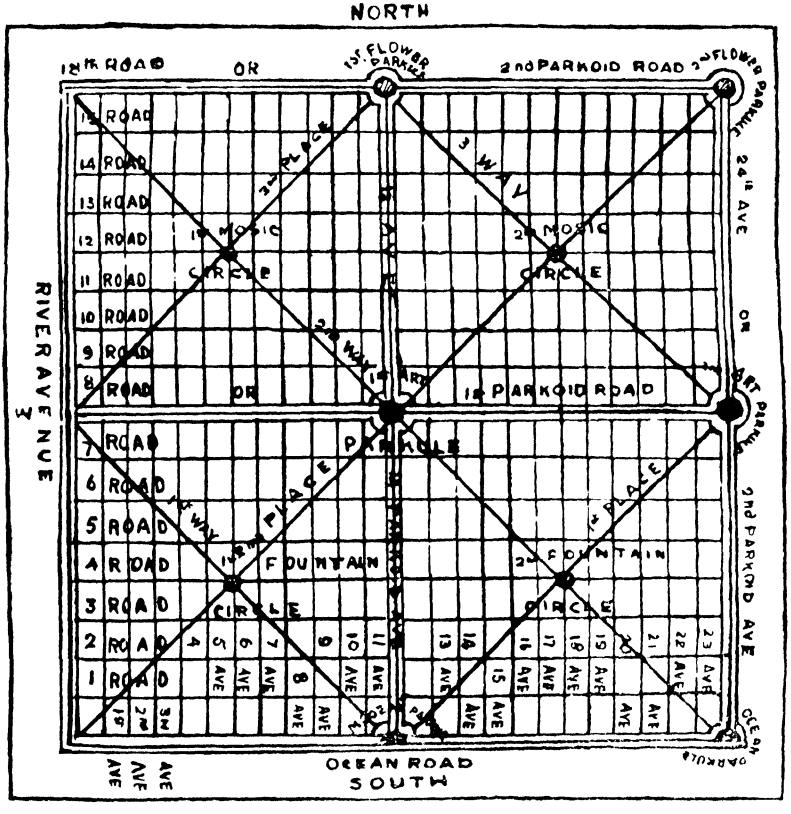

Fig. 63—A plan of a model City.

or south, and every three streets in going east or west, will average a quarter of a mile, the estimate for the ordinary streets,

however, being slightly less, on account of the un-common width of the Parkoids. Five long blocks with their ordinary Roads, lack about eighteen paces of being one kilometer.

13. **The Streets Self-Measuring.** It will be seen that, in whatever direction one may travel he may know just how far he has travelled, and just what part of the city he is in. Ladies, especially, are liable to get turned around at times in ordinary cities, but could not be lost in a city with the above plan. Thus if they were on an avenue they would know it by the width and general character, and if they should see the number 606 they would know it was on the east side of the Avenue, three doors north of 6th Road, or six long blocks from the southern end of the city, which would be three quarters of a mile. Going to the Road at the crossing they might see the name 8th Ave., which would show that they were eight short blocks or two-thirds of a mile from the west side of the city.

14. **Parkules and Circles.** It will be seen by the diagram, that there are numerous centres caused by the junction of the different streets. Being at one of these, a person can move in eight different directions toward any part of the city. The larger centers which are connected with the Parkoids we will call *Parkules*, or little parks; the smaller centers which are in the middle of the Parkoid squares we will call *Circles*. In this last I have taken a hint from Mr. A. K. Owen, who has made a plan of a city for his Co-operative Company, on Topolobampo Bay, Mexico. The Parkules can consist of a circular plot of ground 300 or 400 feet in diameter, laid off in lawn, flowers, shrubbery, sometimes with fountains, pavillions, works of art, and always with some benches where the weary traveller may rest himself. The street way around the parkule would widen the open space still farther, and all around in the near vicinity could be the concert halls, schools, libraries, family and provision stores and other important institutions and offices for the use of the community. In the center of one of the parkules, standing on a pedestal about six feet high, might be placed an artificial globe ten or fifteen feet in diameter, with the principal oceans, continents, cities, countries, lakes and ranges of mountains of the world distinctly represented thereon. This would be beautiful to look upon, and give a fine object-lesson concerning our planet to all the thousands of people who would be passing by it every day. At another parkule could be placed a planetarium run by clock work, a hollow globe illuminated at night, representing the sun, with the planets and their moons circling around it over the heads of the spectators. This would be a sublime object to look upon and would gradually lead people's minds farther out into the wonders of the

universe. At every parkule should be a fine large thermometer, a barometer, a hygrometer, etc., to encourage people to study nature. Our public authorities should do more to interest and elevate the people. There should be more music at the central points of a city. Even an Eolian harp for the winds to sound forth their sweet and soohing Notes would be better than nothing. The *Circles* could be arranged on a paln similar to the parkules, but some-what smaller and simpler.

15. *Is it the best plan to have one or more great parks off at one side of a city?* Not if a city is laid out as it should be. In our model city, every street is a continuous park, every home is in the midst of a park, and the wide avenues enable the people to breathe pure air. New York and Philadelphia have their great parks miles away from where hundreds of thousands of their people dwell. These, of course, are far better than nothing, but how much better would it be if these cities could have broad, parklike-streets instead of the narrow, crowded, impure and almost treeless streets, of lower New York, where human beings are crowded in cellars, in garrets, and everywhere, without any chance to gain the pure influences of nature. I believe that the cities of the future will entirely revolutionize the present conceptions of things. They will not lay out a Central Park at an expense of fifteen or twenty million dollars in a location where the majority of people will visit it only two or three times a year, but will spread a charm over a whole city, so that when they ride they will have an arcade of trees over them, a well carpeted lawn on each side of them, near which will be smooth side-walks, fringed in many places with flowers, pretty parkules and circles as places of beauty, rest and study, and every thing to entice people out under the open canopy of heaven, where dwell the foces of health and power.

16. **Objections.** I think that a small number of persons will speak of certain objections to the streets as I have planned them. 1st, some will say that the avenues and parkoids are too broad, it is a waste of land to take up so much room with streets. On the other hand, I answer that we cannot afford to have them narrower. It is a waste of health and life to shut out the pure air with narrow streets as well as a destroyer of the beauty of the thorough fares. Another class will say that the roads, ways, and places are too narrow to allow the freest circulation of air. To this I would answer that 70 to 75 feet for a street is not very narrow, but I would make as a principal point that these streets are not intended for residences, for by leaving the ends of the blocks all open and unencumbered by houses, we have an immense passage way for the breezees back of all the houses. Thus suppose the houses on the avenues are commenced thirty feet

from the street to give front yard room and that they extend about fifty feet back. This will take up eighty feet. Suppose the other side of the block does the same, 160 feet will be thus used. But the blocks are 332 feet in width, and subtracting 160 from that leaves 172 feet as an open passage way for the air behind the houses, and 160 feet in front if we include the front yards as well as the avenues. Considering now that the streets of our city run in all directions, and that we can get the air from the north, south, east, west, northeast, southeast, northwest and southwest, I should say that we would have a well-ventilated city, and that with good plumbing, sewerage and cleaning of streets we should have about the same kind of air that we have in the country. Some may object, that it would cost too much to have such finely-kept streets parkules and circles. Here is the money matter for ever coming in, the spirit of sordidness placing itself against health, beauty, and perfection. I am not saying that every community of settlers is able to have all these perfections at once, but they should set their standard high and work toward it. They will be saved the expense of large public parks, and if they will develop a complete and beautiful city, their property will become far more valuable even on a money basis, than in the miserably planned towns that are so common.

17. It will be seen that the **circles** come on every twelfth avenue, taking the sixth, eighteenth, thirtieth, etc., avenues, while the **parkules** come at the crossing of the parkoids, which takes place at the twelfth, twenty-fourth, etc., avenues, and on the eighth, sixteenth, etc., roads. The circles on 4th Road may be named 1st Fountain Circle, at 6th Avenue; 2d, Fountain Circle, at 18th avenue; 3d Fountain Circle, at 30th Avenue, etc., each of which is just a mile apart. The parkules of the eighth Road, may be systematized under the same name, thus, that on the twelfth Avenue may be called 1st Art Parkule; that on the 24th Avenue, 2d Flower Parkule, etc. Various pleasing names could be given to these, and it might be well to have some objects that answer to the name of the circle or parkule, thus a fountain for a fountain circle, some works of art and sculpture for an Art Parkule, etc.,

I have given, Fig. 64 a general plan for a parkule which a landscape gardener may improve on as much as he likes. The middle circle, 1, is 90 feet in diameter, and could be arranged into a circular bower, with vines spreading over the whole top and seats below. At one side of this could be a canopy for a brass band on summer evenings or for a speaker's stand. If a multitue are to be addressed, the circle 2 could be used also, and would hold several thousand people, as it is 180 feet in diameter, and could be used in connection with the bower, the latter

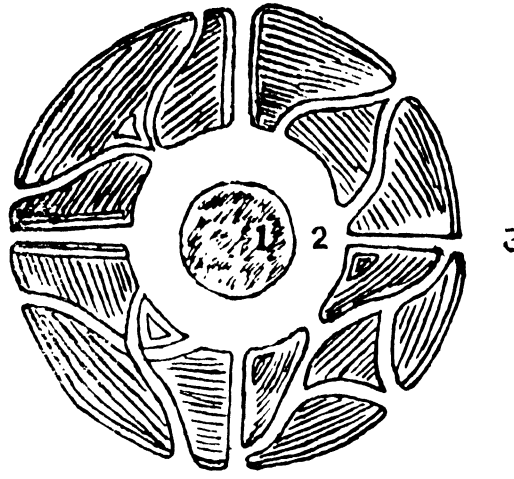

Fig. 64. A Parkule, diameter 350 feet.

being open at the sides. 3 is the roadway of about 100 feet in width which surrounds the parkule, after which comes a parkoid with its rows of shade trees, its centre roadway, its side walks bordered with lawn and trees, and its flowers and other ornaments at the ends of each block. Such a plan, when matured, with handsome homes would undoubtedly make the healthiest, most convenient, and most beautiful city in the world. The abomination of the ordinary horse-wearying, nerve-exciting, rattling, and banging stone pavement should be avoided, and the macadamized, asphalt or wooden pavment used.

Social Upbuilding, Including the Great Co-operative Movements and the Aggrandizement of Humanity.

1. In the foregoing we have been considering how much of the terrible drudgery of life and the stumbling blocks in the pathway of knowledge may be done away with. Hereafter we shall see how language can be made far more expressive, concise, simple and scientific, than the present languages of the world. We shall see that by the aid of phonotopy the various languages may be expressed in type far more briefly than by the ordinary method, and with such a scientific simplicity that the process of spelling and reading may be learned ten, or even twenty times as quickly as by the present English system, or rather lack of system. Think of the six million human beings ten years old and upward, in the United States, and a much larger proportion in many other countries, who cannot read and write. Think of what a world of knowledge is thus shut out from them, when, by a true system, simply learning the alphabet is learning to read. Oh, the criminality of the spirit in our educators which will waste so much of the lives of millions of the rising generation by forcing them to travel in the wretched old pathways of ignorance.

2. I wish now to take my reader briefly into a realm of this temple of knowledge which has a marvelous bearing on human life, both in its ante-natal and post.-natal conditions, namely, **Social Upbuilding**. By a true system of social life, mankind can be lifted into those harmonious conditions which beautify, ennoble and sweeten human existence and develop a grand manhood and womanhood. By a false social system, human beings are crushed to the very dust, the divine image of God in the soul becomes tarnished, and life becomes a prolonged wail, a veritable nightmare.

3. What constitutes a **Correct Social System**, and what, a false system ? It is one of the most remarkable phenomena of the human mind that a great majority of people seem to be quite unaware of the fearful conditions and tendencies of the present social fabric. In fact they are so blind to the whole matter they are apt to be provoked if you indicate that things are not right. The press will admit that there is great misery and degradation in the community, but they seem to have concluded that these sad conditions of human life are necessary evils and refuse to publish communications that go to the root of the matter.

They will show an apparent solicitude with reference to the suffering, and will suggest good things for the superficial relief of the same, but they are quite unable to diagnose conditions, and will not allow those who have gone more deeply into the subject, to use their columns. Physicians themselves perceive but dimly the fact that in a majority of cases, vice and crime result from a diseased physical system or from disheartening and perverted social conditions. Clergymen seem quite ignorant of the philosophy of human salvation, and are too ready to throw stones at the suffering poor whom they regard as good examples to prove their doctrine of depravity. The Rev. Dr. John Hall, of New York says: "Poverty is caused, 1st, by laziness; 2 d, by imprudence, and 3 d, by crime." The heartlessness of such remarks will become more obvious in the light of a few facts. New York alone sustains several hundred benevolent societies, which of course relieve a good deal of distress, and all the great cities of the world are full of these benevolent societies. Would it not be a thousand times better to strike at causes and bring about those equitable conditions which would exalt human nature and place men and women above all need of aid?

4. I wish to say at the start that I shall not aim at a mere sensation but at supreme truth; it being my greatest desire to have all mankind elevated and blessed, including the capitalist as well as the poor man. I would have it understood that every human being is a portion of divinity incarnated and has sovereign rights and possibilities of a God-Like development. I would have it understood that this world was formulated and swung into space for the use of man, and that it is a matter of absolute *justice*, not *charity*, that those social conditions should be established which shall see that every person has a due portion of this Divine inheritance. I would have it understood that wherever, in the whole world, there exists a nation or community which is full of poverty-stricken or degraded beings, the blame for this is not in the beings themselves so much as in the monstrous social and civil system which has crushed them down into such degradation. I would have it understood that every so-called civilized nation in existence, including America, has almost countless multitudes of men and women who are pressed to the very earth by burdens that take all the sweetness out of life and crush out all noble aspirations, until they too often become bestialised and morally perverted. Those persons who have no tears of sympathy, no deeds or thoughts of kindness for these suffering ones, are far gone in hardness of heart and selfishness of purpose. But so long have people been accustomed to the present false system of life that they have to come to think it correct, and that all the misery around them is a necessary matter. They do not see the terrific danger which is approaching, the gap between rich and poor ever widening,

while the quickened sense of human rights must have relief, or, like a mighty volume of steam when pressed down, will cause an explosion which shall shake the whole land to its centre.

5. I wish now, as briefly as possible, to present some of the facts of human society as it is to-day, and then to show, as proved by actual experiment, how this same society may be lifted up, beautified and perfected. I will quote from Henry George's *social problems*:

"Says the New York *Tribune's* 'Broadway Lounger,' incidentally in his chatter: Judge Gedney tells me that on the first of this month he signed no less than 250 warrants of dispossessions against poor tenants. * * * The first of May is, of course, the heaviest field-day of the year for such business; but there are generally at the beginning of every month at least 100 warrants granted. And to those who fret about the minor miseries of life, no more wholesome cure could be administered than an enforced attendance in a district court on such occasions. The lowest depths of misery are sounded.' Judge Gedney says, too, that in the worst cases the suffering is more generally caused by misfortune than by idleness or dissipation.

"Behind all this, social disease, criminals, paupers, prostitutes, women who abandon their children, men who kill themselves in despair of making a living, the existence of great armies of beggars and thieves, prove that there are large classes who find it difficult, with the hardest toil, to make an honest and sufficient livelihood. 'There is,' incidentally said to me recently a New York Supreme Judge, a large class — I was about to say a majority of the population of New York and Brooklyn—who just leave, and to whom the rearing of two more children means inevitably a boy for the penitentiary or a girl for the brothel.' A partial report of the charitable work in New York city, not embracing the operations of a number of important societies, shows 36,000 families obtaining relief, while it is estimated that were the houses in New York city containing criminals and recipients of charity, set side by side, they would make a street twenty-two miles long. One charitable society in New York city extended aid this winter to the families of three hundred tailors. Their wages are so small, when they do work, that when work gives out they must beg, steal or starve.

"Nor is this state of things confined to the metropolis. In Massachusetts statistician of the labour Bureau declares that among wage-labourers the earnings, exclusive of the earnings of minors, are less than the cost of living; that, in the majority of cases, working men do not support their families on their individual earnings alone, and that the fathers are forced to depend upon their children for from one-quarter to one-third of the family expenses, children under fifteen supplying from one-eighth to one-sixth of the total earnings.

"In Pennsylvania, where a similar law against child-labor exists, I read how, forced by the same necessity, the operatives of a mill have resolved to boycott a storekeeper whose relative had informed that children under thirteen were employed. While in Canada last winter, it was shown that children under

thirteen were kept at work in the mills from six in the evening to six in the morning, a man on duty with a strap to keep them awake.

Illinois is one of the richest states in the Union. It is scarcely yet fairly settled, for the last census shows the male population in excess of the female, and wages are considerably higher than in the more eastern States. In their last report, the Illinois Commissioners of Labor Statistics say that their tables of wages and cost of living are representative only of intelligent working men, men who make the most of their advantages, and do not reach the confines of that world of helpless ignorance and destitution in which multitudes in all large cities continually live, and whose only statistics are those of epidemics, pauperism and crime. Nevertheless, they go on to say, an examination of these tables will demonstrate that one half of these intelligent working men of Illinois are not even able to earn enough for their daily bread, and have to depend upon the labor of women and children to eke out their miserable existence.'

"The 'tramp' is known from the Atlantic to the Pacific. Behind him, though not obtrusive, save in what we call hard times, there is, even in what we now consider normal times, a great mass of unemployed labor, which is unable, unwilling, are not yet forced to tramp, but which bears to the tramp the same relation that the submerged part of an iceberg bears to that much smaller part which shows above the surface.

"It is clear that the inventions and discoveries which, during this century, have so enormously increased the power of producing wealth, have not proved an unmixed good. Their benefits are not merely unequally distributed, but they are bringing about absolutely injurious effects. They are concentrating capital, and increasing the power of these concentrations to monopolise and oppress; are rendering the workmen more dependent; depriving him of the advantages of skill, and of opportunities to acquire it.

"It seems to me impossible to consider the present tendencies of our industrial development without feeling that if there be no escape from them, the Chinese philosophers are right, and that the powers we have called in to our service must ultimately destroy us. We are reducing the cost of production; but in doing so, are stunting children, and unfitting women for the duties of maternity, and degrading men into the position of mere feeders of machines. We are not lessening the fierceness of the struggle for existence. Though we work with an intensity and application that, with the great majority of us, leaves time and power for little else, we have increased, not decreased, the anxieties of life. Insanity is increasing; suicide is increasing; the disposition to shun marriage is increasing. We are developing, on the one side, enormous fortunes, but on the other side, utter pariahs. These are symptoms of disease for which no gains can compensate.

"In all our cities there are, even in good times, thousands and thousands of men who would gladly go to work for wages that would give them merely board and clothes, that is to say, who could gladly accept the wages of slaves. As I have previously stated, the Masschusetts Bureau of Labor Statistics and the Illinois Bureau of Labor Statistics both declare that, in the majority of

cases, the earnings of wage-workers will not maintain their families, and must be pieced out by the earnings of women and children. In our richest states are to be found men reduced to a virtual peonage—living in their employer's houses; trading at their stores, and, for the most part, unable to get out of their debt from one year's end to the other. In New York shirts are made for 35 cents a dozen, * and women working from fourteen to sixteen hours a day average three dollars or four dollars a week. There are cities where the prices of such work are lower still.

"As a matter of dollars and cents, no master could afford to work slaves so hard and keep them so cheaply.

"Human beings are overworked, are starved, are robbed of all the light and sweetness of life, are condemned to ignorance and brutishness, and to the infection of physical and moral disease; are driven to crime and suicide, not by other individuals, but by iron necessities, for which it seems that no one in particular is responsible."

6. The following is from Victor Hugo's brilliant pen in his address to the rich:

"What happiness to be ridden and beaten and starved! What happiness to work for ever for bread and water! What happiness to be free from the delusions that cake is good and life other than misery! Was there anything more crazy than those ideas? Where should we be if every vagabond had his rights? Imagine every body governing! Can you imagine a city governed by the men who built it?

"The human race has been made by you slaves and convicts. You have made of this earth a dungeon. Light is wanting, air is wanting, virtue is wanting.

"The workers of this world whose fruits you enjoy live in death. There are little girls who begin at eight by prostitution, and who end at twenty by old age. Who among you have been to Newcastle-on-Tyne? There are men in the mines who chew coal, to fill the stomach and cheat hunger. Look you in Lancashire. Misery everywhere. Are you aware that the Harlech fishermen eat grass when the fishery fails? Are you aware that at Burton-Lazers there are still certain lepers driven into the woods, who are fired at if they come out of their dens? In Peckridge there are no beds in the hovels, and holes are dug in the ground for little children to sleep in; so that, in place of beginning with the cradle they begin with the tomb.

"Bear in mind that a series of kings armed with swords were interrupted by Cromwell with the axe.

"Tremble! The incorruptible dissolutions draw near; the clipped talons push out again; the torn-out tongues take to flight, become tongues of flame scattered to the winds of darkness and they howl in the infinite. They, who are hungry show their idle teeth. Paradises built over hells totter. There

* This is possibly a typographical error for 85 cents a dozen in Mr. George's work.

is suffering, and that which is above leans over, and that which is below gapes open. The shadow asks to become light. The damned discuss the elect. It is the people who are on-coming. I tell you it is man who ascends. It is the end that is beginning. It is the red dawning on Catastrophe.

"Ah! This society is false. One day, and true society must come. Then there will be no more Lords; there will be free, living men. There will be no more wealth, there will be an abundance for the poor There will be no more masters, but there will be brothers. They that toil shall have. This is the future. No more prostration, no more abasement, no more ignorance, no more wealth, no more beasts of burden, no more courtiers—but **light.**"

7. Those who declare that religion is the great necessity of the poor should consider the following words of a Socialist, as given by Mr. W, H. Mallock:

"'What Mr. Foreman thinks,' said Mrs. Harley, 'is this: He thinks that so long as their bodies are treated as they at present are, to work for their souls is a hopeless, is even a ridiculous task. How, he asks, shall they be pure and temperate, how shall they have any of the virtues which good Chiristains price, so long as they are housed like pigs and fed worse than pigs—so long as they have no knowledge and no leisure, and nothing from their childhood that so much as suggests happiness, except drink, and things worse than drink? How shall we tell them to be clean when they have only sewage to wash in?

The following is from Carlyle:

"British industrial existence seems fast becoming one vast prison swamp of reeking pestilence, physical and moral—a hideous living Golgotha of souls and bodies buried alive; such as Curtius' gulf communicating with the nether deep the sun never shone upon until now. Thirty thousand outcast needle-women working themselves swiftly to death, and three million paupers rotting in forced idleness, helping the needle-women to die These are but items in the sad ledger of despair."

8. Spurgeon says there are 6,00,000 drunkards in London and compares that city to Sodom. The most oppressed countries are driven to liquor for consolation. Ireland consumes alcholic drinks annually to the amount of over fourteen million pounds sterling, and little Belgium in 1881 consumed spirits, wine and beer to the value of 475,000,000 francs. The suicides rose from 54 per million inhabitants in 1848 to 80 in 1880. The lunatics advanced from 720 per million inhabitants in 1846 to 1470 in 1881.

9. The following statistics are given by Mr. Albert K. Owen, in the *National view*, of Washington:

"The Landed property of England covers 72,600,000 acres. It is worth $. 10,000,000,000, and yields an annual rent, independent of mines, of $ 330,000,000. One-half of this property is held by 7,400 persons. In fact, six hundred peers own nearly one-fifth of the kingdom, or 14,000,000 acres,

worth $.2,000,000,000, and with an annual rental of $.66,000,000. The population of England is 35,000,000. As bad as this is, in Ireland and Scotland it is worse. Scotland is the paradise of the peers. The county of Sutherland contains 1,299,253 acres, of which the Duke of Sutherland owns 1,176,343. The population of the county is 34,317.

"In London, March 19, 1887, there were exclusive of Lunatics in Asylums, patients in small-pox and fever hospitals, and vagrants, 103,714 paupers officially reported in her care; and it is said that some 48,000 helpless distressed vagrants hide away in her dens and slums; 60,000 families, or probably 240,000 souls, manage to eke out an existence in her cellars; 20,000 saloons are supported by 600,000 declared drunkards; 80,000 women are driven to prostitution, and 250,000 sewing women in London get but $ 1.50 a week. What could be more appalling?

"The manual labourers of England add billions of wealth every year to the nation, and they are homeless, tax-burdened, rent embarrassed, interest-ridden, half-starved, shirtless; and their bodies mortgaged for city, corporation and national debts.

"In France you will find the people in the country better off, because there are more owners of the land than in England, and those who own the farms mostly work them. But in Paris we find 125,000 paupers receiving aid annually. As free as light and air are, there are 27,000 families in Paris inhabiting apartments having no other opening than one door. It cost France $. 60,700,000 last year to keep the city going. Over $. 4,000,000 of this was for keeping the poor from starving, and a great part of this is a tax collected from every vegetable, egg, fish, quart of liquor, pound of meat, etc., which enters the city. In Paris the paupers are 1 to 18 of the population; in London 1 to 30. In Paris the suicides are 1 to 72; London 1 to 175; New York, 1 to 169. In Paris there are 180 families, are about 500 persons, living in one house. This rookery is called. "The house of the Grace of God."

Berlin has an annual budget of above 15,000,000; 100,000 of her citizens live in cellars and vice is probably carried on to a greater extent and depth than in any other city in the world.

When we come to the United States, we find the results of the political management of public affairs a failure, a most deplorable failure. Two and one-half per cent. of the population own one-half of all the wealth. There are mortgages on the farms of ten western States amounting to $ 1,200,000,000.

During 1887 there were 884 strikes, and up to April first of 1888 there have been hundred more. Those of 1887 involved about 500,000 employees, and the loss was 13,500,000 in wages; and 10,000,000 days' labor were worse than lost to the country. We have the result—wages on the average reduced 10 per cent. — a general feeling of insecurity for property—employees and employers more than ever antagonistic, and each watching an opportunity to ruin the other.

10. The following note is also given by Mr. Owen in his *Integral co-operation*:

"Of Naples' 495,000 population, 350,000 live underground in noisome cellars which extend far back from the street. Crime is so rampant that in many thickly populated quarters of the city highway robberies are of frequent occurrence in broad daylight. The natives feel that the world owes them a living, and they are going to get it. Defending the Criminals gives occupation to 11,000 Lawyers of the Italian School, who work for fees ranging from five cents upward."

11. Thus far I have shown but a small part of the great shadow of oppression and poverty which darkens the world under the false competitive and selfish systems of the day, but enough has been presented for thoughtful minds.

12. But another great shadow is often cast over our dear, distressed humanity by the way the erring are treated by our judges and public institutions. European courts, being still governed by old ideas, are expected to be severe, but Americans profess a greater sympathy for their fellow-men, and an American judge who takes a poor, ill-born, ill-reared, half-starved fragment of humanity, and, for some petty offence, blasts his life by sending him to the penitentiary for years, is far more criminal than the one he thus deals with. More criminal, I say, for the judge has been reared under more favourable circumstances, and should have made it the business of his life to study in to the principles of justice as applied to the perverted ante-natal and psychological conditions of his subjects.

13. I will quote the account of a scene at a court of justice—or rather too often a court of injustice—in New York, and another scene in Chicago, as given in *pen pictures*, by Cynthia Leonard:

THE TOMBS, NEW YORK CITY.

"It is ten o' clock on Saturday morning. The judge occupies his seat of honor and the court room is filled to overflowing. On the left of the judge is a small place enclosed with a railing, where the women friends of the prisoners are seated. Some are old and infirm, others younger, with babies and small children, who look thin and careworn; a few stout and matronly; women young and fair to look upon, young girls, some scarcely in their teens, of all nationalities. A prisoner's name is called, and a sad-looking boy is brought forward by a big burly man. He looks up timidly, and answers in a feeble voice to his name.

"'You are accused,' said the judge of stealing a wagon hammer. Are you guilty or not guilty?'

"'Guilty, your honor,' he said tremblingly.

"'Have you any one here to defend you?' asked the judge.

"'No one, sir,'

"'How old are you?'

"'Fifteen years Sir.'

"'Have you a home?'

"'No sir. I stop at a five-cent lodging-house.'

"'Then you have no parents?'

"'No sir, not as I knows of.'

"'Have you any employment?'

"'No, Sir; I used to sell papers, but got sick and ain't got no money to buy none now.'

"'Why did you take the wagon hammer?'

"'I wanted to sell it for old iron to get suthin' to eat.'

" Calling the prisoner by the name the judge said: 'you are sentenced to the penitentiary for one year.'

" The poor lad was escorted from the room, looking the picture of despair. There was no one to mourn for him.

" The second prisoner is called and the same questions asked.

"'You are accused of stealing a bridle; are you guilty or not guilty?' 'Guilty, your honor.'

"'Have you a home?'

"'Yes Sir; I live with my grandmother.' 'How old are you?'

"'Sixteen years, Sir.'

"'Have you a business, or are you employed in any way?'

'I have been in a grocery, but the grocer wants a smaller boy now, and I can't find anything to do.'

"'Speaking his name, the judge said solemnly: 'You are sentenced to prison for two years.'

" A moan of bitter anguish is heard, and the old and feeble grandmother becomes wild with grief, and is rudely dragged from the room by the officers in charge, while she cries, 'Oh! my poor, poor boy! Who will care for your poor old grandmother now?' and sobs of anguish well up from her bruised heart.

" The third prisoner is the oldest child of a mother who presses a nursing babe to her breast as she holds her breath in painful suspense as the name of her darling is called. Great drops of sweat stand out on her forehead; and a wild appealing look follows the poor lad as he is led down the aisle to face the judge. He is not an ordinary-looking boy. His carriage is erect, his head is well-shaped, and his features are strong. His face is really handsome, and there seems to be no fear or dread about him. He is tall for his age, and has an aristocratic bearing.

"'You are charged with stealing a set of surgical instruments; are you guilty, or not guilty?'

"'I am not guilty, your Honor.'

"'Have you any defence to make?'

"'Yes sir.'

"'Who is your attorney?'

"'I have no attorney, sir. I am innocent and cannot afford counsel. I was hired to clean the doctor's office. Several people came in and out, and the

doctor charges me with taking the missing instruments, which, I assure you I never saw.'

"A vicious looking man of thirty or more testified that he saw him take the instruments.

"'You are sentenced to four years in the Penitentiary,' exclaimed the judge in solemn tones.'

"A flush crimsoned the face of the prisoner, and was followed by a death-like pallor.

"'But, your honor,' he exclaimed, appealingly.

"'Remove the prisoner,' was the reply, and he was taken away, trembling in every limb.

"One fearful sob, and his mother fainted dead away. One of the younger women rescued the poor baby, and followed when the officers carried the unhappy mother out of the court-room.

"Several more prisoners departed in much the same way—all less than twenty-two years old. Two or more had employed attorneys, and were going to court to defend themselves.

"One young man, whose handsome dark face and peculiar name denoted Spanish descent, responded to the judge in clear musical tones, though with an expression of doubt on his countenance, 'Not guilty, your honor!'

"His counsel tried to explain that his client did not steal the watch from the pawnbroker. A horse running away when he was in the shop caused a commotion; he went out (with the watch in his hand) to see what was the trouble, and the pawnbroker had him arrested.

"'That will do,' said the judge. 'That is easily understood, I sentence you to five years' hard labour in State's prison.'

"A very young and extremely pretty woman had been watching the entire proceeding with an intensely anxious look on her pale and tear-stained face. When she heard the sentence, she fell to the floor in a swoon. Her condition plainly demanded tender care, but she was given the same rough treatment that had been extended to the others.

"A look of wild despair was on the face of the prisoner as he disappeared from view.

"I followed the young woman to the vestibule, where she revived. 'Oh, my Franco! my poor Franco! he could get nothing to do to earn a penny honestly, and he did it to make me comfortable. He loved me so he would do anything for me. Oh, he tried so hard to be good and do right, but we were starving. Oh! I have no home now, nowhere to go; they will not have me in the hospital until next month, and I am not strong enough to work. We were so happy in all our poverty. Oh, God! Oh, God! where shall I go? What shall I do? My poor Franco struggled so hard to keep bread in my mouth. Yes, it was for me and his child that he took the watch. He was desperate. Now he must go to prison. When he comes out his wife, and little child will be

dead! Again she became quite unconscious, and was sent to a hospital. I did not return to the court-room, though the examination had but fairly begun.

"Oh, liberty! Oh, Justice! Why do you always punish the helpless and allow the powerful criminal to commit shocking crimes, unmolested? Are greedy contractors fit to have the guardianship of prisoners?.

"Scene first is in the large hall of justice in the County Court House on the north side of the river in the city of Chicago. It is ten o'clock on Saturday morning, and there are at least twenty prisoners awaiting examination. It is a peculiar and markedly impressive scene as all of the prisoners are old and some of them very infirm. The usual ceremony of opening a court is completed. Spectators fill the room, and the name of prisoner is announced. A tall, well-built, though somewhat emaciated man slowly approaches the stand. There is dignity and uprightness in his manly bearing. His head is well poised, finely shaped and covered with thin, flowing, wavy white hair. A high, intellectual forehead slightly over-shadowes his finely cut features. The mouth is firm, the chin strong and closely shaven. The most marked features are his large dark-grey eyes, which he turns upon the judge with a look of patient endurance. He responds to his name in feeble accents; the hollow cough that succeeds tells the painful story that consumption has fastened upon his lungs. The judge with a show of dignity says: 'You are accused by your son-in-law, John Smith, of being insane. What have you to say?' 'Nothing, your honor, nothing.' There is an entire absence in the court room of defending attorneys. Only for the prosecution do the legal advisers appear on this occasion. The poor old prisoner is cross-questioned and answers in a correct and dignified manner. At length the judge says in a solemn tone, calling the prisoner by name: 'You are pronounced insane, caused by old age, and will be conveyed to the Cook County Insane Asylum.' His accuser, who looks like a born butcher, smiles sarcastically, saying, 'Good-bye, old man. Good luck to you.' And with a derisive laugh he leaves the room. The prisoner bows his head in meek submission, while tears are coursing down his cheeks, and clasping his hands in despair he cries,'Oh! my poor daughter—my poor, poor child!' and he is led into an inner room. The second is called. The first name is Marguerette. I do not recollect the other. The face and form are of a shriveled and shrunken woman, extremely small in stature, with piercing black eyes and iron-gray hair. Her clothing is clean, carefully and very much mended; her knitting is in her hand, while she listens to what the judge is saying to her. She is nervously winding round and round the ball of yarn attached. 'What have you to say?' queries the judge, when the charge is stated. She looks startled and pained. 'What shall I say? Mr. Shudge. What shall I say?' and she heaves a heavy sigh, 'I shall say dat I am not well enough to wash and scrub and attend to de fires; de schilders is all grown too big to need me more. I shall say that I am no more wanted, as de schilders can do all dat I can now. I am old and useless, and my son-in-law do not want me any more.' 'Well,' replied the judge, 'you are pronounced insane and will be conveyed to the 'Cook County Insane Asylum.' Her wild hysterical wail sends a great throb of pity and sympathy

through the room. 'O Got! O Got! I have loved dose schilders so, I have carried dem in dese old arms,' holding up her shrunken bony arms, 'I have brought dem back to life, when dey seemed dead; I have worn out my life for dem and der mudder, and now I must go to de county poor house and be called insane. No one dat I ever saw before to kiss grossmudder goot-night.' She tears the hood from her head, her face grows darker as the iron-gray hair falls about her, while she throws herself upon a bench in a paroxysm of grief. Two strong arms lift her up and drag her to another room. And now the scene of horror continues. There are more men than women—some bear their fate heroically, others become furious with anger and show signs of violence. One says, in reply to the judge's question, 'They have all my property and my money and have tried to drive me mad. I must be insane to give all my worldly valuables to such ungrateful children.' He is sentenced to the County Insane Asylum as are all the others. Oh, such a pitiful sight! Fathers and mothers who have given their lives for their children, children who love more the stipend it costs to keep them the rest of their waning lives than they do the loving parents who bore them, whose flesh and blood they are. Oh! family ties! Oh! blunted filial affection! Oh! Christian civilization!"

14. The wiser future will abolish penitentiaries and have the workhouse, the hospital and the school in their place. Crime occurs oftener than otherwise from a diseased brain or body, or from bad external conditions, and the criminal, in all such cases, must be treated like any other diseased person by clear-headed, intuitional physicians who know how to apply the fine forces to the subtle causes of disease.

15. Does the reader say I have been presenting dark pictures of human life? But I am no pessimist, and I have simply presented the shadowy side of things that we may all the better realize the conditions and the fearful tendencies of the social life of the day so as the better to reform our methods and prevent the ruin which is impending over us. Too many nations have already gone to ruin and almost to oblivion by having enormous wealth and debasing luxury in the hands of the favoured few and starvation and slavery on the part of the many. I will quote the following important items:

"The eloquent Patrick Henry said: 'We can only judge the future by the past.' Look at the past.

"When Egypt went down three per cent. of her population owned ninety-seven per cent. of the wealth. The people were starved to death.

"When Babylon went down two per cent of the population owned all the wealth. The people were starved to death.

"When Persia went down one per cent. of the population owned all the land.

"When Rome went down 1,800 men owned the world.

"For the past twenty years the United States has rapidly followed in the footsteps of these old nations. Here are the figures:

" In 1850 capital owned thirty-seven per cent. of the nation's wealth.
" In 1870 the capitalists owned sixty-three per cent.
" In 1880 they owned seventy-six per cent.
" Just think of it ! Two millions owned three-fourths of the wealth of fifty millions."

But now 250,000 people have got into their hands far more than one-half of what 65,000,000 people have produced.

16. The writer might have mentioned China as having pretty nearly attained to the starving to death era toward which all nations under the present false systems are surely tending. It is stated that coolies there work in foreign families for $3.50 a month and board themselves, that farmers work for twelve dollars a year, while females consider themselves well off when they get 50 cents a week. When crops are a little deficient, millions will sometimes starve to death. A Chinaman boasts of how few crimes his countrymen commit. But this negative excellence comes from the fact that his people are in a sleep, almost the sleep of death, the life being crushed out of them. And yet they would be an excellent people, under good conditions.

17. Let the wealthy for the sake of their own families, who are liable to be tempted too far in the pathway of luxury, dissipation, and the vanity of power; for the sake of the dear suffering world around them whose lives are sad and uncertain; for the sake of developing a beautiful and harmonious humanity; for the sake of their own future peace and safety, be liberal in every work for human upbuilding; be just toward others with less money instead of building up a monopoly to crush them; be just by being willing to pay even extra taxes on their money and possessions, and especially be generous in helping co-operative action in connection with others of less money, so that the poor may be encouraged and be able thus to work for themselves. A lifetime of money-making is apt to lead away from humanitarian movements, but there are some rare spirits so noble as to realize their responsibilities before high heaven and to work for the good of all. The longest headed course, both for this world and the next, is to bless the poor and the suffering. What multitudes find it a dreadful battle to gain a livelihood for themselves and family, especially as labor-saving machinery is doing the work of many men and throwing them out of employment, and if they find the wealthy hard and selfish toward them, they are liable to become desperate and foment an open revolution. They know that no mortal man has any moral right to a million dollars, while they, working equally hard, are almost crushed. I quote the following from a speech by the Hon. Alfred Taylor:

"To the owners of mortgaged homes I appeal. In the language of the Roman plebeian who began to ask questions like the wage-workers of our day: 'Why is it we toil to make sandals for others, while our own feet and those of our loved ones are often naked and cold?'

" 'Why is it we build beautiful palaces which we never occupy, while our own dwellings are miserable hovels and afford us small protection from the heats of summer and the cold blasts of winter?'

" 'Why do our fingers weave the purple and fine linen to clothe those who do not work, while our own forms and those of them dearest to us in life are shivering in rags?'

" Wealth can never comprehend the suffering of the poor. Marie Antoinette, when told that the fishwomen were revolting because they had no bread, replied, in her confused ignorance, with the insult, 'Why don't they eat cake?' When Paris was in the wild tumult the king played locksmith to avoid the danger, and wrote in his diary, 'Nothing particular happened to day.' Yet they had moved the foundation of his monarchy. Charles I., with contempt for the people, said: 'France needs mowing,' and asked, 'What can these Round-heads do?' and he told them to go and eat grass. In one week from that time they were carrying his head on a pole. Rousseau wrote a book pleading for honesty and purity in the French Government, which was treated with contempt by the aristocratic class. Carlyle says the second edition of that book 'was bound in the skins of the sneering aristocracy.'

" In the spring the assessor appears: 'Mr. Bondholder, you are living in leisure and luxury, while the farmers are behind the plough. What property have you for the taxtion? 'Nothing, Sir, I am exempt except $ 200 in Kansas, which coveres my personal property, and the balance, being bonds, are not taxable.' 'Yes, but you pay a state and road tax?' 'Not a dollar, sir. 'Yes, but you enjoy the benefits of law and civilized society.' 'Very true; but it costs me nothing.' 'You surely pay for the education of your children?' 'Not a cent, Sir; I send them to the public school, which is supported by a tax upon the farmers, mechanics, and business men. I don't like such impertinent questions. This would be the best-governed country the sun ever shone on if it was not for your communistic green-back tendencies.' The above is one of many specimens of class legislation."

18. The Hon. Daniel P. Baldwin says: "Statistics prove that 250,000 persons own eighty per cent. or four-fifths of the wealth of the country, and that they pay but one-fifth of the taxes. The people who own the balance of the wealth, or twenty percent. of it, pay four-fifths of the taxes.

The latter class is what is known as the submerged class, the working people of the country. The lecturer thought there was something wrong in a system that at one end turned out every decade 50,000 tramps, and at the other end a host of multi-millionaires." By this abominable system of things, the poorer classes who often have a life-and-death struggle to keep head above water, pay proportionately sixteen

times as much as the wealthy, who by any system of equity should pay all the taxes. What a moral debasement and lack of real manhood for the wealthy man to throw his own burdens upon his poor struggling neighbours to bear.

19. I have thus given positive and startling facts to show that THE LEADING NATIONS OF THE WORLD ARE IN THE PATHWAY OF RUIN, from the fact that the rich are swallowing up the poor, and the selfish and the powerful are destroying the weak. These facts are shown that many once mighty nations have disappeared from the world from the same cause, and it could be shown that still other nations, like China, India, etc., which were once luminous with their wisdom and great in power, have crushed the life out of their people to such an extent that for centuries they have been resting almost in a death sleep. Oh! the shallowness of statesmen who think the only way to deal with the vast volume of starving, despairing multitudes is to increase the police force and the armies, so that when their agony becomes no longer endurable and they burst forth in open revolt to get something to eat, they are to be run down and bayoneted and shot and shut up in abominable dungeons! And does not nearly every paper in London and New York send up a howl against this distressed people, hounding on the officers and judges into still greater sternness, and, although encouraging various benevolent movements of a temporary character, never once suggesting any methods for removing the cause by means of social conditions that will develop the people into a happy manhood and womanhood? The Rev. Dr. John Hall, of New York, with a salary of $. 20,000 a year, a fine personage and other perquisites, preaching in a million dollar church to an audience, said to be worth 200 million dollars will naturally look down with scorn upon the poor; but Christ himself advocated the use of property in common, ever preached against riches, and always dwelt among and sympathized with the poor.

20. **Kindness and encouragement** *are incomparably more powerful to control human beings than rude force and severity*, a fact that all despotisms are totally unacquainted with, and which even republics are but dimly conscious of. The old theologies ever portraying a harsh and wrathful Deity have tended to harden those who come under their influence. Even the great Carlisle could talk thus of the Irish, — "Ye see thee Airish may have their grievences, and they have been hairshly treated but I tell you, sairs, before I'd listen to one waird from them, I'd just with sword and gun, shoot and cut and hew them a 'until I'd brought them to respect human life, and give up their murdering. Then I'd listen to them." In other words this philosopher would teach the Irish

to give up their murdering, by becoming an abominable muderer himself. The old brute force method of thrashing the pupils of a school has been done away with in all the leading American cities, and it is found that gentler methods are very much more successful, as the students study much better and behave much better by appealing to their self-respect and love.

21. Of course we must have **Law** and **Order**, but in dealing with disorder we must correct *causes* and not make matters worse by savage processes. Our public authorities should of course be firm but fatherly and tender. If a person has to be confined he should have the true teacher and the true physician to reach down into the perverted conditions of the subject, and not be left under the influence of some lawless associates whose psychological power will make him worse then ever. *All correct punishment must be remedial*, a principle which seems hardly to be dreamed of by our prison managers. Society carries out a depressing system that develops paupers and criminals, and then deems it right to stamp them under foot. I quote the following from Henry George :

"Take the revelations made this winter before a legislative committee of the barbarities practised in New York state prisons. The system remains unaltered; not an official has been dismissed The belief that dominates our society is evidently that which I find expressed in a journal of civilization, by a reverend professor at Yale, that the criminal has no claims against society at all. What shall be done with him is a question of expediency.

22. The above barbarous sentiments from the Yale professor seem to come from a belief that a perfect God has some how created a very imperfect set of human beings, or at least beings who were so imperfect as to become depraved and devilish, and hence they should be treated in a contemptuous manner.

23. Does my reader consider me sensational when I say all the leading nations under the present system are moving in the pathway of ruin ? This is not sensational but absolutely truthful. If, as the facts show, drunkenness, lunacy and pauperism are increasing, the gap between rich and poor opening wider, the wages of the labourer, while, perhaps, not absolutely decreasing, are *relatively* so, and in many cases absolutely so, what is all this but a nearing of the end ?

" During the time that the population of the United States has doubled," says Mr. A. K. Owen, " the idiots, the deaf and dumb patients, the convicts, the inebriates, and those who are dependent upon the charities for protection shelter and food, **have increased eight-fold**!" But am I saying that England, France, Germany and the United States are to continue under the present system until they are over-whelmed

in ruin ? Not at all. In all directions the people are rubbing their eyes and waking up from their stupid perception of human rights, and beginning to see the real state of things. The various nations will first aim at a republican form of government. This is a step toward national freedom and salvation, but as now constituted is only a halfway house. The talk about "inalienable rights," "equality," "freedom," is all beautiful and good, but so long as no way has been devised of carrying these principles into practical effect, the long headed, the cunning and the selfish, will rob and enslave the people and prevent the grand development of which mankind is capable.

24. Now I seem to hear of a chorus of voices answering me somewhat indignantly as follows :— We are some of the rich people whom you seem to think are so contemptible. One of us has grown rich from the honesty and excellence of his manufactured goods and from his energy in bringing them before the public. Another has grown rich as an upright merchant, another became rich by inheritance, and others have become rich by doing many things which build up the community. Are you going to brand us as infamous persons because we have been so fortunate as to gain a goodly share of this world's comforts ?

25. Not for a moment do I condemn rich men as being necessarily bad. Some of them are beautiful in their spirit of benevolence. I simply condemn the system which in many cases allows them to get far more from the people than they have any right to, or to rob and crush rival concerns. What multitudinous **Trusts**, such as the Oil-Trust, the Sugar-Trust, the Copper-Trust, the Rail-road trust etc., are sprung upon the people in order to pump every cent possible from them, vast land monopolies which force thousands of people to be homeless; an unjust system of taxes which comes far more in proportion upon the poorer and so-called middle classes than upon the rich ; a monstrous wage system and a dangerous power which bend communities and Governments to their selfish ends, and grind the people down to starvation prices. We shall see presently that a diviner system of life is now dawning upon the world ; that thousands, yes, even millions, are already looking forward to it, and that even the rich themselves shall be led into a happier and more rational life.

26. But what are the causes of this wretchedness, this terrible social condition ? Is not this a land of liberty and equality of privileges ? Yes, there is some liberty here, more perhaps than in most other lands, but among other things there is liberty to struggle and fight against the most desperate competitions ever known, and to be a conqueror if you are powerful, or cunning enough to make finance the chief end of life ; but if you are not powerful in money-making, if you are aiming at some-

thing higher, if you are weak and depressed, without capital to start with, or sick and have never had opportunities for development, then you also have liberty, the liberty to be a slave as a majority of people even in our free country are to-day. There is a great deal of equality, also equality of degradation and of slavish struggle to keep head above water. Nominally, too, there is equality of privilege and of power to use the ballot, so far as men are concerned, which of course counts somewhat on the redeeming side. I will illustrate just what this liberty and equality amount to by an example. We will have a battle represented, the directing power of which is the Government of the United States, which offers land and other prizes to be contended for. The contestants consist of all classes of people, giants, warriors, athletes, feeble old men, delicate and pale women, sometimes even children, untrained and inexperienced persons, and invalids barely able to move around. "Now," says Government, "this is a free contest, with equal privileges for all. Men, women and children, rush forward and seize all you can. I will see that the true rules of battle are lived up to, and that each one shall go forward with all possible freedom."

27. No sooner is the word said than there is a dashing and thundering movement of footsteps, warriors, athletes, giants rushing pell-mell over all the feebler ones, and seizing nearly all the prizes for themselves. The more delicate and feeble men and women lie prostrate on the ground and implore the conquerors to allow them something to prevent starvation, in compensation for which they offer their services. This scramble for places, even poor ones, begets endless rivalries and wranglings, setting every one against his neighbour and destroying the harmonies of social life. The victors, seeing the helplessness and necessities of their fallen rivals, condescend to give them a pittance and then throw all their burdens upon them, making the weakest usually bear the most, and that for the smallest compensation, the women, for instance, generally receiving only half as much as the men. The Government pats the victors on the back, makes great concessions in their favour, and even constructs the laws so that they shall the more truly become the liege-lords of the country.

28. This is what we call *competition*, one of the most fiendish system that ever cursed the world. It has filled society with discord, gloom and almost beggary. But the dawn is dimly breaking, and the new era of the ***brotherhood of man*** is approaching.

29. So far, then, we have seen, 1st, that the whole social and civil fabric of the nations of the world is based on monstrous principles of injustice, which not only crushes the people, but tends to weaken and

finally destroy the nations themselves; 2nd, that a system which allows wealth and power to rest in the hands of a few by robbing the many, brings about a congested condition of society which is hurtful to both rich and poor; 3rd, that as mankind have not yet evoluted out of selfishness into love and justice, they will be almost sure to misuse any unusual power that is placed in their hands, and capitalists, in almost all cases, will rejoice at and encourage a system which forces the labourer to offer his services at prices barely sufficient to prevent starvation; 4th, this robbing the people of their rights and crushing them down with poverty tends to debase them, and to destroy all noble aspirations, so that they fall a more easy prey to vicious habits, which fact leads superficial people to say: "there is no use in trying to elevate these people;" 5th, the system of competition tends to put all men at war with each other, leads them to misrepresent each other's business or accomplishments, develops such a money grasping habit that endless defalcations, thieving and cheating in trade take place, causes multitudinous failures in business, making kings of the few that are successful, and slaves of the many who are not successful, and tends to destroy all principles of brotherhood and good neighbourhood. The fact that mankind have not been utterly ruined by such a system, and that some good and noble persons exist in spite of it, shows that the human soul is indeed godlike in its nature.

30. The object of this work being human culture as well as cure, it would be an immense oversight in me to neglect this wonderful social question which has such a vast bearing on both soul and body. How can there be any proper stirpiculture among people who are agonizing and struggling with terrible external conditions? When the parents are slaves, will not the children be slaves also? When the parents are drudges, bound down to hard earthly conditions, how can the child that is born under such circumstances have lofty aspirations and a divine sweetness of nature? How can it be trained in the knowledge of all lovely and harmonious things? Therefore, it is absolutely imperative, if we are to lift the human race into its grand possibilities, that there should be individual liberty and comfort on the one hand combined with unity and fraternal harmony on the other.

But before proceeding to the sweeter task of unfolding a more ideal conditions of life, a few more of the disheartening falsehoods and pervertions of the society should be touched upon.

31. Among the worst of these pervertions is the bearing of **artificial titles** still so prevalent in Europe and so often bowed down to by American as well as European snobs. A man may be magnificient in attainments and grand in character, a Shakespeare, a Milton, an Isaac

Newton, a Washington, and still he cannot pass as a **noble man** while another man may be one of the most worthless and dissipated men in a whole kingdom, and yet be called *Lord so and so, Duke so and so,* and looked up to with awe. What mockery of everything high and pure! I will speak more especially of England, our fatherland, which is more afflicted with the **class** system than most of the other great nations of the world. To show that I am not prejudiced against England I am free to say that British power and energy as manifested in every part of the world is one of the marvels of the ages, while British literature and science, taken all in all, transcend those of any other nation, ancient or modern. It seems singular to us that with all the Anglo-Saxon championship of human rights and force of intellect, they still see such magic in mere names. An American clergyman, residing for sometime in London, wished to send his son to a well-known school, but the headmaster would not receive him until he became satisfied that he was the son of a gentleman. Learning that his father was a clergyman he concluded to receive him, but if he had been a merchant, he said he could not take him, for all his patrons would remove their sons immediately. A man may be one of the greatest and best men in England, but if he is a **tradesman** he is not a gentleman. I will quote some passages from General Badeau on English Aristocracy:

"Thackeray was once staying at a country-house, where one of the high born guests inquired after dinner: 'Who is that agreeable man?' When he was told that it was the famous novelist, the representative of the peerage remarked: 'You surprise me. I thought he was a gentleman."

32. The following will show how comparative pigmies, standing upon the great Gladstone's shoulders, and through him, as Prime Minister, receiving their titles, were placed above one who occupied the highest official rank in England next to the queen:—

"The Prime Minister himself has no precedence by virtue of his place, and I have seen Mr. Gladstone, when at the head of the government, go in to dinner after barons of his own creation. Even when ministers enjoy a temporary rank, this never confers precedence on their wives, who, like the wives of bishops and archbishops, can sit at the bottom of the table and look up to the top, where their husbands are dining by the side of Dutchesses. When I first observed the little regard paid to official rank in England, I expressed my surprise, but was quickly told: 'Oh, we respect the substance, not the shadow.' An American would have said that rank was the shadow and power the substance."

33. **General Badaeu**, in another place, goes on to show that "blood does not tell, or, if it tells, it tells the wrong way." I will mention one or two cases of monstrous criminality among titled families—cases, that occur so often as to excite no comment. One consists of one of the

noble families of Scotland, in which a son marries below his station. Although his wife was an excellent lady, and the most genuine love and harmony existed between them, he was commanded to desert her under pain of being driven from his home and thrown penniless upon the world. The young man came to America with his wife, had a child, and remained firmly true to the woman of his choice till he died, although, in the midst of his deprivations, large bribes were offered to get him to desert her. Thus the false dignity of a family was considered more important than the dignity of obeying heaven's law of right; another proof that the so-called higher class are very low.

Another case was that of Viscount Hinton, who was lately disowned by his father for marrying one that he disapproved of. It is said he now plays a hand-organ in London suburbs. In front of his instrument the following words are printed very conspicuously:

"I am Viscount Hinton, son of Earl Poulett, *Vide* Burke's Peerage.

34. Of course, General Badeau speaks also of many "well-rounded," "admirable, accomplished, and most genial" members of the aristocracy. How absurd, however, to call them *lords* and *noblemen*, while many mighty and noble names have plain *Mr.* as their only title!

"The influence of rank," says Badeau, "I repeat, is not refining. It not only magnifies the importance of externals and depreciates that of essential qualities, but it has not the effect claimed for it, of inspiring its possessors to keep themselves up to a high standard. It may do this in some rare instances with superior natures, which would be lofty without the stimulus of rank; but with the mass of those who enjoy it, who are commonplace enough, it has the contrary effect. It encourages them to dispense with effort; it inspires an offensive pride; it relieves from the obligation of courtesy; it frees from the restraints of breeding; it destroys outright that delicate consideration for the rights and especially the feelings of others, which is at the basis of every grace that makes life or character beautiful..... if the influence of the aristocracy is vulgraizing upon the aristocrats themselves, rendering them arrogant, supercilious, and rude, it is still more so with their inferiors, debasing the spirit and degrading the behavior, to an extent incomprehensible to an American, in persons who in other respects are neither abject nor servile. .....

"It is not to be supposed that the aristocracy are without virtue. There are houses and circles as pure as those of the queen; but there is hardly any family in the peerage that has not, like the queen's, its admitted illegitimate connections. There is probably no more immorality among the upper classes of England than in the corresponding caste in other countries, or possibly in the wealthiest and most pretentious circles in our own. But there is this difference: rank in England often enables its possessor to ignore or defy the shame that here would follow the sin."

Tennyson puts the matter thus happily:—

" Howe'er it be, it seems to me,
'Tis only noble to be good.
Kind hearts are more than coronets,
And simple faith, than Norman blood."

And yet the poet afterward chose to receive the title of a baron, and have *Lord* attached to his name. The noble Gladstone has risen above the desire for an artificial nobility.

35. Persons of superfluous wealth and much idle time on their hands often get into some very useless practices. The New York **Herald** of Feb. 19th, 1882, gives an account of the second, " Smoking Concert " at Standard Hall, London, where the Prince of Wales, the Duke of Edinburg, and various others of the aristocracy of England " had met. During the concert all drank and smoke as much as they pleased."

A dignified occupation, was it not ?

36. It is not a matter beyond all doubt that artificial rank and titles which are not founded on merit, but which are often bought with money, or secured through influence or through the favouritism of some monarch, or detrimental from every point of view, and discouraging to people who have no titles, but who may be far nobler and more accomplished than those who have ? Ideal society must spurn all falsehood, all shams, all pretentions, and build on supreme truth and justice.

37. It is amazing how our present structure of society is honeycombed with deceit and falsehood. Nearly every letter is stamped with falsehood, especially when its writer signs himself **an obedient servant etc**. Why not use such terms as respectfully, truly, very truly, sincerely, cordially, your friend, etc. ?

" Not at home," is the falsehood which the head of the house so often perpetrates. The editorial **We, Our, Ourself,** for one person, is hardly a necessary thing.

" I'm delighted to see you ! Come again ! " is the cordial expression of a heartless society woman. " I'm glad she is gone ! She is a regular bore !" is the expression of the same woman as soon as the collar is out of sight.

The falsehoods of political parties are monstrous, and America can do her full part in this shameful business.

38. Millions of persons have been perverted by the Chesterfieldian etiquette which actually recommends falsehood and insincerity in many cases. Society people are so in the habit of using honied phrases to each other that even intimate friends will often neglect to tell each other the truth, however important it may be.

39. A prominent English writer considers that the amenities of life are carried out in New York better than the Saint Louis; in London, better than in New York; in Paris, better than in London; in Rome, better than in Paris; and in Cairo, better than in Rome. This is probably true of the external amenities. The deeper amenities, that relate to kindness of soul and sincerity, would possibly reverse this order.

40. The truth is, we need an American etiquette of a higher grade than the European society code—an etiquette which is not loaded down by absurd conventionalities and petty rules that destroy the freedom and joy of social life. The brave English General, Gordon, who lost his life at Khartoum, Africa, expressed his disgust for conventionalism in the following language, which was found in his journal:—

"I dwell on the joy of never seeing Great Britian again with its horrid, wearisome dinner parties and miseries. How we can put up with those things passes my imagination. It is a perfect bondage. At those dinner parties we are all in masks, saying what we do not believe, eating and drinking things we do not want, and then abusing one another. .I would sooner live like a Dervish with the Mahdi, than go out to dinner every night in London."

41. While it is proper to pay some attention to forms, customs and fashions, the danger, if carried far, is that the soul of manhood and womanhood will become crushed out thereby, common sense be ignored, and people become slaves.

42. A London author once received a letter in which a wafer instead of sealing-wax was used. He rejected it with disgust, exclaiming: "what does the fellow mean by sending me his spittle?" The utter lack of common sense in such a proceeding is evident from the fact that the wafer might have been moistened with the purest spring water, for all he could judge from any unpleasant effect.

43. In Europe, ecclesiastical and official manners have at times an arbitrary character which would not be tolerated in this country, owing perhaps to monarchical influences. In Scott's life of Dean Swift, he relates that the Dean once dined with the Earl of Burlington. After dinner he said: "Lady Burlington, I hear you can sing; sing me a song." This blunt method of commanding displeased her, and she positively refused. He said: "she should sing, or he would make her. Why, madam, I supposed you take me for one of your poor English hedge persons. Sing when I bid you!" The lady burst into tears and left the room. One reason, no doubt, why he felt like domineering over the lady, was that she was *only a woman*, and to be a woman in the opinion of Dean Swift and a good many other European writers was to be something quite inferior to a man.

44. I think on the whole, then, that we should not gain but lose by transferring European manners bodily to our country. In saying this, I am quite well aware that Americans have many imperfect points that should be altogether modified, and that if they will sift out the good points of European etiquette, omitting the insincerity, the arbitrariness toward inferiors, the cringing style towards superiors, and the excessive conventionalism, they will gain some extra polish which is quite desirable.

45. What our ideal community needs is to have people with truthful and loving impulses, and a gentle, transparent way of expressing them. When such is the case they may express kind words to their friends without uttering falsehood, or if they should differ from them and privately choose to call attention to what they might consider an error, it would be done with such kindness and purity of purpose as not to give offence. The duelling system of continental Europe is another of the points to be avoided, as it degrades men to the level of bull-dogs.

46. The truth is that *the more vain, selfish, unkind and unreasonable a community is, the more Etiquette will be required, to give at least a Semblance of goodness, while the more truthful and good a community is, the less Etiquette will be needed.* Thus there are barbarous islands in the Pacific ocean where their etiquette is far more sternly carried out than in civilized lands, it being punishable with death, for instance, if a private individual should walk behind a chieftain. This is because the people are considered so treacherous as to be liable to do him harm. When people become pure-souled, gentle and refined, etiquette and forms and ceremonies may be pretty much done away with and true liberty of social intercourse enjoyed.

47. I have been led to say thus much on this subject because society is dreadfully afflicted with forms, ceremonies, pretentions and deceptions. Statistics show that ecclesiastical and civil institutions which deal the most in forms and in those arbitrary requirements which prevent liberty and a manly self-control, furnish the greatest number of criminals for the prisons. This would seem to signify that, where forms are excessive, the soul of matters is lost sight of. *

***The English Churchman** furnishes the following statistics, copied from a papal source, namely, *L'amico dia casa almanico populare*, published at Turin:—

BIRTHS.

	Legitimate	Illegitimate	Legitimate	Illegitimate
London	75,097	3,207	Vienna 8,821	10,350
Paris	19,921	9,707	Rome 1,215	3,160

In this respect, then Rome is about sixty-six times worse than London.

MURDERS.

From the same source it is stated that England has one murder in 178,000 people; Prussia, one in 100,000; Austria, one in 77,000; Spain, one in 4,113; Naples, one in 2,750; the Roman States, one in 750. In this respect, the Roman States are about 236 times as bad as London. And yet should not these descendants of the grand old Romans be among the greatest people on earth under a system which should teach them to lean upon their own manhood instead of upon authority?

48. The law of *primogeniture* which prevents large tracts of the land from being owned by the people; the nearly 500 lords who are said to average an annual income of more than $ 120,000 each, and the millions spent on the Royal Family, seem, at least in part, to have been developed to promote the national dignity by raising up a series of powerful and perhaps model families for the rest of the nation to look upto. But unfortunately they are not model families, and the power and intellect that have carried England's literature and much of her military glory over the world have come more generally from outside of the nobility. " The house of Lords," says Badeau, " was called the 'Hospital for incurables,' in Horace Walpole's time ... ... instead of fostering or developing talent, rank seems to have a crushing or withering influence, and the aristocracy is decidedly less brilliant since it has been extended."

49. It is quite time for the nation to understand that the grandeur and power of a common wealth consists in the elevation of all the people and not the aggrandizement of a few in a way to crush the many. Extreme conditions are ruinous to both sides. The aristocracy boast of their idleness, and hardly consider the industrial portion of the community, however exalted, as fit associates for themselves. Is not such an influence disastrous ? And is it not monstrous that so many in our country have imbibed the same foolish sentiments against **Labour**, which is so largely the artificer of the world's great achievements ? If too many labourers are ignorant and undeveloped, so much the more need is there of placing them in conditions which will exalt them. When travelling in Europe I have often noticed how beautifully smooth and finished the fields appear, but how poor and rusty the human beings who make them so. Is not man the culminating glory of the whole ? Let us see to it, then, that he himself shall become beautiful.

50. The governments of the world, then, having failed so disastrously in ruling their people; having impoverished and degraded the masses and made the few excessively and injuriously wealthy, it is high time to aim at some larger conceptions and better methods for developing and harmonizing them. How then shall we combine individual liberty with fraternal unity? How shall we establish a real democracy in which every person shall take part and act **with**, not **against**, every other person ?

51. In answer to this question, France seems to have gone more profoundly and practically into this subject than any other nation of the world. England has done a great deal for human rights and America has taken a still further step in advance, but, as we have seen

the powerful and the grasping have got the upper hand of the people, and great misery is the result.

52. In north-eastern France, near the town of Guise, the late M. Godin established a system of co-operative labor on so wise and practical a plan, that it may be said to have introduced a new era in the progress of mankind. The co-operative feature of the people in his employ has now been running with a wonderful success for over a third of a century having commenced in 1860, under the name of the **Familistere.** The association manufactures heating apparatus, house furnishing and kitchen wares in enameled iron, etc. M. Godin, who had had an inspiration from his very childhood to do something to ameliorate the conditions of the working people, gave his workmen an associated interest in the whole business They live in several palaces, in the midst of a park and gardens, have their theatre for concerts and amusements, their lecture halls, libraries, a wonderful school and nursery system, their spacious glass-covered courts for festival occasions, their swimming baths and private baths, their private suites of rooms sacred to their own families, their fine laundry arrangements, co-operative shops, stores, etc., where things are furnished at cost price; their excellent band of music, their provision for sickness and old age which prevents anxiety; their free medical attendance in case of sickness, and their independent capital of nearly $ 2,000,000. The Familistere has now a population of nearly two thousand persons, and during their whole existence not crime has been committed, and not a single police arrest ever made. Even the children, trained so admirably from their infancy in their nursery and kindergarten, are thoughtful of each other's rights and so self-controlled as to pass every day among luscious fruits hanging within reach, without ever touching any of them. The old motto is: "Be virtuous and you will be happy". This beautiful system of life would seem to change the words into *Be happy and you will be virtuous.* Compare this paradise of harmonious, contented, neatly dressed grown people and children with outside laborers and perhaps all around them, where children will be ignorant and ragged, their parents often intoxicated, living in squalid huts, and sometimes committing crimes. Does this not teach a wonderful lesson? Religion is a good thing, but why cannot clergymen elevate and save communities in so efficient a manner? Can they not see that material as well as spiritual conditions must be attended to? Godin's noble humanitarian spirit strikes at causes. The worldly Christianity of the day strikes for the dollars. "In India," says Archdeacon Farrar, "the English make one hundred drunkards for every one Christian." "Islam has done for civilization," says Rev. Canon Isaac Taylor, referring to Asia and Africa, "more than Christianity; Islam has

abolished drunkenness, gambling and prostitution, the three curses of Christian lands.

53. It is a very common remark that if the stimulus of competition should be done away with, people would lose their energy and lead an indolent life. But no such effect is produced at the Familistere, for the people know that they are becoming more and more the owners of the whole vast establishment, besides which there are gradations of position in which their salaries and their honors are increased in case their efficiency as workmen and the correctness of their lives demonstrate their fitness for the same. The children are stimulated to all high attainments by beautiful prizes and by records of their standing which are posted in the public halls.

54. The *nursery* is a remarkable institution, and the education of infants is commenced when they are but a few weeks old. The plan of their beds is simple and admirable, they are never allowed to be rocked, they are taught to respect the rights of their fellow babies, to practise self-control, to deal kindly with each other and never cry when put to bed at night or when they awake in the morning. The parents can come in and take them to their homes when they please, or bring them back when they please. How much worry and drudgery is thus escaped, while the children themselves are cared for and developed far more skilfully than most parents would be able to do it. One important thing is the fact that the little ones can entertain other little ones far better than adults can, so that forty children are said to make no more annoyance than one does under the ordinary training. When they get a little older they have thorough object teaching and enter the kindergarten. They are early taught principles of self-government by electing their own monitors from among themselves, for different occasions.

55. Speaking of the freedom of the people in the Familistere, Godin says:—

"Liberty is the absolute essence of right; nothing will prove enduring in human institutions if liberty be not respected. . . The Familistere has its entrances but neither gates nor bars. Everybody comes and goes everywhere, at any hour, from cellar to garret, without consulting any one. The Familistere is absolutely free! Liberty is the first principle in every measure taken. Neither individuals nor families have to trouble themselves about following rules. There are none, except those inscribed in the conscience of each. The right is practiced because the new home answers the wants of all, and all respect the common good with which their own happiness is one. Frequent infractions of this natural rule would indicate imperfection in the material arrangements. Reform in these, not in the people, would be suggested."

56. What a broad, beautiful sentiment is here promulgated in one of the old European countries, and how it rebukes many of our American states and institutions which are far too much loaded down with laws and rules.

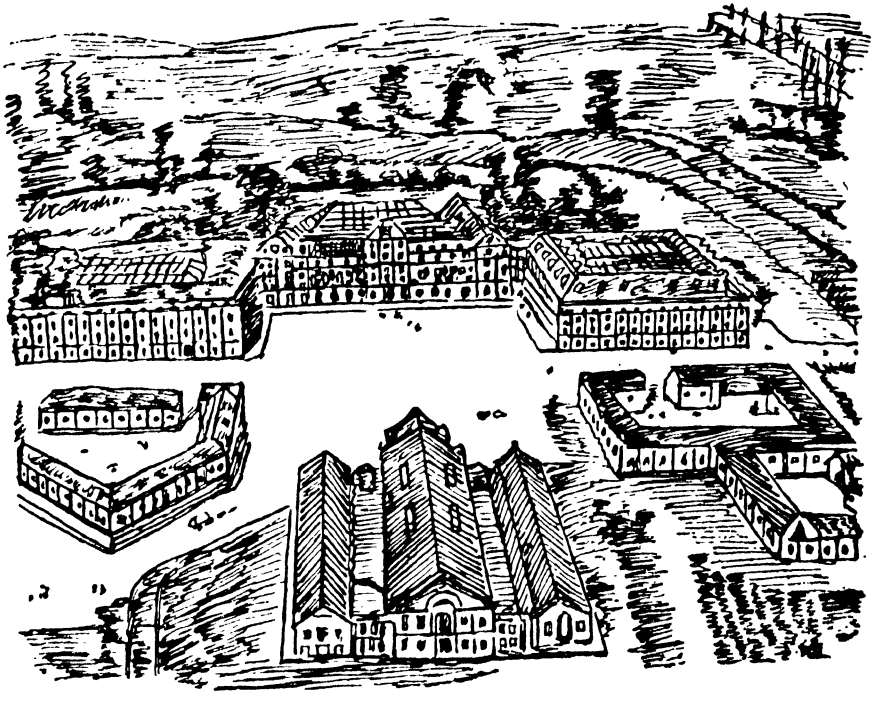

Fig. 66.—General view of the Familistere. A large newer palace at the left is not shown, and the shops at the right do not appear.

It is a superficial method to try to make everything just right by external force instead of appealing to the divine law of right in human souls, or the harmonizing elements in human bodies.

57. What a grand work for humanity has thus been done by M. Godin in giving so many pleasant homes and elevating conditions to these people, but especially in demonstrating through so many years how human society can be elevated. Compare the condition of the ordinary people through France with this happy community. Says Godin:

"What is the state of ideas in the 300,000 thatched cabins in France to-day which have only a door for an opening! The tax could not count one or two little squares of glass set in the thickness of the clay walls, and through which scarcely light enough penetrated to move about. Again, the 1,800,000 houses that have only two openings—a door and a casement window! These are the refuges of ignorance, because they are the refuges of poverty."

58. According to the United States Bureau of Labor the average daily wages paid to laborers in the year 1886 (I think it is) was $ 1.15, and the average production $ 10 a day! The profits on each worker was thus $ 8.85. It would be but the simplest justice for the laborer to get at least half this profit, or $ 4.42, which, when added to his wages of $ 1.15, would make $ 5.57, leaving $ 4.42 for the use of capital. With this amount the laborer could educate and elevate his family, and buy many comforts for them which would immensely increase the demand for manufactured articles, and this again would greatly increase the business of the whole country.

59. It is common for the ordinary slow people who try to hold back the car of progress, to say that these social movements are Utopian, and that the great success of the Familistere was owing entirely to Godin, and not to the beautiful fraternal system that he adopted. At this time (1890) the society is now nearly thirty years old, and Godin himself has been deceased for two years, but the association is moving on with the greatest success and harmony. The wonderful results they have developed seem like the vision of some better life, and have dashed the Utopian idea to pieces. Wishing to know their present condition, I wrote them not long since, and received the following answer from Mme. Godin herself, which I have translated:

Guise, Familistere, Aug. 8, 1890.

"M. Babbitt: In reply to the desires expressed in your letter of July 20, I am impressed to say to you:

"A.—That the members of the Familistere always work together in the most prosperous and harmonious manner.

"B.—That their morals are excellent in all their relations.

"In the course of the month of October next I shall be able to send you the annual report of the present status of the Society of the Familistere, and you will see that from the advantage of the wise organization given to it by its founder, the association is as strong and prosperous as one could desire.

"Please to accept, Sir, the assurance of my perfect consideration.

"Marie Godin."

60. The immortal Godin, the benefactor of the human race, has thus shown the statesmen of the world the true method of civil as well as social government. I will translate a few words from a memoir signed "Pierre et Paul:"

"Jean-Baptiste Andre Godin was born Jan. 26th, 1817, at Esqueheries (Aisne) ... Having become a widower in 1881, he married, on July 14, 1886, one of his people (who had been a noble co-worker), Mlle. Marie Moret. Previously

he had been named chevalier of the Legion of Honor and officer of the Academy. He was deceased on the 15th of January, 1888, after a short sickness. He left half of his possessions, about two and a half million francs, to the Society of the Familistere of Guise. Profoundly Spiritualistic and free-thinking, he wished his obsequies to be purely civil. His mortal remains lie in the garden of the Familistere. His funeral, in which men of all parties took part, was a true glorification of the life of this honest man".

A fine monument has since been erected in his honour.

61. Equitable Distribution. I will give an idea of a righteous system of distribution to both labor and capital, mainly on the plan suggested by M. Godin, but modified somewhat to suit American circumstances :

A capitalist furnishes $ 50,000 for a business. If there is any risk in the business, the capitalist rather than the laborer will have to meet this risk, and so he requires 20 per cent. of interest for the amount furnished, or ... ... $ 10,000

Wages, per annum, of 90 laborers	50,000
Invention and direction	20,000
	$ 80,000

At least 4 per cent. (Godin says 5 per cent.) of this $ 80,000, or $ 3,200, should be held as a reserve fund, or **natural rights** fund, in case of accident or sickness.

During the year the net profits are $ 40,000. Subtracting the $ 3,200 we have $ 36,800, which is an extra compensation to be divided pro rata between capital, labor, and invention.

Thus, Capital receives not only its $ 10,000, but 1/8 of $ 36,800, or ... ... $ 4,600

Labor receives not only its $ 50,000 in wages, but 5/8 of $ 36,800, or $ 23,000

Invention, of course, receives its pro rata, or ¼ of $ 36,800 or	$ 9,200
The reserve fund.	$ 3,200
	$ 40,000

62. This gives to every laborer who receives $ 600 a year in wages an extra amount of $ 276. Under the ordinary plan, capital seizes the whole $ 40,000, robbing the laborer of his share, and generally letting him and his family go to ruin in case of sickness or accident. Capital seizes it, because, under the present unjust system, laborers can be found whose necessities force them to work for any pittance which they can get. What monstrous injustice! "**Not a man in the world has a moral right to make a profit out of the labor of other people without giving**

them a pro rata share of it. He may charge an extra amount for his wisdom and experience in managing the business, and a fair amount for capital, but after that is done the workman must have his share, or a foul robbery is committed. Now I seem to hear a voice answering me thus: We have skill and inventive power, and brain-power, and indomitable push, and we have a right to make money; while these poor people that we hire have no management, and they are to blame for their own poverty.

63. Sir! where did you get this brain-power, this inventive skill, except as you have received them and inherited them from this very human race which you are now wronging? And where have these weak and unfortunate people received their imperfect conditions except as they have been robbed and wronged by some of you strong people who have grown up under more favourable conditions? What right have you to take the capital which your parents may have transmitted to you and go and buy up all the best land, the best water-power, the best conditions, and then sell the land at an enormous advance, so that the poor are robbed of homes, or build great factories and mills, seizing all the advantages of labor, until you pile up an immense fortune, ten times greater than you have any rational use for? In your inmost soul do you not say, as Cain did, am I my brother's keeper? You are your brother's destroyer, but should be his keeper, so far as you are strong and he is weak. Immortal man is a divine structure and growth, and you will find, before you get through with this world and the next, that there will be some reckoning in connection with him. A ledger account is being made up daily, and it will have to be balanced, sooner or later. Oh capitalists! Oh Corporations and Trusts! who buy up legislatures and get control of the foods and comforts of life, so that you can make yourselves rich by making others poor! The common remark that corporations have no souls may be quite true, but you who constitute the corporations will find out some day that you individually have souls, which will prove, in the end, most serious matters to deal with. For every dollar that you gain wrongly, you will lose a score of dollars in a diviner coin which is imperishable.

64. In making these remarks, I have only kindness of feeling for the man of wealth, but I feel intensely how extreme wealth, gained by extreme methods, tends to destroy the people, and still more to destroy those who commit this injustice, for wrong-doing injures the doer more than those who innocently suffer the wrong. I by no means wish to prevent people from becoming rich, for I want everybody to be rich. With a true fraternal system of co-operation, for both production and distribution, the first effect will be to make all comfortable, and the still

more complete development to make all even rich, refined, intelligent, moral, healthy, cultured, and happy.

65. Tell me, oh man of extreme wealth, would not you yourself be very much happier if you could be one of these people of moderate wealth, under a true social system, where all society should be loving, refined, harmonious, and beautiful; where all tramps should be done away with; where all fear of having your mansion broken into, your safe robbed, or your person assaulted by thieves and bandits, would be dissipated; where no operatives could frown upon you as rolling in wealth and ease through their labors, while they were suffering many privations, hardships, and fears for the future; where there would be no prisons, courts of law, poor-houses, and almost no policemen, lunatic asylums, or hospitals to be sustained; where there would be no degraded and filthy population to breed disease and impurity in their crowded quarters, but all the streets of a city would possess a royal beauty, and all houses be charming with their elements of taste and refinement; where all children would be refined, neat, and tasty, and fit associates for your own children; where the foolish vanity of making a greater display than your neighbours would not be fostered; and, finally, where the rivalries, gambling, wickedness, and warfare of commercial life would be for ever at an end. Tell me, also, if you do not think that it would be a source of never-ending satisfaction and joy if you should build a palace home for your laborers, establish useful and beautiful surroundings and conveniences for their happiness, and allow them an associated interest in the business itself, so that they may gradually buy their homes and a share of the business, somewhat as they have done at the Familistere? Godin does not think that such a system of co-operation damages the capitalist in any way, but binds the workmen far more closely to him, encourages them to be more faithful and efficient in their labors, and prevents all strikes, boycotts, and discords. Then think of the unending gratitude and love which these workmen and their families would manifest to you; and best of all, think how it would whiten your soul to be thus the means of blessing others, and helping the world by such an example. This wealth, you know, will soon vanish, at any rate, and it can never be transferred to the diviner life of the future unless it has been used to upbuild humanity or further some noble cause. Forgive me for talking thus freely to you about these momentous matters of human life and the use of wealth, for your minds having been devoted to worldly conditions and profits so long, must tend to overlook and forget those grander interests which reach out through time and take hold upon eternity.

66. To understand all of the wonderful details of Godin's constructive socialism, as worked out so successfully in his social palace at

Guise, one should read his Social Solutions.* He shows with great force the fallacy of Communism as interfering with individual liberty, and declares that "Charles Fourier elaborated the grandest system that the human brain ever conceived." The efforts of the noble Robert Owen, and of his equally noble son, Robert Dale Owen, in Scotland and America, doubtless ran too far into the communistic phase, and, although highly useful, failed.

67. **Co-operative Societies** are spreading over the world more rapidly than most people realize. The Bon Marche of Paris is the most magnificent mercantile establishment in France, possibly in the world! It has many thousand employes, who are governed by some 300 associated proprietors, and these by a council chosen by themselves. Regular salesmen get a bonus for certain amount of sales, and when they have 1,000 francs to put into the business they can become proprietors, in case they receive the votes of the other proprietors. The young women have an immense private hotel to themselves opposite the Bon Marche, and the young men have great advantages for culture. Mme. Boucicaut, the daughter of a washer-woman, was the founder and leading manager of this magnificent establishment, and having deceased in 1887, left the $ 20,000,000 which she had amassed to a great number of beautiful charities. If she could thus lay up such an amount, after all her great benevolence throughout her life, and after giving away such a large associative interest in the business, does this look as if co-operation had a tendency to impoverish? The clerks and other employes are said to be especially courteous to their customers, seemingly as much so as if they were sole proprietors of the establishment.

68. There is a great number of successful co-operative societies on the continent of Europe. Concerning which I quote the following from *Good Works*:

"From small beginnings among the shoemakers of Delitzsch, in 1850, Herman Schultz has, by faith and patience, created one of the most remarkable social structures of the century. When he died in the spring of 1883, there were 3,500 co-operative societies in Germany, organized under his control, besides thousands more in Austria, Italy, Russia and Belgium, which owed their origin to his example and looked up to him as their father. Those 3,500 societies had a membership of 12,000,000, a share capital of £ 10,000,000, deposits amounting to £ 21,000 000, and did a total business of £ 100,000,000 a year."

69. The following facts are from an article in the *National Labor Tribune* by Mr. Albert K. Owen:

"Rochdale, in England, gives us an illustration of the success of *distributive co-operation*. This was inaugurated forty-four years ago by twenty-eight poor weavers. In 1888 the report of the chief registrar showed that 934

*This work has been translated into English by Mrs. Marie Howland.

societies made official returns to the Central Board of a membership of 682,000 adult persons, and of sales which amounted to $ 424,000,000 for that one year.

"*George Jacob Holyoake*, in a recent letter, says: 'Distributive Co-operation is well established and extending. Leeds, for instance, has about 20,000 members. It has so many branch stores and is so continually erecting new ones, that they keep a staff of builders who move from place to place as new stores have to be built. During the last twenty years the business done co-operatively by workmen in Great Britain is estimated at twelve hundred and forty millions of dollars and the profits of the same at about one hundred million dollars have gone back into their own hands.'

"'Out of the retail stores have grown the wholesale, with its trading capital of nearly $ 4,000,000, and now *productive co-operation*, with the men as their own employers, is developing naturally from these conditions. It is not generally known that the most prosperous cotton mills in Great Britain are those run on co-operative principles at Oldham, with $ 27,000,000 of capital. The outfit represents more spindles than there are in Russia, Italy, Spain and Austria, and nearly as many as in Germany and France.'

"Turn for a moment from the consideration of the economic to the moral value of the co-operative principle. In the letter from Mr. Holyoake, above referred to, he says: "When I first knew Rochdale, all the working people needed relief. All who could get it had it; and the chief hope of others was, that the work-house might not be too full when their turn came. Now they subscribe to the relief funds, to hospitals, present fountains to the town, and in all things give like gentlemen. It is in this manner that co-operation, by amelio. rating social conditions, transforms the old civilization and brings in a new order of things.' "

70. N. O. Nelson, in the *Twentieth Century*, compiles the following:

"Co-operation has already passed beyond the experimental stage. In great Britain alone it now handles a business of over two hundred and fifty million dollars a year, from which a profit of over twenty-five million is returned on purchases, besides paying five per cent interest on capital and accumulating a surplus. There are nearly two thousand retail associations, of which many have several branches. Some of the societies have as high as thirty thousand members. The annual sales of the Leeds Society exceed four and a half millions.

"Twenty-five years ago the retail stores formed a federation and established a wholesale society. Fifty millions a year is the business now done by the wholesale society. It has its own buyers in the important centres of the world buying from first hands. It owns six steamships, which carry its cargoes from the Continent and from Ireland. It does the banking and the insurance for the co-operative societies and individuals.

"The membership of those societies which are regularly incorporated and report to the Government is now 1,450,000, which represent a population of about seven millions, or one-fifth of the United Kingdom. The societies predominate in the great manufacturing midland counties; in Lancashire and

Yorksnire probably one-half of the people are co-operators. This whole system has grown from a little club of twenty-eight very poor workmen who joined together just fifty years ago (1845) to buy their tea and flour at wholesale, for cash, and deal it out to themselves at the ordinary retail prices, for cash".

71. Thus it will be seen that English co-operation is getting powerful and aggressive, and is now gradually entering the field of *co-operation in production*, after which the co-operative *homes* will of course be realized. They seem to be solving the financial problem with greater skill and rapidity than ourselves.

72. In America a number of partially co-operative movements have been set on foot, but without much success. There are, however, very many co-operative associations, which are unknown to the general public, and which subserve a useful end. There is a looseness here as everywhere else concerning *liberty* and *law* and *human rights* which I wish to touch upon briefly. It seems not to be understood that *the greatest liberty and diversity and individuality, in order to be perfect in their working, require the greatest law and unity and organization, and that either side of the question taken by itself leads to destruction.* Unity and law without liberty is despotism. Liberty and Individuality without law is anarchy. The one condition is equal to the other in its ruinous effects. Nature in countless millions of objects portrays the true and everlasting principles of things, but mankind is stupid in perceiving its lessons.

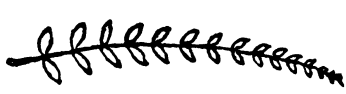

Fig. 67. Fig. 68. Fig. 69.
Individuality and Organization Combined, or Constructive Socialism.

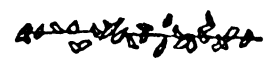

Fig. 70. Fig. 71
Individuality without Organization; Anarchy or Destructive Socialism.

Notice how the leaves organize around the central stem, Fig. 67, and arrange themselves in fraternal harmony to form a complete whole, and yet each one has its own individual place without interference from the others. In Fig. 68, notice how all the petals of the flower have the same centre of unity, and yet each one has its own individual freedom of position and direction. This very combination of liberty and law, this arrangement in franternal harmony is what makes the beautiful whole. If these petals had been arranged in parallel lines as in Fig. 69, they would have no center of unity and no true freedom or diversity of direction, so that greater liberty occurs where there is greater organisation, a fact which anarchists seem wholly unaware of. Remember that

the law of harmony requires the blending of contrasts, which in this case is the combining of unity and diversity. It will be seen then why the lawless liberty or rather the ruin of the flower as appears in the anarchy of petals in Fig. 71 and the lawless leaves of Fig. 70 are so unbeautiful and imperfect, the principle of unity being wholly lacking, and all parts being at war with all other parts. Even Fig. 69 is greatly superior to these, for it has some unity and some diversity, there being a kind of a communism of direction among the petals as well as some diversity of position. As all things are fundamentally like all things, the conditions of a perfect society are typified by every leaf, tree, flower, crystallization and solar system. On this principle, then, we may see that there may be more liberty in the marriage or family state than in celibacy, although more law is required also, and there is more liberty in a true social condition than in the solitude of a wilderness. For instance, what liberty has the hermit to enjoy the society of wife or child or parent or friend—to enjoy music or oratory or recreation or the great achievements of man? As society then gives us such liberties and sweets, we must see to it that we observe law, or in other words hold the liberties and rights of other people sacred. The more perfectly we possess an interior law of right, the less need will there be of exterior laws to rule us. A true *Interdependence* then includes the greatest *Independence.*

73. But I have reserved for brief mention an excellent plan of integral co-operation, namely, the **Credit Foncier of Sinaloa**, devised by Albert K. Owen, of Chester, Pennsylvania. This is planned to a considerable extent after Godin's Familistere, but aims at a larger and freer field, and an application not merely to manufacturing, but to agriculture and commerce as well. A colony formed on this plan has already gone forward to Topolobampo Bay and vicinity, which is in the state of Sinaloa, Mexico. This bay is a portion of the Gulf of California in latitude 25°, 32', is one of the most beautiful harbors in the world, and has, on the whole, a delightful climate. If the Mexican and Pacific Railway, which General Grant and other eminent men planned, shall be carried out, it will be nearer to New York than San Francisco is, by almost 800 Miles, and to St. Louis by 322 miles, so that the commerce of Asia, Australia, and the Pacific islands could be brought via Topolobampo much more cheaply than by the more northern route.

74. I must mention some admirable practical ideas which Mr. Owen has suggested. Among other things he says:

"There cannot be *equity* where non-incorporated persons are forced to struggle for existence against incorporated classes; where the weak and uneducated have to combat with the strong and cunning; where woman, intelligent, refined, and

a holder of property, is politically classed with felons, minors and idiots; where *competition reigns* instead of *co-operation*; where independence takes the place of interdependence; where *equality* is attempted instead of *equity*; where *charity* is offered and *justice* is not given; and where 'Superior' and 'Subordinate authority' is practiced to the exclusion of co-ordinate control."

75. I must take a little exception to these last expressions against independence and equality. These are sacred words which are dear to all progressive souls and should not be inveighed against by anybody excepting despots. I have shown elsewhere that the greatest individuality and liberty are consistent with the greatest unity and organization, or that, in fact, the one side of the social system absolutely demands the other side in order to the most complete working. The greatest slavery and dependence result from the system of competition. Under co-operation, a certain amount of liberty is given up in one direction, but this is doubly and trebly compensated for by the liberty gained in another direction. By the term *equality*, no such absurd thing is meant, as that one human being is equal or similar in endowments to any other human being, but rather that under the same conditions, all should have an equality of privileges and rights. The fraternal working of co-operation is the only system on earth that can exemplify true equality or true liberty. M. Godin, of the Familistere, has proclaimed the importance of liberty and shown how thoroughly it is carried out in his great institution at Guise. Let the motto be, **Independence** combined with **Interdependence, Equality** combined with **Equity** forever!

76. Mr. John W. Lovell, treasurer of the Credit Foncier Company, makes the following remarks:

"The building of Associated Homes will be encouraged. In these each family will own its own apartments; but by systematic co-operation much of the drudgery of house-keeping will be avoided, and women will have more leisure for self-improvement and intellectual pursuits. Instead of having each family attend to all the details of daily house-keeping, cooking, washing, etc., there will be in each one or more blocks of building but one kitchen under competent management, one laundry, and a well-organised corps of domestics to visit each apartment daily, to clean and keep it in order. There will be one nursery, founded on the plan now in operation by M. Godin, at Guise, France, to which infants a few days old can be sent, and under trained nurses cared for, taught to walk and speak, introduced to the kindergarten school, and finally graduated to the public and industrial schools. In such a nursery, parents can visit their children at any hour, take them to their rooms whenever they please, and while enjoying all the delights of their children's society, be relieved of the painful drudgery the care of infants entails, especially upon young and inexperienced mothers.

" The corporation will be a guardian to all those left dependent upon it, providing for their wants, and suitable occupations as soon as they are able to

engage in them. Parents therefore need not fear to spend their incomes in providing all the comforts possible for their families, for they will know that if death should remove them, those dependent left behind would be kindly and lovingly cared for.

"After the payment of all wages, which will include both those to labor and those to capital, the net profits remaining will be used, first, for the expenses of the general government, public works and improvements, care of parks, beautifying the city, etc., but the sum so used for these purposes shall at no time exceed fifty per cent. of such profits; the remainder shall be divided among all the recipients of wages, both labour and capital, in proportion to the amount each has earned. For example, one who has earned $ 2,000 in a year will receive double the percentage of profit of one who has earned but $ 1,000, and in the same way an investment of $ 5,000 capital, earning $ 300, will receive double the amount of profits of $ 2,500 earning only $ 150".

77. Does all this seem too much like heaven to the reader ever to be realised? But if such things can be realised under the harder conditions of France, how much better should they be realised in the broader fields of the New World. No poor-houses with their abominable conditions of humiliation will ever be required under such a system, for all aged or afflicted persons, all widows and orphans will be cared for while surrounded by loving friends at their own homes. Thousands in this country and millions in Europe have the poor house or the work-house ever looming up before them like a hideous specter. In an English town lately, a helpless and sensitive old gentleman was allowed 82 cents a week to pay his rent and board. He refused to go to the poor-house and starved to death. "Good enough for him!" was the heartless remark of some of his townspeople, "he needn't have been so proud." But does not self respect belong to all noble manhood? When I was in England, the land from which we have inherited so much of our liberty, I once made the remark that it seemed too bad to have the people grow up in such ignorance. "It will not do to educate them, for where will we get our servants?" was the reply. That is the idea. Keep the people degraded so that we can ride over them all the better. What short-sightedness as well as depravity in such a sentiment! Educate and elevate labour, make it respectable, and we shall be waited on ten times better than under our present wretched system. In the Credit Foncier Colony, the terms *master* and *servant* are flung aside as relics of the old barbarism. No person as an individual is ever allowed to hire another. The directors of each department, in the name of the state, appoint certain ones for certain duties, and give them machinery and conveniences of various kinds, so that labour becomes far less of a drudgery than under ordinary conditions.

78. This colony has passed through many transitions for a number of years back. Some sad mistakes at the start, aided by some unprincipled members, nearly destroyed the whole movement. A number of hundred persons, including some excellent and cultured people, are on the ground, waiting for the railroad to be built, the means for which, I am informed, have now been promised. Mr. Owen has given his means and almost his life in carrying forward the enterprise, and, if I understand the matter rightly, deems it his right to give votes for the officers who manage the colony business, according to the number of shares he holds. This view has caused much dissension and criticism. Although it is in harmony with the ordinary principles of a stock-company, would it not be wiser for him to act, even in this matter, according to the beautiful fraternal principles which he has established, and give every one an equal vote? Will not the constitution and by-laws of his company protect him and others in their rights? Different parties have been making desperate efforts to thwart Mr. Owen and his company and get control of that wonderful location in their own hands, but President Diaz and the Mexican government have nobly sustained him and granted him very fine concessions. If some of our land-sharks could get hold of that property, they would dedicate it to Mammon. Instead of letting the people have lots at twenty or forty dollars each, they would, after a while, demand ten or twenty thousand dollars for some of them. I quote the following from one of our dailies :

"One of Chicago's millionaires, Mr. Dale, sold for $75,000, not long ago, a lot within the city limits, that he originally paid only $75 for, and a Denver man sold a lot for more than 2,000 times its first cost."

79. The **interest** in this whole co-operative movement and in plans for elevating labour is increasing over the world. Mr. Andrew Carnegie, the millionaire manufacturer, uses the following language in the *Forum*:

"Whatever the public may have in store for labour, the evolutionist who sees nothing but certain and study progress for the race, will never attempt to set bounds to its triumph, even to its final form of complete and universal industrial co-operation, which I hope is some day to be reached."

80. The noble Professor, John Stuart Blackie, gave up his chair in the Edinburg University, in 1884, to consecrate himself to the upbuilding of the Highland peasantry. He says : "Let Greek die, let Hebrew die, let learning go to the dogs; but let human beings live, and let brotherhood and charity live." Professor Blackie has lately deceased.

81. Says Henry Carey Baird : "No country which has ever existed has ever developed a tithe of the power which its people and its resources have been capable of, because all governments are now, and ever have been, run by and for the few to the exclusion of the many".

82. "Europe," says Wendell Phillips, "is heading forward to the day when the mass of men shall work less and enjoy more".

83. *Other things being equal, where physical conditions are best, mental and moral conditions will also be best.* We have seen that in the Familistere at Guise, France, where, under a system of Co-operation, all persons have risen above poverty and want, not a single crime has been committed in more than a third of a century, while education is made universal among all the rising generation. In the well-developed part of America, with an increase of freedom and comfort over European countries, we have an increase of moral conditions as shown by statistics. The dynamiters, the Mafia societies and Molly Maguires are mostly foreigners. Anarchists and mobocratic persecutors of the Chinese are almost to a man from abroad. The miserable system of revenge called *Boycotting* is an imported affair. These erring people are not fundamentally bad, but hard, unjust conditions have injured their finer natures. When a great flood or a great fire or other disaster takes place here, foreigners are often surprised at the amount of relief thatis immediately furnished by a sympathizing people. The debasing liquor saloons are kept much more by foreigners than by Americans. Dickens, while travelling through this country, used to consider it a fine cause for sarcasm when he sometimes found whole towns where not a drop of liquor could be had. Statistics show that in a number of the American states the amount of illiteracy among the native whites is considerably less than in any other part of the world. Thus, according to the census of 1890, the number of native whites ten years old and over who could not read and write was but eight-tenths of one per cent. In Massachusetts and Nevada, one per cent. in Connecticut, one and two-tenths per cent. in South Dakota, one and three tenths per cent. in Nabraska, Washington and Wyoming, one and four-tenths per cent. in Minnesota, one and eight-tenths per cent. in New York, Oregon, North Dakota and Iowa, etc. The statistics are much more unfavourable when the whole population, including foreigners and Negroes, is included, and even the whites in our Southern States are sadly behind. In foreign countries, according to Mulhall (1889), the percentage of adults unable to write was as follows: England, 9; Scotland, 6; Ireland, 23; France, 15; Germany, 4; Russia, 85; Austria, 45; Italy, 53; Spain, 72; Switzerland, 5; Belgium, 20; Netherlands, 14; Scandinavia, 3. At the Ford Investigating Committee the following facts were elicited which I quote:

"Dr. Charles S. Hoyt, of Albany, Secretary of the New York Board of Charities for twenty-years, told the committee that there were in this country four and a half times as many foreign as native Paupers, in proportion to population. Three foreigners were convicted in the courts to one American, and

five foreigners to one native received out-door relief. Dr. Hoyt thought that immigration helped to fill up the hospitals and asylums.

"Marshall Vaught, Warden of the almshouses on Blackwell's Island, said that 90 per cent. of the 2,550 inmates of that institution were foreigners."

In the paper which gives the above, it is also stated that at establishments which were paying women $ 8 and $ 9 a week some time ago, the price of labor has been brought down to $ 4, and, in some cases, to $ 3 a week by the use of labor-saving machinery and by the influx of Polish Jews and other foreigners. These Hebrews have been persecuted and degraded in Russia until the American women will not consent to work by their side and cannot endure the starvation wages, and so have generally had to leave. Justice Duffy, of the Essex Market Police Court, New York, says there was only one American among 80 prisoners on August 11, 1888.

84. These facts I quote with delicacy, knowing how many excellent and even noble people are also among foreigners, and knowing, too, that those whose better nature has been perverted, are not wholly to blame for it, for by nature they are as good as ourselves. I am free to admit, too, that an American, when he sets about it, can be as reckless, mean and contemptible a being as there is on earth, and that American Republicanism is only a quarter-way house to the better social condition which must come in the future. When that point is reached the vast number of poor-houses and prisons that now afflict us will be entirely abolished, police-stations will be very scarce, and, under better laws of life, hospitals and lunatic asylums will gradually die out. What a vast saving there will be also in Lawyers' fees, in physicians' fees, in standing armies, in tobacco bills, in liquor bills, and the whole train of abominations that go with our present perverted society.

85. **Gambling**, which grows out of the present system of competition, is one of the crimes of the day, practiced to a fearful extent all over the world. This system deals so much in tricks of trade, in speculations, in stock gambling, and allows such vast fortunes to be made, that the people become intoxicated with a desire to become suddenly rich, and getting under the excitement of the gambling table, become practically insane. The city of Monaco in southern France is the splendid gambling infernum of the world. The lives and fortunes of promising men are constantly being wrecked there, and it is said that one suicide occurs on an average for every day in the year at that point alone. It is to be hoped that the moral sentiment of France will soon grow sufficiently to make and execute laws against this abomination, and also against the barbaric practice of duelling. Even churches practice raffling quite extensively; and ladies, whom we look up to as being higher toned morally

than men, seem to be getting more and more into this base practice of trying to rob some of their neighbors.

86. *All the great machinery of* **Transportation** *and of* **Telegraphic** *and* **Telephonic Communication**, *as well as all the* **Land**, *should be held by the state for the people.* All the advantages of travel, of the conveyance of freight or the possession of a home should be furnished at cost price to the people The government has no right to allow a few wealthy and shrewd individuals to seize the land and the railroad and steamboat privileges, and then get every cent out of the people which they possibly can. Capital builds rail-roads and develops a great many things which are of great advantage to the people. True, but could not the government do the same? Will not the government be forced to take charge of the railroads if it maintains its supremacy? I quote the following from Henry George's *Social Solutions* :

"Either the government must manage the railroads or the railroads must manage the government. There is no escape .....The railroad power is gigantic, and growing faster than the growth of the country it is tending still faster to concentration. It may be that the man is already born who will control the whole railroad system of the United States, as Vanderbilt, Gould and Huntington now control great sections of it. Practical politicians all over the United States recognize the utter hopelessness of contending with the railroad power ... The great railroad absolutely dominates the State of California. The men who really fought it or taken into its service or crushed, and powers are exerted in the interests of the corporation managers which no government would dare attempt ....I speak of California only as an instance. The power of the railroads is apparent in state after state, as it is in the national government. The railroad managers *cannot* keep out of politics, even if they wished to. The difficulties of the railroad question do not arise from the fact that peculiarly bad men have got control of the railroads: they arise from the nature of the railroad business."

87. "But it will centralize power too much," is the constant cry. Henry Ward Beecher brought up the same argument, and said this centralizing of power is what the monarchs of Europe are aiming at. What loose reasoning? A monarchy is a very different thing from a government in which the people elect their own rulers and hold them accountable for their actions through a free press and a free ballot. The Post Office business is a system of co-operation for the benefit of the people, and it may be safely said that there is no great business, either public or private, conducted so carefully, so systematically, so honestly, although it requires the handling of millions. That which comes in close contact with the people like the Post Office, the railroad, the telegraph, the telephone, the express, need not have much fraud behind them. Call it not paternalism, but rather fraternalism. Should the government run these different kinds of business, a vast system of

corruptions will be ended, and a vast advantage to the people will accrue from the cheapness of prices. Is it not wonderful that the government can send letters and printed matter, thousands of miles for almost nothing? And would it not be delightful and most enlightening to the community if they could travel everywhere for a mere trifling price? Will Southworth gives an immense number of statistics from all departments of the railroad business to show that the actual cost of well-filled cars for conveying each individual across the continent from New York to San Francisco would be but $1! Think of the hundreds of thousands, yes, millions, that would pass from ocean to ocean even if they had to pay only $5, besides food and sleeping facilities. Think of the unspeakable blessing it would be to thousands of laboring people if they could be taken ten or twenty miles out of the great cities for three or five cents and have the advantage of their own independent home with pure air and verdure and a garden spot. The report of the Pennsylvania Railroads Co., in 1881 shows that the actual cost of moving a train of cars over 100 miles of track, had been reduced to. $6.02. At that rate, suppose a train of ten cars, each car carrying fifty people should go from New York to Chicago, which is nearly 1,000 Miles, the whole cost would be $60.20 for the 500 people, or 12 cents each. If we should add $65 for wear and tear of machinery, it will make 13 cents more, or 25 cents in all. If we should allow $500 more for interest on the cost of the road and the rolling stock, and repairing the road, this would make one dollar more for each traveller, or $1.25 in all. The government would make money at this price, as there would be sure to be ten or twenty full trains a day at these cheap rates, hence I have somewhat overrated expenses. But $2.50 would take one to Chicago and give him a good berth for sleeping in also. We may safely say that travelling would be ten or more times as cheap as now, and labor would be furnished for at least a million of new employees in this country alone. What a heavy expense would thus be removed from the people, and what an educating, enlarging influence would result from the vastly increasing travel into every part of the country. Then what a vast saving there would be in the price of freight, the cost of telegraphing and telephoning, if these departments were run by the government for the people. "In England", says Mr. George, "the telegraph and parcel-carrying and savings bank business are managed by government more efficiently and economically than before by private corporations." In many countries, too, the railroads are run by the government, but not as fully as they should be for the people, as the prices are too high. It is beginning to dawn on the world that high prices for the people do not pay as well as low prices. The Post Office Department did not pay as well when letter

postage was 25 cents as it does now when it is two cents, and numerous cases to the same effect could be adduced.

88. *But shall the Government seize the railroads, the telegraph offices, the telephone offices the express offices, by main strength without compensating their owners for the immense labor and expense which these institutions have cost?* Of course not. Are we social reformers free-booters that we should advocate such a thing? Supreme justice should be our motto. Our whole aim must be to bless the rich as well as the poor. But how is government to get money to meet this great expense? Now comes an important problem. Whatever is done must be done legally and with a desire to prevent all violent wrenching of the interests of even those who hold the purse-strings.

To help us out in this problem of how the government is to gain power to buy the railroads, telegraphs, telephone systems, express companies, etc., I will suggest a special system of operations, and will be most happy if somebody else will suggest a better plan.

89. **Railroads.** The railroads of the United States have cost about $ 9,000,000,000. Their present worth has been estimated at five billions of dollars. To make it the more fully satisfactory, we will put their value at six billions. Let the government issue currency to the extent of one-sixth of this amount, or a thousand million dollars, secured by the railroads themselves. If twice or three times this amount were issued, the security would be equal to that of gold, but it would not be best to have an amount so great as to cause inflation. This amount should be paid to the stock-holders of the roads, and the securities on both sides properly executed. Let the full cost of running the roads, including the carrying of passengers and freights and the interest to stock-holders, be carefully ascertained, and then let ten per cent. more be added to it towards settling the $ 5,000,000,000 still due. When this amount is settled, the cost of travel will be a trifling affair. The following are quoted from the statistics of the day, and will show how other nations are getting the start of us in these respects.

Sixty-eight governments own their telegraph lines.

Fifty-four governments own their railroads in whole or in part, while only nineteen, the United States among them, do not.

In Australia one can ride 1,000 miles (first class) across the country for $ 5.50, or six miles for 2 cents, and railroad men are paid more for eight hours labor than they are in the United States for ten hours. Does this impoverish the country? In Victoria where these rates prevail, the net income for 1894 was sufficient to pay the federal taxes.

In Hungary where the roads are state owned, one can ride six miles for a cent, and since the government bought the roads, wages have doubled.

In Belgium, fares and freight rates have been cut down one-half and wages doubled. But for all that, the roads pay a yearly revenue to the government of $ 4,000,000.

In Germany, the government-owned roads will carry a person four miles for a cent, while the wages of the employes are 120 per cent. higher than when the corporations owned them. Has such a system proved ruinous as the croakers declared it must be? No. During the last ten years the net profits have increased 41 per cent. Last year (1894), the roads paid the German Government a net profit of $ 25,000,000.

It has been estimated that government ownership of railroads would save the people of the United States a billion dollars in money and give better wages to its employees, two million of whom would doubtless then be needed instead of 700,000 as at present.

Berlin, Germany, is called the cleanest, best paved and best governed city in the world. It owns its gas-works, electric lights, water-works, street railways, city telephones, and even its fire insurance, and thus makes a profit every year of 5,000,000 marks, or $ 1,250,000, over all expenses. In that city the citizens can ride five miles as often as they please every day in the whole year for $ 4.50, while two trips a day on the elevated railroads of New York would cost $ 36.50.

Mr. F. G. R. Gordon has given in the *Twentieth Century* the statistics with reference to lighting a number of American cities, and finds that the average price of each arc light by the year when under Municipal control is $ 52.12½ while the average price paid to private parties by the various cities is $ 105.13 per light each year, or a little more than twice as much as when run by the cities themselves.

Under the light of such facts, the rulers of our cities or states are criminally stupid or dishonest, who will sell their franchises to private corporations that, for their own selfish aggrandizement, will skin the people by forcing upon them the highest possible prices.

90. **Telegraphs, Telephones, etc.** These could be bought out by the government on the same general plan. The price for telephone service is enormous. The average price for telegrams in the United States in 1891 was thirty-two and a half-cents. In Germany, where the telegraphs are owned by the government, messages of ten words are sent to all parts of the country for five cents. From the greater distances and higher prices for labor here, we would probably have to pay from five to

twenty cents, according to the distance. The remarkable advantage of having each municipality control its own gas, water, coal and street railways, has been demonstrated by Birmingham, Glasgow, and other cities. To commit these things which are sacred to the rights of the struggling people, to cliques of greedy capitalists, is an outrage upon humanity.

91. For **Additional means** to pay off these large amounts, the following plans may be suggested:

All *large inheritances*, the result of the present unjust system of things, should in part revert to the government.

A *tariff* on foreign manufactured articles. This should not be very great, but sufficient to prevent the under-paid labor in the old world from competing too severely with our home products. When the labor of foreign countries has attained to a reasonable figure the spirit of brotherhood, which should include the whole world, will, no doubt, lead us to remove all tariffs, and do away with the complicated and expensive system of custom-houses, with their multitudinous officers.

92. The system of nationalism being gradually extended in all directions, the whole people would have all things at wholesale price, and life would become a harmonious and happy thing. Under such a system the tendency to gambling, over-reaching one's neighbor, dissipation, and crime of all kinds would be almost entirely abolished. There would no longer be any national banks to help the rich at the expense of the poor, no monopolies, no middlemen. Gradually the great store-houses, commissary departments, and granaries would be held by government for the people, and this alone would be an enormous saving of expense. The millions of dollars spent by merchants and others for advertising themselves at the expense of their neighbors, the hundreds of millions in a large city spent for thousands of separate stores, factories, etc., would be done away with. Finally, full integral co-operation would be arrived at, and the very land would be held by the government, sacred to the homes of the people. In a country like our own, where every man has the right of sufferage, the people have all things in their power, and their ignorance and folly are supreme so long as they do not work, through legislation, for these grand results, instead of getting up strikes, boycotts, and mobs.

93. **Intemperance.** Another immense good that would result from this condition of things would be the suppression of the evils of intemperance, as all liquors would be kept in the commissary department, and would be denied to all persons that tend to become intoxicated. Thus would be removed an evil which causes a majority of our crimes,

wrecking and destroying thousands of families, and a thousand million dollars every year. Let all prohibitionists, then, work with the people's party as the most rational and practical way of promoting the temperance cause.

94. **The wealthy themselves should encourage** *and help on such a cause.* They should cease to live as though this world were the eternal good, and the next, a misty, evanescent affair. They have it in their power to rise into the celestial atmosphere of beneficence, which, when developed, gives such happiness to those who are assisted, and an ineffable peace of mind to those who give. How like the breath of heaven would some of their money be if turned to the aid of some poor but talented artist—some inventor who has a genius that would bless the world if he only had some means to make experiments with; some scientist who is making great discoveries, but would make far greater ones if the money question was not forever blocking all his nobler attainments; some useful institution which is struggling to get a foot hold; some important periodical which is giving the world noble ideas, and should be sustained. But, no; the most of these men shut their hearts and the purses, and say they will not be troubled with these things—that their money is their own, which they have made by their skill and management. Falsehood and delusion! This money has come principally from the people, and the people have important claims on it.

95. Croesuses work under a false system, which tempts them to get all they can from their neighbors into their own pockets. We must bless them by lessening the temptations, and making it impossible for them to amass these unreasonable fortunes. Industry and temperance are great things; but the great fortunes of the world have not come into being thus.

96. As I have said, all of this excessive wealth is taken from the public, and, though often correct legally and according to the customs of society, is nevertheless robbery. The millionaire merchants, speculators, etc., often feel that they should do something in return for the suffering people, and so they devise some scheme of benevolence which they deem quite immense, and put perhaps a fiftieth part of their whole fortune in it. Even this amount is quite generally reserved until after their decease when they can no longer use it themselves, and when their wills are liable to be contested. But their nieghbors will rise up and glorify them for their liberality, as though they had done some great thing. Every merchant who makes his millions has taken them from the people, and most of it should be returned to the people, as did Mme. Boucicault of Paris.

97. But it is said that a majority of merchants fail and lose money. This is a wrong to the merchant, then, and another argument against the competative system.

98. But **Labor-saving Machinery** "it is said" enables one man sometimes to do the work of ten men, perhaps, a hundred. The other nine or ninety-nine men usually employed will not be needed, hence there will not be a demand for labor. Demand and supply must always work together, and when there is thus so small a demand, how can you expect any good wages to be given, especially when a multitude of persons are waiting to be hired at almost any price? This is the very argument of arguments for co-operation, and shows that the people must unite, own these machines, and hire themselves or be the veriest slaves. They must co-operate in all things, and then they will not only find employment at a good compensation but be able to procure extensively those goods which have been cheapened by labor-saving machinery, in this way again causing the field of labor itself to be much larger. The more labor-saving machinery the better under a true system, but under our false system the sewing-machines and the great manufacturing appliances have conduced far more to upbuilding the employer than the employes. The man of capital can monopolize the benefits of the machinery, and the laborer is left to shift for himself.

99. In speaking so freely of the character of the very rich and the perversions brought about by great wealth, far has it been from me to unduly color anything, but I have desired to utter a warning voice against the insane worship of wealth and to show how damaging is this wealth, both to the possessor and to the people from whom it is taken.

100. Noble indeed is the man of wealth who can rise above all its temptations, maintain a gentle, kindly demeanor toward his poorer neighbors, rise above selfishness and greed and dedicate himself and his great power to humanity. Was it not beautiful in Amos Lawrence to spend all the latter part of his life in looking up causes in which his money might prove a special blessing; in Garrett Smith to give away ten thousand farms to the poor and large amounts of money; in Lady Burdett Coutts of London to contribute millions of pounds sterling to the relief of the poor; in the English Hebrew, Montefiore, to shower his benefactions upon the oppressed and distressed of so many different nations; in the French lady Boucicault who not only gave a co-operative interest to hundreds of her employes, but millions of dollars in money to good causes of all kinds; and in many others whom I have not room to mention, to so freely offer their means for uplifting humanity instead of making themselves the principal object of their desires? That sunland,

California, bids fair to match her marvelous trees and vegetable growths with large-minded men like Mr. Lick, the Hon. Lelond Stanford, etc.

101. **Inventions.** We have seen that usually in the case of persons of great wealth the most of this wealth is drawn from the people, and just so far makes them poorer than they would have been. To be sure, in one sense, the people may have been benefited by the rich man, for the latter may have opened up great public improvements which help the whole community, but what I mean to say is, that if the people had combined and made the same improvements for themselves, or if government had done it at cost price, the community would have had to pay only the bare cost, and so the $ 100,000 or the $ 1,000,000 of profit that goes to the rich man could have been saved for themselves. It is said, however, that the inventor, for instance, the one who invented the sewing-machine, or the reaper, or Bessemer steel, does for the community what no co-operative action can do for them, saves human labour, and more than compensates them for the extra charge for the patent. Has he not a right then to make himself rich as long as he leaves the community richer by his invention than they would have been without it? Nine-tenths of mankind will answer, yes, to this question, but I think this little word should be modified in this case. In the first place America is a very ingenious nation. We have had an influx of all nations among us and get the combined skill of the Frenchman, the German, the Englishman, the Scotchman, the Irishman and the American, sometimes all working in the same shop. The skill of these people comes from generations of development and many a struggle of their ancestors. Finally some person carries an instrument a notch farther than his ancestors have done, the result of which is a complete machine. The credit is not due so much to this person as to the whole line of previous generations. Must all the nations in the world, then, have a heavy tax put upon them just to pay this one man? Was it right and best that all the first sewing-machines should have been sold for at least five times the actual cost of manufacture so that thousands of families were debarred from their use? Would not Singer himself have lived a better and happier life if he had received merely a good competency instead of leaving $13,000,000? Take another case. Some scientist has worked weary days and nights for weeks, months and years in developing the underlying principles of things. No one at the time is intelligent enough to perceive the greatness of his discoveries, and as they do not bring immediate results in money, he and his family have a severe struggle for existence. "I have no time to make money," says Agassiz, and no one who is enlightening and blessing the world in a scientific or literary way should be required to make money, but should be buoyed up by

society in order that he may accomplish all the more good. These principles having been given to the world, some man imbued with them constructs machinery, gets his patent and finds himself rich. He gets all the credit and money; the scientist is forgotten. Again, consider that multitudes of inventions were developed in part or entirely by some other person than the actual patentee. Many a poor person has worn himself out in perfecting some beautiful and useful thing. He appeals to some one that has more money to help bring it out before the world. This person takes it, perhaps makes some unimportant change, and gets it out as his own patent, leaving the true inventor and his family to starve. Take one more case. Edison is no doubt the greatest inventor that has ever been on this planet. But he freely admits that his leading inventions were revealed to him by some wiser power than himself. If this is so, if these are really free gifts from heaven, would it not be well if they could be made a little more nearly free for the world at large ? Edison is already said to be very rich. Let him be rich, but not too rich. What we would urge, then, in the light of all these facts, is that the inventor should be encouraged and well rewarded for his useful labours, but not to such an extent as to interfere with the free use of his invention by the people. The people have had a hard struggle and have a right to all the help that can be obtained from earth and heaven.

102. The **Statesmanship**, or rather the lack of statesmanship of different nations is sad to look upon. What a number of petty politicians who dwell on the surface of things, forever proclaiming the interests of the people as their leading purpose, and yet doing almost nothing for their real interests. Here in America one great party advocates a high tariff and the other a very high tariff as the central principle, and the leaders try to make the people believe that the country will go to ruin if their own party is not placed in power. How to give woman her rights and her suffrage; how to lift up the struggling masses from their degradation; how to control the mighty trusts and corporations that are already infringing upon the freedom and interests of the country, seem to be subjects about which they either know but little or care but little. On the whole, very few regulations are made in favour of the poor, very many in favour of the rich.

103. Look at India, that great sun-land of the east, where, in connection with China, the civilisation and religion of the world started. Its people would naturally be gentle and loving and aspiring, if they were not so ground down to the very dust. The Muhammadans and the Hindoo Rajahs had systematically robbed the people of everything they could raise, excepting enough to keep the breath of life in them and

furnish seed for new crops. What an opportunity for the great Christian nation, England, to show the superiority of their rule ! Have they done so ?

104. I will skip the fearful accounts which have been given concerning the oppressions that have ground this noble people to the earth, and quote a somewhat more favourable account from an article of Mr. Frank G. Carpenter, in the *Cosmopolitan Magazine*, for British rule, whatever its drawbacks may be, has no doubt been highly useful to the people there and most important for their upbuilding.

" England now gets a revenue of $ 109,000,000 a year from the land, and she pays her servants $ 15,000,000 to collect it. The contrast between this immense sum and the poverty of the people is painful. Nine hundred and ninety-nine out of every thousand people in India live in huts of mud, and a majority of them have not what we would call the necessities of life. The huts are so small that the beds have to be put out of doors during the daytime, in order to give room for the family. The sleeper uses neither sheets nor pillows. He sleeps in the cloths which he wears during the day, and the beds are so short that he must double himself up on them. The huts are unfloored and destitute of furniture. The family squat on their heels or sit cross-legged on benches. The kitchen utensils are a few pots and kettles, and the eating is done with the fingers. The floor is often the dining-table. The fuel is the droppings of the cattle, which are gathered up by the women, mixed and patted into cakes, and laid in the sun to dry. The people have learned by experience just how much food will support life, and an Indian husband would go into a rage if his wife ate a bit more than this amount. In my travels about the world I have nowhere seen such living skeletons as I found in India. Throughout the Ganges valley, where the land is as rich as guano, and where nature gives man two or three crops every year, the people are in a starving condition."

Mr. Carpenter then gives the more favourable side:

" Heavy as are her taxes, they are not so great as they have been in the past, and the one third of India which belongs to the native rajahs is more heavily taxed than that portion which is directly subject to England. The condition of the people in the English provinces is much better than that of those of the native states, and through Anglo-India you find good roads, irrigating canals and a system of hospitals and schools."

105. For thousands of years India has been harboring the almost idiotic notion, so common to barbarous nations, that woman is a very inferior, debased kind of being, not fit to associate with a man. The man will not eat or live in the same room with his own wife or daughters, and teaches the sons to treat their mother and sisters with a kind of contempt. Thus does this petty despot man, who gets his very being from woman, despise his own origin and establish a system which destroys the love and sweetness of home life. The presence of a strong nation like the English to drag the people out of their fearful ruts is almost like a boon from heaven to this people. May the rulers use their power kindly and justly.

106. Japan has a population of 37,000,000 and a few years ago it was estimated that it had in all only 10,000 paupers. But our western civilisation is taking effect there, and it is now said that paupers are decidedly increasing, and that the wealthy are also increasing—two extremes which belong together. Let Japan beware of the bad side of western civilisation and take only its good features.

107. Such is some of the statesmanship of so-called civilized nations. In one century from now our present civilization will be called barbarism. The most wonderful century of the ages thus far is the nineteenth, a century of marvellous discoveries and inventions—a century when humanitarianism is dawning dimly upon mankind—a century of transition from the darkness of savagism toward the morning twilight of glorious day. As this century goes out, steam will be on the wane, and early in the twentieth century better motive powers and cheaper heat and light will be in use. During the twentieth century all nations will see what Victor Hugo declares that "it is **Man** who ascends," and statesmen will put forth measures for exalting the whole people, instead of developing a plutocracy. During the twentieth century all advanced educational institutions will have the solarium over the tops of their school buildings or elsewhere, so that the students can quicken both their bodily and mental forces from the great fountain of nature, and this, of course, would be exceedingly important in primary schools where children are forming their constitutions. Early in the twentieth century horses will be less and less in use, and people will have their tricycle or quadricycle, which will carry two or more persons and probably be run by electricity,* or some force developed by the gases. These instruments will be cleaner and cheaper to keep than horses. During the twentieth century the air will be navigated with much skill and great velocity by flying machines, not balloons, though the *sky-traveler* will not supersede the land vehicles for carrying freight.

108. **Strikes and Boycotts.** Beautiful is love and the greatest power in earth or heaven. It is the warming, blending, harmonizing, cohesive force. Hatred is the element of weakness, repulsion, and disintegration. Love is happiness, hatred is misery. Revenge and destruction are the methods of wild beasts and come from that part of human natu e that has not yet evoluted out of savagism. Have I not shown my love for the interests of the dear struggling people with sufficient intensity in the foregoing pages of this work to allow me to speak freely to them ? To the laboring man I would say, I think I know your struggles, and how you have often been ground down with low prices and long hours, or been treated with contumely by your

* Tricycles of this kind are already in use.

employer, and some of your co-workers discharged because they have dared to organise for their own protection, and how you have, in various cases, been required to vote as the employer dictates, and thus sink your manhood into a kind of chatel slavery, and how you have often been subjected to petty rules and unreasonable fines, and how the government itself generally acts in favor of capitalists, and corporations and against the working man. All of these things, and more, I know, and I think there are tears of sympathy for you in your suffering from many a true soul; but cannot you see that it is the system more than anything else that leads to such unfair treatment? If you were in your employer's place, would you or would you not aim to get as cheap labour as possible, and then, if you had got pretty well up in the world and felt that you could manage your business without the dictation of anybody else, how would you feel to have your employers come and make threats in case you chose to use the coal kept by a certain company, or to signify to you that you must not use the groceries or the manufactured articles, of certain firms, or if you found certain parties unpleasant to you and you chose to discharge them, how would you like it if they should approach you and demand that you reinstate these parties, or threaten to leave abruptly and to boycott your whole business? Would you not, in such a case, feel like making war on them and defying them? Would not the employer feel the mighty spirit of liberty rising within him, and, in many cases, determine to dismiss all the men who should turn so abruptly upon him, even although he may esteem many of them highly? And think of the thousands of hungry men who stand ready to fill the places of the strikers, and see how difficult it is for them to carry their point. Can you not think of any better method of righting your wrongs than that of violence, which is sure to set capital and labor at war with each other? The Knights of Labor have advocated a great many admirable principles, including co-operation, and so have other bodies of laboring men which are now becoming powerful. The question is, can they, as a mass, see far enough and with unimpassioned spirit, to circumvent these long-headed capitalists, some of whom would like to grasp the earth for themselves? Have you not often shown a revengeful spirit and talked about victory more than justice in your struggles against your employers? Has not the fine intellect of Mr. Powderly, the Master Workman, condemned the use strikes and boycotts except in rare cases? Cannot you see that he has been right, and that, on the whole, the laborer has, in a majority of cases, been defeated and damaged more than benefited by this system? You say *the interest of one is the interest of all*, when you consider that one of your members has been wronged. Good, but there is a still broader motto which is,

The interest of all is the interest of all. Is it wise, because one or several of your members have been treated in a way you deem wrong, for your whole body to stop work, damaging yourselves thousands and perhaps hundreds of thousands of dollars, discommoding the whole community until they become disgusted, and especially injuring the poor?* Take the case of one strike as an example, the account of which is given in the Detroit *Free Press*:

"Of the men who struck on the 'Q' road, seven have committed suicide from despondency and scores of others will not be able to work out of debt for sometime. Many of the engineers who had homes partly paid for lost them."

109. Now, as the employing class happen to have the money and so have an advantage over you in most of these contests, and as they, in many cases, refuse to arbitrate and show a despotic disposition, is it not about time to adopt a more practical and a longer-headed way of doing things, such as using the ballot to elect legislators who will take the taxes off from the poor and put them upon the rich, where they belong; who will take control of the street cars and other means of conveyance, so as to transport at cost price the man of moderate means from the crowded city where his labor is, to a home in the country where heaven's pure air and sunshine can cheer and strengthen him; who will foster, as fast as possible, all fraternal movements that will give those who perform the labor an interest and part ownership in the same, and so develop their manhood and womanhood, and who will make the public schools more effective and practical, establishing kindergartens and industrial schools everywhere, furnishing books and apparatus free to every pupil, establishing a free library with objects of interest and instruction to the whole people in every school district, furnishing the school buildings or school-yards with apparatus for gymnastic practice

* Since writing the above, the famous Pullman strike has taken place and attracted the attention of the whole world. Mr. Debs, President of the American Railway Union, who has been vilified and falsified over the whole United States as a man who has ordered the strike and perverted the working people, until everybody is ready to call him a monster, turns out to be one of the grandest men of the day—philosophical, eloquent, broad, upright, and intense in his sympathetic nature. He found the people ground down by the Pullman Company, their wages so repeatedly and greatly lessened that it was almost impossible to keep their heads above water, the condition of their families being terrible, as was proved by repeated and careful investigations. The Pullman Company had made millions out of these poor laborers, a portion of which, on principles of supreme justice, should have been given back to them, instead of their receiving still further wrong. They finally concluded that they might as well starve by striking as to starve by trying to live in this way, and

and having skilled teachers in the beautiful accomplishments of singing, drawing, calisthenics, elocution, and other important arts. The laboring man himself, who should be nature's nobleman, must strive manfully to rise above all gross, immoral, or unkindly habits,such as drinking, or slovenliness of person or dress, or being untrue to one's word, and should study, read, and become intelligent in all the great movements of the world. Step by step, under the better progress of the future, he must become more cultured, rendering labor itself dignified by his own dignity, and forcing the capitalist to look up to him in his own department. While I have shown that the present condition of labor has been brought about by the iron heel of unscrupulous power, yet I would proclaim the fact that there is something Godlike about every human being, which, aided by a mighty will-power, can, in many cases, control adverse conditions and rise victorious over them. Nevertheless it is all important that the laws of the country should be changed so as to give all men, women, and children supreme justice and tender care, in the place of the crushing influences that have for ages kept them down. With a spirit of thoughtfulness and even kindness toward the man of overgrown capital, whose interests must not be unnecessarily involved, the labourers, and other intelligent citizens must insist upon a legislation by which a portion of such capital shall be devoted to institutions for the people, and by which great monopolies and trusts will become impossible. The people are vastly in the majority, and with a clear sense of what is justice and right, can carry their point, and that without resorting to the abomination of rude force or bloodshed. After a while, as the sense of justice becomes developed, people of means will see that it is perfectly right that they should be drawn on more fully than heretofore to sustain these fine institutions for the culture of the whole community, as also to encourage those co-operative movements which will enable a multitude of people to get back some of the rights and possessions of which they have been robbed for so many ages.

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there is no doubt that great good has been done by the strike, as a whole, as it has called attention to the injustice and greed of capital and the wrongs of the people. To make a bad matter worse, a certain Federal Judge Woods, of Chicago, without jury, in the most high-handed manner, and contrary to constitutional and natural rights, has sentenced Mr. Debs and some of his associates of the Railway Union to imprisonment for conspiracy. The capitalists, the trusts, and corporations have a right to combine and further their own interests without being considered conspirators, but they are indignant if laboring men from combinations or unions, will not arbitrate with them or recognise them in any way, and hound on the judges who prosecute them for conspiracy, if they choose not to submit to being skinned any longer.

110. These then are some of the facts of the social question ; men of means, men of worldly power, what will you do with them? Will you try to quiet your conscience by aiming a blow at me, calling me an extremist, an advocate of utopian theories? Just hold up a little and wait until you can shake my facts, before you make charges. Is that utopian which has been absolutely demonstrated in different parts of the world for one or two generations back? I will make a prophesy that nine out of ten of all wealthy people who read these facts and principles which I have striven so earnestly to found on a basis of justice, will demur at them and aim to offset them by the old stereotyped theories that have misled the world for thousands of years back. A few, however, whose souls have been baptized of heaven and who can rise above self and the fleeting interests of to-day, seeing how sublime is the prospect of a redeemed humanity, will give their aid in this beautiful work. Is it not the duty of every enlightened mind to use his influence, his tongue, his pen and his purse, when practicable, to forward such movements?

111. **Anarchy.** A class of people in Europe, seeing how hopelessly they are crushed down; how the civil power is on their necks and the privileged and wealthy few can rest in ease and idleness while they are in almost a mortal struggle to keep from starving, finally become desperate and advocate the destruction of all society. These are known by the names of **Anarchists.** The very *name*, which they seem to delight in, argues a streak of insanity, while their murderous methods belong to savagism, and yet these unbalanced minds see a side of truth which should be heeded, and include some men of thought and power, who, seeing the constant perversions of the government which bolster up the wealthy to the neglect of the poor, finally advocate the abolishment of all government and all laws.

112. **Socialism.** Genuine socialism, that which is *constructive* instead of *destructive*, is *par eminence* for peaceful methods, being hostile to every form of war, excepting the war against poverty and wrong-doing. To adopt methods of bloodshed and to destroy society is, of course, anti-socialism. Co-operative socialism makes people fraternal and peaceable beyond all other systems. Godin speaks in trumpet tones against all wars. He shows that the Franco-German war not only lost France two of her noblest provinces, Alsace and Lorraine, but cost, when summed up in full, about 27,000,000,000 francs or between five and six billion dollars! The following is taken from his "Social Solutions":

"With these twenty-seven billions there might have been constructed more than four millions of houses, each worth from 6,000 to 7,000 francs. This

would represent 20,000 communes rebuilt on a scientific plan and comprising, of course, all necessary public buildings.

"But those who have followed attentively the practical developments contained in this book will understand that these 20,000 communes might be 20,000 palaces, making the homes of 20,000,000 of people.

The palaces, surrounded by highly cultivated lands, manufactures, and model farms, would have made France the most prosperous, the most intelligent, and the most independent nation of the earth; while now, under the curse of war, France has become a land of devastations, of suffering, and poverty."

Then the prophetic spirit of Godin declares that "France is yet to inaugurate the era of peace on the earth.....Instead of organizing war, she will organise labor."

113. Thus speaks the great French Socialist, and such is the spirit of all the leading Socialists of the world, who would lift humanity above the plane of wild beasts and give them those harmonious conditions that would convert them into a brotherhood. But there are a few so-called Socialists who mistake the whole meaning of Socialism and sport the red flag which is interpreted as being the emblem of blood, whether its bearers mean it so or not. There is neither good sense nor taste in having one extreme color on a banner in this way, especially as it was made infamous by the Jacobins of France.

114. He who cannot see that Socialism, pruned, perhaps, of its extreme points and the marching hosts of the people, are, before very long, to take control of governments and communities, is but a poor prophet. Germany, France, England, Australia, and the United States are sweeping rapidly toward this goal. The following startling figures refer to Germany:

Election in	Total number of Social Democratic Votes.	Members Elected.
1871.	124,655	2
1874.	351,952	9
1877.	493,288	12
1878.	437,158	9
1881.	311,961	12
1884.	549,990	24
1887.	763,128	11
1890.	1,427,298	36
1893.	1,876,738	44

115. Those who think the Socialists are unpractical dreamers or poverty-stricken people who are jealous of the capitalists, should read

the following from a very able volume lately published by R. T. Ely, Ph. D., LL. D., Professor of Political Economy in the University of Wisconsin:

"The leaders of Socialism in the present century have generally been men of extraordinary capacity, placing them far above the ordinary man. One of the earliest English Socialists, Robert Owen, was at one time so successful in cotton spinning that he was called 'the prince of cotton spinners,' and he amassed a large fortune. The three early leaders of the modern German social democracy are Karl Marx, Friedrich Engels, and Ferdinand Lassalle. Karl Marx is recognised by friend and foe as one of the most learned and gifted economic thinkers of the present century; Friedrich Engels is one with whom economic philosophy must deal, and it is said, besides, that he has been more than ordinarily successful in business; while the gifts of Ferdinand Lassalle attracted the attention of all with whom he came in contract, Wilhelm von Humbolt calling him 'a miraculous child,' and Bismarck declaring in the Imperial Parliament that he was one of the most gifted and amiable men with whom he had ever associated. Bebel and Liebknecht, the political leaders of the German social democracy of to-day, whatever we may otherwise think of them, have talents and qualifications which enable them to hold their own with the leaders of the other great political parties.

"Another prominent German social democrat, a manufacturer, has a fortune which, it is said, places him among the millionaires of his country.

"The English Socialists to-day include men who were trained at the great English universities, and who have been successful in whatever they have undertaken."

116. The Socialists and members of the People's Party, including also the Populists, are moving forward virtually in the same grand pathway of high principles, the loftiest that any political party has ever attained to. These do not by any means include the lowest and most ignorant grade of society. The lowest grade of laborers and the real proletarians do not know enough to join them, but are swept like flood wood into the old parties, who preach democracy, but constantly play into the hands of the plutocracy. The intelligent grade of laborers, the superior mechanics, clerks, merchants, manufacturers, railroad employees, teachers, thinkers, workers of all kinds, are the ones who properly belong to this great party of the future. We have just seen how many of the world's eminent thinkers are guiding it, and many others could be mentioned. The great Englishman, William Morris, famous as a poet and man, is an intense Socialist. Victor Hugo, the greatest literateur of his day in France, was a whole-souled worker for the people, and J. D. Howells, one of the very foremost American literati, thinks and works in the same line. But various college professors and rators are springing up in behalf of the cause. Powderly is a brilliant

speaker and most practical man. Debs, the most abused and lied about man in Christendom, is supposed to be a monster who leads labour societies to ruin. But hear him, see him, and you will find him a broad-minded, calm-souled, tenderly sympathetic and exceedingly conscientious man, far superior to those who persecute him. But there are many other noble men and women whose names cannot be mentioned here.

117. The Populists are becoming an important party, virtually doubling once in two years. They have a series of great principles quite as high as the people can reach at the start. They are in the direct line of socialism, and as they advance they will doubtless modify some extremes and move forward to greater attainments. It is a mortifying fact that some Socialists are so narrow in their principles as to refuse to work with the Populists, thus leaving them to fight the battle of human rights alone.

118. **New Zealand** consists of a group of islands in the South Pacific about 1200 miles long, and covering 106,200 square miles. Its aborigines consisted of cannibal savages, but under the rule of Anglo-Saxon freedom and progress, it is becoming a teacher and model for the world. Formerly half a million people were in want, business men were threatened with ruin, and many were leaving the island to find work elsewhere. Now it is called the most prosperous country on earth, and every willing hand is employed at good wages. This magic change has been brought about by that same Socialism that superficial souls are wont to sneer at. Its large-minded people have established the following:

1. Government ownership of railroads, telegraphs, telephones and insurance.
2. A graduated income-tax.
3. Exemption of homes from taxation.
4. Discouragement of alien ownership of land.
5. Government assistance to unemployed citizens.

The Government has assumed control of all native lands, opened them up, and leases, rents, or sells outright, to a settler on easy terms, the ground he may require, or if he has no money, advances him a sufficient sum to make his first payments and begin improvements. The policy of the Government is to discourage one owner from holding over 150 acres of land.

119. The **Pleasantness of Labor** will be vastly increased under a co-operative system. Each one can have exactly or nearly the kind of employment that he or she is best fitted for and takes the most pleasure in, while associated life can provide those fine appliances and the

skilful machinery which make labor comparatively easy and pleasant to perform. The fear of being considered as mere servants or menials, of being thrown out of employment by some arbitrary master, of having want, sickness, starvation and the poor-house in the possible future, and of leaving a helpless family to struggle with a cold world, no longer rests like a nightmare over the life of the worker, nobody has to wander homeless through the country as a despised tramp, nobody to stand on the streets and swing shoe-strings all day, nobody to over-haul barrels of refuse matter for a possible morsel of something, no army of useless peddlers forever annoying industrious people, no prostituting of the bodies and souls of men and women for the sake of little money, and no one to practice trickery, gambling, deception, and perhaps murder, for the sake of robbing his neighbor, for all shall live in comfort, have many of the sweets of life around them, and be strong with the self-respect caused by a kindly social condition. This harmonious condition will rapidly develop the aesthetic, mental, moral and spiritual nature, and thus bring mankind to higher fountains of happiness than they have heretofore conceived of.

120. The **Malthusian Doctrine**, first published by the Rev. Mr. Malthus in 1798, asserts that population is ever liable to outgrow the means of subsistence, and that early marriages and other means of human propagation should be discouraged in order to prevent the overcrowding of the world. He formulated the theory that population increases in geometrical progression, but the means of subsistence only in arithmetical progression, which is as much as to say that people will lose their hands, their brains, and their power to earn their livelihood when they increase in numbers, a statement contrary to all the facts of Christendom, as states and countries like Massachusettes and England, for instance, if free, average the greatest wealth to the individual although so densely populated. It is founded on the wretched sophistry, accepted by nearly all the world, that wages are derived from capital or from the Government instead of from labor. It is an outgrowth of Adam Smith's theories, and such eminent writers as Mill, Buckle, Carlyle * and others were deluded by it. Such a theory is very soothing to the rich, for it shows that the woes and poverty of mankind result from there being too many people and not from the grasping character of avaricious men, who rob the poor of their rights. These men like to talk about the

* The Rev.Dr.Cuyler reports the following remarks as coming from Carlyle: "I wad like to see America. Ye may talk about your dimocracy, or any other 'ocracy, or any kind of poleetical rubbish, but the secret of happiness in America is, that ye have gat a vast deal of land for a very few people." Cheap land, of course, is a great help, but it requires a good many other things to make a person rich or happy.

"niggardliness of nature," but forget to speak of the niggardliness of men. They profess to believe in God as a kind Father, and then try to show that He has made such a botch-work of the universe that man and nature cannot work together, but are moving on directly toward ruin. One class of people is trying to remedy God's mistakes by making laws to prevent the world being too much overrun with population, while another class seem to fear that the universe is so imperfectly constituted that its population may run out altogether, and so they make laws to punish any one who may retard the conception of human beings. How shall we ever succeed in elevating humanity so long as they pervert the true philosophy of things? The following item, taken from an account of Sheffield, England, in *Harper's Monthly* for June, 1884, shows the Malthusian spirit:

"The Sheffield grinder inflexibly adheres to established usage, and resists every innovation. He suffers severely from a painful disease caused by the entrance of steel and stone dust into the lungs, and when fans were employed to create draughts that would suck the dust away, he objected to them because they would lengthen the average life of the trade, and lead to a surplus of labor!"

121. One of the foolish vagaries of Malthus was, that population, when unrestricted, will double every twenty-five years. At this rate before very many centuries the people would crowd the whole world so that they would scarcely have standing room. Henry George, in his *Progress and Poverty*, has overwhelmingly destroyed the Malthusian theory. He gives the following amusing illustration of it in the history of Confucius and his descendants:

"The descendants of Confucius still exist in unchangeable China and enjoy peculiar privileges and consideration, forming, in fact, the only hereditary aristocracy. On the presumption that population tends to double every twenty-five years, they should, in 2,150 years after the death of Confucius, have amounted to 859,559, 193, 106, 7 9, 670, 198, 710, 528 souls! Instead of any such unimaginable number the descendants of Confucius, 2,150 years after his death, in the reign of Canghi, numbered 11,000 males, or say 22,000 souls in all."

122. *An immense difference between* **Theory** *and* **Fact.** Such a population would be sufficient to stock a million solar systems for untold millions of years. But I must take issue with Mr. George when he attempts to prove that the population of the world is not increasing, and that the world will probably never become full. In several European nations the length of human life has doubled within two or three centuries according to statistics, which shows the progress that physiology and hygiene are making, and this progress is to be far greater in the future. It may take several tens of thousands of years for the world to become full. The wonderful science of the future will show men how to

develop vastly greater products from the earth and even the very atmosphere than they now can. The late Mr. A. N. Cole, of Alleghany County, New York State, by a system of trenches and subterranean irrigation, has raised 1200 bushels of potatoes from an acre of ground, and single strawberries which are a foot in circumference. At present mankind spend their energies incomparably more for war, liquor, tobacco, drugs, and other things that damage them, than they do for food and education. When these hurtful things have been outgrown, when under a harmonious society all the expenses of prisons, hospitals, poor-houses and law courts shall be abolished, the cost of living will be but small, and the earth will be able to maintain fifty or a hundred times its present population. Finally it will become full, however, and then what ? It will simply stay full and never overflow. Why ? Because in that far-off period people will have become so scientific and self-controlled that they will regulate their families with absolute system. Every man and woman will be mated, and their progeny will consist of just one male and one female child. But suppose sickness or acccident shall destroy these children before they are matured ? my reader may ask. At that period of the world man will be so evoluted, so powerful, so wise, so clairvoyant, that sickness will never occur, nor accidents ever be known. Chemical science will discover and prepare those substances which never break or burn under any ordinary conditions ; the motive powers will be far greater and safer than those we now use, and in case there is danger of accident, the searching clairvoyant vision which most people will then possess, will lead them to perceive and provide against it. There is no need of any worry about the world becoming overstocked with people, for the earth itself was made for man, and man shall yet hold dominion over its conditions.

123. **A Palais de Ville.** I recommend that in every town or city, a handsome central building shall be constructed for the general culture and use of the people. This may be called a Palais de Ville, or City Palace. The Palais de Ville may generally consist of at least three stories. The first story should be somewhat lower than the surface of the ground, though with an open space all around it, so that no soil can come against the outer walls to cause dampness. This story should have a fine eating-room as its principal feature, which should be conducted by the city, at a little above cost price, i.e., at a price which will pay for the material at wholesale price, for the wages of the cooks and waiters, and a little more which may go toward the cost of the building. Families in many cases will find it a great privilege to take some of their meals at such a place, for they will get the food already cooked and served to them at about the price that the material will cost at their

own homes, and thus save the litter and drudgery and extra fires and the trouble of marketing. On the same floor can be a small ladies' parlor provided with some lounges. A few minutes of rest on these would prove a great boon to many a weary woman who has had to walk the city streets. The second story, or first story from the street, may contain handsome apartments for the public library and reading-room, and perhaps a department of beneficience to look out for the poor and the suffering ones of the city. These reading-rooms and the library should, of course, be free to all, and as far as can be afforded should have works of art or, of public interest as well as the books and periodicals. The next or upper story should be lofty and have a gallery and arrangements as a beautiful concert or lecture hall, in which lectures with music or variety entertainments of an excellent kind might be given as often as once a week with an ordinary charge of only ten cents for each person, or on occasions where extra and high-priced talent is employed, of twenty-five cents. Once in two or four weeks, a *sociable*, I think, should be given without charge, to draw the people of the whole city together in a more fraternal fellowship and for a restful interchange of magnetisms and sentiments. Being a beautiful building, all will aim to be equipped in tasty attire, though the rich should disdain to dress gorgeously to discourage their humbler neighbors. On such occasions people of all classes can mingle freely together, the rich and the poor, which will not interfere with their having their special friends at their own residences at other times. When a person says to himself, concerning his neighbor, I am better than thou, I am holier than thou, it is always a sign of inferiority. The true nobility may be more refined and large minded than others, but will always have a sympathetic feeling for them, and will be willing to do them good by example or words, or otherwise. During the other days of the week, the concert-hall can be let to different parties for lectures or concerts, and thus the expenses of the building can be mainly, if not entirely, defrayed. A handsome Palais de Ville would be a matter of pleasure and pride and a great means of culture to all the citizens of a town. The expenses of the library and lectures could be aided by the state as well as as by the town, on the same basis as that of the schools, they being among the most important features of the educational system. In a city laid out on a model plan like that which I have given, one of the parkules could be used, and this building be placed directly in the centre of it. If the town should be a co-operative one, it might be well to make no charges for the lectures. It would be well to employ a band of music on lecture nights, some time before the lectures should commence, or, in fact, it would be very

desirable to have it for a while every evening. In a large city several of these palaces might be sustained.

MISCELLANEOUS POINTS.

1. Many a poor person is treated with far less consideration than our horses or cattle. Why? Because owners of horses have a selfish money interest in them, and hence will not allow them to be abused, but men, women and children are cheap under the present degrading system of things, and if they happen to get killed off by overwork and deprivation, what matter ? Several cases occuring in England have lately been brought to public notice in which men were required to work day and night with the exception of three or four hours for sleep. The following case I clip from a daily :

"Josiah Aldcroft, an English carter, fell asleep on a load of hay, tumbled under the wheels, and was killed. At the inquest it was developed that he had been kept at work for a week with an average of only about three hours' sleep a night and that this was a usual thing with men in his business. The Coroner, at the request of the jury, promised to call the attention of the authorities to the matter."

2. The **Late Dio Lewis** intimates that people gain great wealth by having larger brains than other people, and then aims to draw sympathy in behalf of the wealthy by showing how much care and worry and insomnia they are subject to. Sure enough they do suffer, and that is one reason why we would prevent overgrown wealth. It causes suffering all around. As to size of brain, the philosophers, scientists and statesmen who are generally poor money-gainers, wear the largest hats. Jay Gould, nearly our richest American, is said to have worn only a 6¼ hat.

3. **Money** is supposed by some to be the cause of all our evils. No! it is the misuse of money, the unequal distribution of money the mad race for money, that brings disaster to the people. Money, or, at least the equivalent of money in the form of paper certificates, signifying value, is a most convenient condensation of values into a small space, so that it can be easily taken in the pocket and exchanged for other kinds of value. Money does not need to consist of intrinsic value, however, such as specie, but should be issued, with proper limitations, by the state.

4. In **San Diego**, California, an amount of $ 2,000,000 has been subscribed for an orphan asylum. In a co-operative community, all such expenditures are done away with, as all children are properly educated and cared for by the society itself, in connection with a system of things already established.

5. **A Fearful Responsibility.** John D. Rockfeller, of this country, is said to have a regular annual income of many million dollars. Being a Baptist, he, of course, professes to follow a Master who declaimed against riches, and who commanded the wealthy to give their possessions to the poor. Is it any wonder that millions groan and struggle with poverty when so many overgrown capitalists have drawn these immense sums from the people?

6. **The Nationalists** are an organization, started in Boston, and spreading most rapidly over the country. They advocate the nationalization of railroads, telegraphs, expresses, municipal lighting, heating, and other great industries, for the good of the people. The Nationalist clubs first sprang into being from the influence of a remarkble book called *Looking Backward*, by Edward Bellamy, of Massachusetts. Many eminent persons have already joined these clubs, such as Edward Everett Hale, T. W. Higginson, Miss. Francess Willard, leader of the Woman's Christian Temperance Union, Mrs. Mary A. Livermore, Prof. de Leon, of Columbia College, W. Mcllavaine of *Harper's Magazine*, and many others. Edward Everett Hale thinks the word Nationalist not a good name, as Municipalities, Counties, etc., have a right to regulate their local interests, such as lighting, heating, etc., without any necessity of national action. This is a grand movement and should give to the people great privileges at cost price. It is the direct pathway to integral co-operation. Our papers are apt to call it *paternalism*. It is really *fraternalism*. Populism seems to be taking its place.

7. Among other things it is stated in this grand work of Mr. Bellamy, that every human being able to work should receive exactly the same compensation, that there may be no inequality. This will probably have to be modified. I believe that in the perfected future, there will be a system of institutions, grading upward according to the advancement, which will include all society and that those who have attained to the higher institutions will supervise the members of the lower. Under the high development which is to come, the examiners who admit persons to a higher grade, should possess not only a high scholarship and character, but be so psychometrical and clear-sighted as to weigh the moral status of those who apply for a higher grade. If an applicant feels that he is better than his fellows, or works on the principle of selfishness, or is subject to any debasing habits, in just so far will it be against his promotion. Now what I would say is this: when a person by long effort, culture and study has attained to a higher grade, he has come into a greater responsibility for others and a greater field of development for his own future growth, demanding a larger library and more extensive artistic and other equipments, hence he should receive

a somewhat larger compensation for his labor than when in the lower grade. This is in harmony with equitable commerce, which says, that one who has a business that requires years to learn, should receive more than one whose business requires only weeks or months. These gradations of attainment thus stimulate to excellence, and furnish directors for a community or country on a far more accurate basis than even a republican government, in which caucuses and rings often rule without regard to qualifications.

8. Mr. Bellamy condemns all use of money, and advocates the use of credit cards as a representation of a certain amount of labor. But these are to be used as a medium of exchange, and after all they constitute money, or a system of paper currency which is really the wisest style of money. These credit cards should possess a variety of values, and thus obviate any necessity of punching which *Looking Backward* advocates.

9. **How Millionaires Bless the People.** When the late John Jacob Astor was deceased and his son William Waldorf Astor came into possession of his vast estate, estimated by some at nearly $ 150,000,000, the New York Sun made the following remarks on the subject:

"Several years ago the Astor income was computed from a careful examination of the tax lists at one million dollars a month. In the estate there were 2,700 dwelling houses alone, of an estimated average rental value of $ 2,000 a year each, to say nothing of the vast amount of business property and the personality. The estimated income of $ 12,000,000 a year would therefore seem to be not excessive.....

"Has this enormous accumulation of landed property in the lands of a single family been injurious to the interests of the community?

"We say plainly that it has rather been of advantage to the community. The wealth of the Astors has in no wise prevented any other man from getting rich. In important respects it has helped others to that end. With their vast resources the Astors have been able to put up houses for thousands of tenants who were not so situated that they could build houses for themselves".

Such is the superficial talk so common with our newspaper press. The people cannot individually build the houses in which they live, therefore it is right and best that Astor should build for them, and charge a rent which draws so many millions from them every year. Cannot these editors possibly see that if the people should combine and co-operate, they could build their own houses and have them at cost price, thus saving all these millions of dollars? Suppose Mr. Astor should live and increase during twenty-five years, he will draw at least $ 500,000,000, from the people, and allow himself an enormous salary besides. At the same time the other millionaires would raise the sum

taken from the people of New York to at least $ 5,000,000,000, and this in less than a single generation ! *And all this harms nobody, but helps people to get rich !* How immoral for editors to advocate such monstrous principles.

10. The late **William Astor** passed away, leaving an estate valued at about $65,000,000. Has he handed back the most of this to the public from which it was taken. No. Has he even divided it equally among his own children ? No. The whole amount for public benefaction was $ 145,000. Nearly the whole amount of his estate has been given to his son John Jacob Astor, a comparatively small amount being granted to his wife and daughters, one daughter whose conduct did not please him having received nothing at all in his will. Such is the perverting character of a great wealth which leads to the imitation of old-world aristocracy, considering woman an inferior being, and in violation of all principles of justice, aiming to sustain the family grandeur by turning over nearly all the property to one son. What do such people care about the thousands all around them that are agonizing in poverty.

Gould has also passed away, and after taking seventy-five million dollars from the people has given back virtually nothing.

11. There are many excellent people among the Socialists who declare that co-operative colonies are not desirable as the proper aim should be to bring the whole people into the benefits of a true social life. This is but another way of saying that we must have a whole loaf or none. Of course every large-souled person should work early and late to have the railroads, telegraphs, telephones, expresses and other great popular needs in the hands of the nation for the use of the people and should urge the importance of having every city furnish its own gas-light, electric-light, water, street cars, etc., at nearly cost price, instead of making its inhabitants pay double price to some selfish corporation which gets rich by thus oppressing others. But can they not do all of this and have a little piece of heaven besides, as they carry out their own private co-operative colony? If the beauties of socialism can be exemplified on a small scale, will it not go just so far to recommend the system on a universal plan as soon as the people can be brought to understand it? By the time we get a hundred or a thousand Familisteres over all parts of the country, the work will be virtually done and the nation itself will make haste to adopt a universal socialism.

12. Socialism holds to the sacredness of a true **Marriage**, but condemns a marriage despotism, which would hold in a licentious union two persons who despise each other and which forbids all recourse to divorce even under conditions ruinous to themselves and children. Miss. Lanchester

of England, who is nominally a Socialist, condemns marriage under the plea that it destroys woman's independence, and the papers have hastened to attribute these loose views to Socialism. Such a falsehood, and the assertion that Socialists advocate the possession of all things in common and are a dangerous set of men who tend toward anarchy and ruin, are proclaimed by a fossilized and selfish public. The truth is that Socialism combines individuality and liberty with public harmony and law, and will be the salvation of the country from slavery and ruin of the people, which is ever widening under the present system. Socialism is to be the joy and exaltation of the nations; a system of fraternalism not paternalism; of Christianity put into practice, with the golden rule and equal love to one's neighbor as one's self, as central principles; careful of all human rights, including those of the rich as well as the poor, while the old systems, both ecclesiastical and civil, are too generally heartless, inhuman and bent on self-aggrandizement.

HUMAN CULTURE AND CURE

PART THIRD

MENTAL AND PSYCHOLOGICAL FORCES

PART THIRD

Mental and Psychological Forces

1. PHILOSOPHY IN ITS PAST DEVELOPMENTS.

1. **Science,** as generally understood, gathers up the facts of the material world and arranges them in systematic order. In its higher aspects it should also include mental phenomena and the exquisite forces connected therewith.

2. **True Philosophy** includes all there is in science, and extracts truth and wisdom therefrom. In this definition I find myself forced to differ from that graceful and learned writer George Henry Lewes, who in his "Biographical History of Philosophy" treats the vague theories advocated by so many of the so-called philosophers of the past, as having a right to the title of Philosophy and hence it is a greatly inferior thing to Science, which builds on the facts and realities of nature. "Philosophy," he says, "has been ever in movement, but the movement has been circular; but this fact is thrown into stronger relief by contrast with the linear progress of Science. Instead of perpetually finding itself after years of gigantic endeavor, returned to the precise point from which it started, Science finds itself year by year, and almost day by day, advancing step by step, each accumulation of power adding to the momentum of its progress." But the very word Philosophy means *a love of wisdom or skill,* and its grand purpose demands that the universe shall be searched into and reduced to law.

3. **Science itself has been greatly delayed in its triumphal progress by not having had a true system of Philosophy** to make known the underlying principles of things, just as Philosophy has been impeded in the past by not having had the revelations of science. Induction and deduction should work absolutely together.

4. Various things contributed to the **Imperfection of the Systems of Philosophy of Antiquity:** 1st, the deficiency of scientific development from lack of the telescope, the microscope, the spectroscope and a hundred other instruments, so that no correct ideas of the starry heavens or of terrestrial phenomena could be acquired; 2nd, the absurd and very common idea among the ancients that the facts of nature and of everyday human life were unworthy of the research of philosophers, while, on the other hand, the wildest speculations and most baseless conceptions were considered dignified and important. Thus Thales (B. C. 636) taught that

all things, including the very gods, have their origin in *Water;* Anaximines (B. C. about 529) considered that air is the generator of all things; Pythagoras (B. C. about 582) concluded that all material things have their origin in *Numbers;* Xenophanes (B. C. 570–480) proclaimed that the God-power is the infinite blue sky; Heraclitus (B. C. 503) considered that *Fire* is the principle of all things; Empedocles, (B. C. 444) affirmed that the primary elements of all things are just four, Earth, Air, Fire, and Water; Democritus (B. C. 460) came to the somewhat materialistic conclusion that only atoms and space exist"; Georgias the Sophist and Nihilist (B. C. about 427) affirmed that "Nothing exists: if anything exists it would be unknowable, or if anything exists and is knowable, the knowledge of it can nevertheless not be communicated to others; Plato (born B. C. 427), who considered ideas all in all, said, "Matter, which existed from eternity, together with God, is absolutely devoid of quality and possesses no proper reality"; Aristotle (born 384. B.C) says, "No place is empty; space is limited; the world possesses only a finite extension; outside of it is no place. Time is unlimited; the world was always, and always will be. The *primum motum* is heaven. The sphere to which the fixed stars are attached, has, since it is in immediate contact with the Deity, the best of all possible motions, namely, the motion of uniform circular rotation. Aristotle seeks to explain the movements of the planets, by the theory of numerous spheres moved, in various senses, by unmoved immaterial beings, who are, as it were, a sort of inferior gods. The earth, which is spherical, reposes unmoved at the center of the world*"; Epicurus (B. C. 341-270) declared that the "real and apparent magnitudes of the sun and other heavenly bodies are the same," which shows that he did not grasp a trillionth or a quadrillionth part of their real size; Plato says, "As there is nothing beautiful but Intelligence, and as there is no Intelligence without a Soul, he placed a Soul into the body of the World, and made the World an animal." "As soon as that vast animal began to move, live and think, God looked upon his work and was glad."

5. **The Veneration for the Ancients** so common in nearly every college and educational institution, has a detrimental influence on the minds of the present day. There were grand souls from whom we can take lessons, and men of brilliant reasoning powers, but as they were ignorant of the whole plan of the universe, their reasoning is often very imperfect. They knew almost nothing of the whole planetary and solar system, misunderstood physiology and chemistry and material forces generally, and, being thus ignorant, it was impossible for them to get a correct conception of the mind itself. Pythagoras, aided by inspiration,

**Ueberweg's History of Philosophy, Vol I. P. 164.* What a little insignificant universe is thus portrayed by this greatest scholar of antiquity.

got a correct glimpse of the solar system, but became an advocate of metempsychosis; Zeno and the other Stoics, aimed at rigid moral principles, but considered that they had attained to superiority by becoming so much like a stone as not to manifest sensation or impulse, whereas they sank to inferiority by thus violating nature; the Sophists taught the art of disputation, and included many of the wealthy and fashionable classes, but, like many of the fashionable classes of the present day, were too often lacking in all deep convictions; the Epicureans advocated much that was genial and cheering, but declared that pleasure was the chief end of life. Such men as Plato and Aristotle made a vast study of the problems of man and the universe, and attained to some great truths; but a schoolboy of the present day could teach them more of the facts and laws of nature than they ever knew. I believe it will generally be conceded that only in sculpture have the Greeks, the most advanced nation of Antiquity, surpassed the moderns. In those ignorant ages, when there was no printing press to illumine the world, and before the achievements of real Science, these eminent minds struggled manfully to gain truth, and they should have due credit therefor, however imperfect their results. I wish to state right here an opinion in which many very wise people agree with me, namely, in most of the Universities and Colleges of the world, these men of the past are apotheosized to such an extent that their students become charged with their spirit and teachings until they have an aversion to the far grander sciences and progressive movements of the present day. "Distance lends enchantment to the view," and like the Chinese, they are forever looking backward to the past, instead of toward the future with its sublime possibilities. While, of course, there are great advantages in college training, their teaching is too narrow and unpractical and their students, instead of having their minds open to conviction and alive to the new and true, frequently become enclosed in their own shells, until they are ready to scoff at those who bring before them some great discoveries. They have got their ideals, and modern attainments must not differ much from these or their judgment will be adverse. Take, for instance, a character like Plato. Statements will often be made in our public press and elsewhere, that in him was to be found the culmination of human development. We may see the effect of such teachings on the mind of Mr. Alfred Russel Wallace, himself eminent as a scientist and beloved as a man. In a certain publication he was led to announce the distressing doctrine that the human race cannot be improved by heredity, partly from the fact that mankind, as he presumed, had never been able to improve upon Plato during more than two thousand years. Does not the law of evolution lift man and nature into higher developments as the centuries and millenniums roll

by? Who was Plato that he should thus discourage the people of to-day? Let us see if there is not some delusion about this matter: 1st, Plato made everything of ideas, considering them substance, reality, existence, the eternal things; while material things were not substance, not reality, in other words pretty much the same as nonentities. Thus, a carpenter may make a table, but this he declares has no real existence: it is only the idea of the table that constitutes a reality. Matter, he says, is perishable. Nothing of the kind. Like Spirit, or like Truth, it is eternal. It is changeable in its forms; so is Truth in the forms in which it appears. These dreamy, unreal theories have beclouded thousands of minds and put back the world's progress, however much the Grecian intellect may have helped the world in other respects; 2d, Plato discovered no immutable laws of things on which he could rest, but experienced many changes of opinion. "He contradicts himself constantly," says George Henry Lewes, in his "Biographical History of Philosophy"; 3d, he was severely intellectual and, though aiming at a high standard, was unloving and uncongenial and almost inhumane at times. His theories with respect to women and the marriage question were disgraceful; 4th, he condemned poetry and music, the very things that add some of the highest glories to life; 5th, while stately and sometimes brilliant in style and often acute in his arguments, in many cases his reasoning is weak and his fine-spun theories can be entirely destroyed. Macaulay has shown with great force the unpractical nature of the Ancients, who spent a great amount of time on such questions as "Is pain an evil?"—or declared that "Nothing can be known," or asked, "if it can be known that nothing can be known," and so on, deeming it degrading for a philosopher to adopt the processes of induction in a way to cope with the facts and utilities of everyday life. Socrates, Aristotle, and others sometimes advocated inductive processes, building on the facts of nature and experience, but not until Lord Bacon (1561—1626), proclaimed them in a more emphatic way, did the world wake up to the great importance of the matter, as a result of which, invention and scientific achievement commenced their wonderful career in all directions. One trouble has been, however, that our scientists have worked too exclusively on the inductive plan and neglected the grand truths that they might have gathered by combining both induction and deduction, and so, as Kant would have it, have followed the method of empiricism.

6. **Empiricism and Dogmatism.** According to Kant, in Empiricism "the only method of philosophical inquiry is experiment, and the combination of facts ascertained by experiment, and philosophical knowledge is limited by experience. Dogmatism is the philosophy of those who believe themselves able in thought to transcend the limits of all experi-

ence and to demonstrate philosophically the doctrine of God's existence, the immortality of the human soul," etc. (*Ueberweg.*) Bacon, Hobbes, Condillac, and to a considerable extent Locke and the Scotch philosophers, are ranked on the empirical side; Descartes, Spinoza and Leibnitz on the dogmatic side. Empiricism is usually understood to mean a system founded on external perceptions and on experience without a basis of principle to guide in the matter. In this respect our medical men will too generally be found wanting. To reason *a priori*, to build up theories without facts and experiences is another very imperfect method of procedure. To class such thinkers as Bacon and Locke among empirics is somewhat extreme, although their tendency is in that direction.

7. **Idealism.** Lack of space will allow me to give only some brief points in the philosophical speculations of the world, but there are certain hallucinations with regard to subjective and objective ideas extending all down the ages, confusing the whole realm of thought, that it is important to have the reader's attention called to. This infirmity of perception reached many brilliant intellects, minds that could grasp some principles with great clearness, but when they came to this point, became as weak as children. Among these minds were Plato and many other ancients, also Locke, Bishop Berkeley, Spinoza, Kant, and the German Idealists such as Fichte, Schelling and Hegel, which last reached almost a complete insanity. John Locke (1632–1704), came part way over to idealism and mistook the *perception* of an object for the object itself. He considered that "extension, figure, motion, and, in general, all spatial properties belong to the external objects themselves. Color and sound, on the contrary, and all other sensible qualities (heat, cold, etc.,) are only in the perceiving subject and not properly in the things perceived" (*Ueberweg*). But a fire will burn down cities or forests whether any person perceives it or not, and blue light will dash a bottle of hydrochloric acid into atoms whether any one is looking on or not. Point to a fire and tell a three-year-old child that the fire is inside of him and he will laugh at you and wonder why you tell him such a foolish thing, but Bishop Berkeley considers "the existence of unthinking things without any relation to their being perceived, perfectly unintelligible. Their *esse* is *percipi*; nor is it possible they should have any existence, out of the minds which perceive them." Again, he uses the following language: "*An idea can be like nothing but an idea*; a color or figure can be like nothing but another color or figure. Again I ask whether those supposed originals or external things, of which our ideas are the pictures of representations, be themselves perceivable or no? If they are, then they are ideas, and we have gained our point; but if you say they are not, I

appeal to anyone whether it be sense to say a color is like something which is invisible; hard or soft like something that is intangible ?"

This vein of sophistry seems to have beguiled the fine intellect of Mr. George Henry Lewes, from whose History of Philosophy I have quoted the foregoing, and he remarks as follows: "Realism is without a shadow of an answer. The philosophers are powerless against a theory so defended. No wonder that Idealism should have been pronounced irrefutable; the weapons were not forged, or, at any rate, were not in the armory of philosophy, which could successfully assail a fortress built on such a position."

Let us see what there is in this. An *idea* is a form or picture or literally something seen. When Berkeley says, an idea can be like nothing but an idea, it is like saying a picture can be like nothing but a picture, and yet it is one great object of a picture to be like the tree, the landscape or the human being which it portrays. Suppose we wish to get an idea of the form and color of a house. The sunlight carries its exact image and hue to the eye and paints it upon the retina, from which it is transmitted to the sensorium. Berkeley and a whole line of so-called philosophers have come to the conclusion in such a case, that the house itself has gone into the eye and mind of the person perceiving it, for they have determined that all things are subjective. The image or idea of a house has gone into the eye and therefore there is no house. The image itself is considered the reality, the substance, the eternal thing, but the actual house is a nonentity, a nothing. We will suppose a number of philosophers are standing before a large mirror. What should we think of them if they should turn toward their images reflected in the mirror, and say, "These and that which is predicated of them are the eternal realities of our being, the noumena, the substance. Our bodies here are mere phenomena and unrealities. Would not these represent those idealists who worship the mere images and ideas which have been communicated to the brain from the external world, and then ignore the infinite universe around them from which those images came?

But Plato, Berkeley, and others say that the forms, colors, and sounds of the external world do not resemble the perceptions of the same. Why not? A whole landscape with its forms and colors is minutely painted on the retina. When the short or long cords of a harp are struck they are answered whithin the ear by the short or long rods of corti, which give the perception of pitch. When rude vibrations which give loudness of tone are caused, rude vibrations are represented in the tympanum and communicated to the sensorium. Men who advocate these unreasonable theories are apt to pervert the facts of nature itself to carry their point; or, rather, they look contemptuously upon nature.

I have shown elsewhere that nature's unrestricted growth teaches spiritual and moral perfection.* It should be understood that external nature, including the human body, when rightly apprehended, is a realm of divine harmony, and its laws should be understood in order to the highest spiritual unfold nent. How it is that so many men of learning and character in other directions, could have got into such an absurd groove, may be accounted for from a natural idiosyncrasy, and also perhaps from perverted theories from their childhood up, which caused them to be easily psychologized in that direction.

8. **Some German Idealists. Johann Gottlieb Fichte** (1762-1814), a high-toned and eloquent man, made Consciousness, or the subjective system all in all. Illustrating his theory, he says: "A tree is a perception, and all perceptions are subjective," i. e. in the mind. His premise is entirely wrong. The tree is not a perception, but a thing perceived. The perception consists of the mere image of the tree with its forms and colors as thrown upon the retina and transferred to the sensorium. This of course is subjective, being a process of mentality. But what has that to do with the tree itself which may have stood in its majesty centuries before Fichte ever saw the light? It seems as if any schoolboy might have discriminated between the perception of a tree and the tree itself, and yet this brave-souled man was a Professor of Philosophy at Jena, at that time the greatest of German Universities.

Frederick William Joseph Schelling (1775-1854), a student of Fichte and an eloquent man, who also became a Professor at Jena, maintained the identity of the object and subject, also of Knowledge and Being. While Fichte traced everything to finite or individual consciousness, Schelling was a Pantheist, and the Ego in his system was a part of the Infinite. He made a good hit in maintaining that vegetation and life were due to chemical action, but chemical action requires the aid of spirit.

George Frederick William Hegel (1770-1831), Professor at Jena Heidelberg, and Berlin, was to a considerable extent a follower of Schelling, but carried his idealism to a still greater absurdity. By an algebraic method it can be demonstrated that one is equal to two, but Hegel can outdo anything of that kind, as he shows that mind and matter, object and subject, being and non-being, light and darkness, are identical, and finally demolishes the whole universe excepting ideas, leaving not even consciousness untouched as other idealists had done. When Kant said, "There is considerable difference between thinking we possess a hundred dollars, and possessing them," Hegel replied that, "Philosophy

* "Principles of Light and Color," P 38.

does not concern itself with such things as a hundred dollars." This, with various other things, shows a weakness of intellect on Hegel's part. He despised and condemned Isaac Newton and considered his wonderful discoveries mere illusion, although Newton's more inductive methods had changed and blessed the world, while his own methods were fruitless in comparison. Lefevre calls Hegel's reckless perversion of truth in which he "plays off right against wrong, establishing the identity of contraries, the satyr blowing hot and cold at once." Schopenhauer, the pessimist, speaks of these "three sophists," and although himself a German, says, " A radical defect of the German temperament consists in seeking in the clouds what lies at their feet. Utter in their hearing the word *idea*, which to an Englishman or a Frenchman presents a clear and precise notion, and they are at once ready to start in a balloon. . . . The chief cause of the extreme flattening of the brains was Hegel, a moderate intellect, who by every known means endeavored to pass for a great philosopher, and who succeeded in assuming the attitude of an idol before some very youthful minds, at first unduly meddled with and ever since hopelessly muddled." Lefevre says that, "Though the school (of Hegelianism) has been dispersed and the doctrines have vanished, they have left behind them certain baneful influences, that have tainted the mind of several generations.

Kant (1724–1804), though advocating much truth, was himself perverted by Metaphysics, which has been the bane of nearly the whole line of so-called philosophers, and he himself misled Fichte, Schelling, and Hegel, who were his students. The word *Metaphysics* means *beyond nature*, or *away from nature*, and the old thinkers, enamored of their own speculation, imagined that they could travel in some grander pathway than that which is connected with the visible universe, and so built their structures in mid air. The word *Metaphysics* must be replaced, by **Psychophysics** or **Physiomentalism** in the higher philosophy of the future.

9. **Hindoo Philosophy**. Although the master spirits among the Hindoos, growing up as they do nearly nude under their powerful sun, have probably attained to the greatest psychic power of any people in the world, their knowledge of science is limited, and their methods of Philosophy tend toward the flighty Idealism which I have been describing. People whose minds are not analytical are sometimes psychologized to think these people are unequalled in their theories of things. Mrs. Besant travelled among them and came to the conclusion that they were far beyond western nations in their grasp of philosophical truth, and a Dr. Hensoldt, in one of our leading magazines, has gone wild in their favor. He ranks their ancient system as "one of the greatest

triumphs of the human mind . . . in comparison with which the logic of our foremost modern luminaries sounds like the veriest child's prattle." But what is this wonderful system, and what does it teach us? "Matter is an illusion; mind alone is real." "The entire external world can have no independent existence, namely, cannot be real except as a mental phenomenon, and that if the mind should ever be destroyed, or cease to exist, the world, as a matter of course, would cease to exist also." The Doctor is evidently standing on his head, and seeing everything upside down blames us occidentals for not seeing them in the same way. He abolishes matter and makes the mind all in all, and yet the mind itself is dependent in part on matter in the form of human brains. How does the mind act? Perhaps the Doctor had better study into the chemistry of mental forces before he decides so positively between eastern and western methods. There are a plenty of people even at the present day who go through with the insane process of blotting out the material universe with the mere stroke of the pen, hence in this foolish style of greatness we are just as expert as the Hindoos. Some of their great psychic achievements will be explained farther on.

10. **Christian Science.** A class of people calling themselves Christian Scientists has sprung into some prominence in America, and has gained this prominence by the many cures which they have made. Many of these persons are of genial and lovely character, with a pleasant magnetic atmosphere which would tend to heal their patients even were they not to teach them at all. Then they bring before the people, many of whom are desponding, doubting, bilious, and worldly, the grandeur of the human soul as a part of the Divine Presence who rules and encompasses the universe, and the power of the spirit when under the direction of knowledge and right belief to triumph over the ills of the body. All of this is a beautiful side of truth and by its means they have cheered and uplifted thousands, for which they should have due credit. But like so many other human beings, they can see only one side of Truth, being wholly unacquainted with the duality of law. From the house-tops and everywhere they proclaim that *there is no such thing as matter and no such thing as disease*, the merest assumption and the greatest falsehood in the universe. At heart, of course, the most of them do not believe it, as they take pains to have food for their bodies, fire to warm them, and houses to shelter them. So far as they attempt to live up to this false side of their doctrine it is disastrous. They will say it matters not what one eats, and under this doctrine are liable, if delicate, to become dispeptics. Thin-soled shoes on damp ground will in many cases induce coughs or pneumonia, in spite of the most earnest teaching of Christian Science. A full believer was urged to do some

thing for her cough, when she replied, "Let it cough if it wants to; it doesn't concern me." She coughed herself into her grave, whether it concerned her or not. A Christian Scientist healer in New York who was yellow with biliousness and wild-eyed with nervousness, declared that there was no such thing as disease and exclaimed, "Bring on the sick! I can heal them all." Shortly after she was taken severely sick herself, and as she was helplessly prostrated in a Christian Science family who did not believe in material things, she was left without food until she nearly starved to death. When I induced her to take a solar sweat bath to clear out and vitalize her system, she came up with a bound, and began at last to see that there was more than one way to heal the sick.

The pernicious effect of teaching falsehood was seen in Burlington, Iowa, some time since, in which city the Christian Scientists begged the school board to let their children stay out of school when anatomy was taught, as there was no such thing as the heart, lungs, liver, stomach, and kidneys, and the children should not be taught falsehood. The children and the adults are in dying need of having anatomy, physiology, hygiene, and the laws of mental and physical development taught them, and we need ten times more of it in our schools instead of less. The people should understand that the body is the sacred temple of the spirit and a part of our real selves so long as we live in this world.

The term *Christian Science* is evidently a misnomer, for science includes a systematic arrangement of facts, while they ignore the principal facts of man and nature. If they had more of a basis on which to rest, they would not be so intolerant of opposition. In fact, their theories would seem to prevent all scientific attainment, for they deny the existence of matter or of atoms, and settle all mysteries by attributing them directly to God and considering them beyond human power to understand. Besides, should those methods be called *Christian?* Christ in most cases healed by laying on hands. Their leader, Mrs. Eddy, condemned all magnetic healing and massage. Christ made no charge for his exalted teachings: Mrs. Eddy charged $300 for only twelve lessons, and these lessons were not very perfect at that. For sometime her students charged exorbitant prices, one of whom in Michigan required $250 for a short course of lessons and the infatuation for the cause was so great, that a poor widow mortgaged her little house to pay it. These people appreciated at least that part of matter which is called money. The furor in this cause has abated and no such prices can now be commanded. A noble soul who has received grand inspirations and secrets of power, is not going to trade them off at some unreasonable price, but longs to have the whole suffering world made happy thereby. In making these remarks I am not advocating the giving of labor without

compensation, for the necessities of life demand compensation, but I would like to have our public instructors come somewhere near Christ's golden rule.

11. We must have a **Broader Science of Life and of Human Upbuilding**, one which reveals to man the majesty and power of his spiritual nature and also adopts the refined and safe elements of the material world. All forms of Mental Treatment will become more scientific by bringing the patient partly, or if possible wholly, into the Statuvolic condition, in which case the mightier psychic forces becoming predominant, the whole system may at times be revolutionized by the new potency of the will.

12. **Phrenology.** After Philosophy and Psychology had moved on through countless years in a dreamy and visionary maze, in most cases without a material basis with which to be connected, the great name of **Francis Joseph Gall** (1757–1828) came upon the stage and demonstrated more clearly than it had been done before, that mental processes themselves require a material brain. Such men as Gall and Spurzheim, as well as many other eminent scientists from the same country, show that not all Germans are given to the flighty theories of Idealism. But the subject of Phrenology must be reserved until we reach the department of Phreno-Physiognomy.

13. **Auguste Comte** (1798-1857), a daring intellect of France, founded what was called the Positive Philosophy on the basis of Science. He did an important thing for the world in thus bringing philosophers back to their senses and teaching them to put more stress upon phenomena and the faculty of perception instead of spending so much time with *a priori** methods.

This Positive Philosophy of Comte, however important in some of its features, is positively false in some other respects. It declares that the "current doctrine of immortality is profoundly immoral, as it puts before every human being the notion that the life hereafter is the only worthy ideal to live and strive for," while it asserts that " this earth is the only world of which we really know anything." This horrible doctrine that there is no higher world that human beings shall yet attain to, shows how deeply sunk in the fogs of materialism he must have been. A multitude of facts even in his day, and ten thousand facts of the present day, demonstrate that there is a sublimer realm of being for mankind, the

* To the unlearned reader it may be remarked that reasoning *a priori* is making deductions from causes or supposed truths down to effects, dealing more directly with the interior processes of the mind; reasoning a *posteriori* is making inductions from the experiences, phenomena or effects of the outer world up to general laws or causes.

glories of which lead to nobler aspirations, even in the present life. The historian of civilization, Thomas Buckle, says: "The doctrine of immortality is the doctrine of doctrines: a truth compared with which, it is indifferent whether anything else be true." Every rational mind advocates true living for this world as well as the next.

Another badly thought out principle of Auguste Comte, as expressed by one of his disciples, is, "Morality is living for others; immorality is living for yourself" (C. G David). This principle is called "as truly scientific, as the law of gravitation." Is it? Let us see. That is scientific which is in harmony with nature. All nature gives and takes. A tree or flower drinks in the sunlight and sap, not only that it may radiate its beauty or fragrance to all around, but for its own nourishment. The motto so common with Altruists, "*all for others*," should be *all for all*. We are not to love others better than ourselves, but *as* ourselves. Some persons let themselves go to ruin in trying to serve others. Comte was an advocate of Phrenology and knew that Self-Esteem was one of the divinely ordained faculties of the human constitution. Being thus, it must of itself be divine. It is absurd to confound Self-Esteem with selfishness.

I have room for only one more of Comte's errors as explained by Mr. David: "This clamor for human rights is a mistake, for the only right a man has is the right to do his duty.....with us it is only the capitalist who should save. We have no faith in savings banks or any institution which cultivates the accumulating faculty in the working class. We discourage the desire in them to save, to secure better positions in life or to get out of their class; all this, we teach, is immoral. Positivism regards the concentration of wealth in a few hands as not only an inevitable but a wholesome tendency." These abominable principles, which would abolish human rights and allow every despot to trample one under-foot; which would establish a class system founded on money; which would reduce all nations to the conditions of China or India, in which the few have everything and millions are nearly starving to death, constitute, according to Mr. David, not the most infernal code of rules, as one would naturally think, but the "highest order of morality the race has yet seen." Alas for such blind leaders of the blind!

II. THE CHEMISTRY OF MENTAL ACTION.

1. **The Question of the Ages** which has racked the brains of a hundred philosophers is, *how does mental action take place?* Are ideas innate, or must they all be brought forth in connection with the external world? Mr. George Henry Lewes, at the close of his "Biographical History of Philosophy," remarks as follows:

"*Have we any ideas independent of experience?* In other words, have we any organ of Philosophy? The answers always end in a negative. If any one therefore remains unshaken by the accumulated proofs this History affords, of the impossibility of Philosophy, let him distinctly bear in mind, that the first problem he must solve is, "Have we ideas independent of experience?" I believe this question can be answered.

2. **The Great Barrier to all True Philosophy and a Correct Knowledge of Mental as well as Physical Laws, has been the Ignorance of Atomic Action and the Processes of Chemical Affinity which rule in Every part of the Universe.** Even the principles of Force, as exemplified in nature, have been neglected by our thinkers, whose achievements, although marvelous in certain directions, could have been far greater if they had, reached basic principles.

3. **Force.** Before giving a brief view of atoms, the process of Force should be understood. As already explained, force, throughout the whole *known* world, is always *a fluid sweeping through or against some other substance*, as in the case of water, wind, steam, etc. These substances have weight, and are always entities.

4. **The Universe has an Absolute Unity,** the whole being fundamentally like a part, the invisible like the visible, the unknown like the known, hence all forces, including electricity, light, heat, magnetism, nerve force, mental force, etc. are *fluids* and have weight. This is the dictum of nature, and our scientists should not dare to violate nature by their false theories.

5. **The Fine Forces.** The four grades of matter consist of Solids, Liquids, Gases, and Ethers. The ethers, including Electricity, Magnetism, Light, Heat, Vital Force, etc., constitute the Fine Forces and consist of streams of atoms so fine as to be able to pass through the channels of coarser atoms like those of oxygen, carbon, the solids, etc.

6. **The World of Matter consists of Atoms and Atomic Combinations,** which are the formulating and individualizing realm of being. The

coarser atoms are made to vibrate by finer ones or ethers; these again are kindled by the flow of still finer ethers, and so on.

7. **Spirit.** When the ultimate point of atomic fineness has been reached, there must be a *Substance* almost infinitely subtile, elastic, and entirely infrangible. This substance we call pure *spirit.** Spirit is drawn into activity by the vibratory and suctional power of atoms, and, on the other hand, the vibratory power of atoms is caused by the pressure and elasticity of spirit; in other words, neither spirit nor matter can act at all except as they act in correlation.

8. **Atoms.** Demetrius and some other Ancients saw the necessity of atoms for the explanation of Nature's phenomena. All eminent scientists of to-day admit their existence. The existence and general form and working of atoms is no longer conjecture. It matters not that atoms may be a million or a decillion times too small to be seen with the naked eye, for the mind, aided by scientific discovery and principle, is able to transcend all microscopes and telescopes. The author, perceiving that our scientists, although achieving many wonderful things, were still working in the dark with reference to the basic principles of light, heat, electricity, magnetism, chemical affinity, vital force, and in fact of all other forces, felt that it was an absolute necessity to gain a knowledge of atoms, the wheel work which, in connection with spirit, runs the universe. After years of severe effort, aided by science, he felt that he had attained to clear light on the subject in the year 1876, finding that the etherio-atomic system enabled him to solve all mysteries of force so far as they were brought to his attention. The form and working of atoms were explained somewhat extensively in the "Principles of Light and Color," which was first published in 1878, to which work the reader who wishes fuller details of the subject is referred. Without the knowledge of atoms, no correct system of biochemistry, or physiological or psychological or mental chemistry can be acquired, for which reason it is important for the reader to have a brief outline of the subject here. I must simply describe atoms without demonstrating all my points here.

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*Spirit is quite a different thing from *a spirit*. At death the more refined part of the earthly brain and bodily organs constitute the form of the new being and are material. This form in connection with a concentrated portion of spirit which belongs to it, constitutes *a spirit* or an individualized human being. When speaking of chemical affinity or electricity, or vital force, etc., it is always to be understood that spirit is an underlying factor. For the demonstration of spirit see "Principles of Light and Color," P. 107.

9. **The General Form of the Atom** is a flattened ovoid. Fig. 72 will give some idea of its general structure. The line from 1 to 4 is simply to give the direction of the spiral channels that move around the outside of the atom in the heat-developing process, while the channels from 4 to 1, through the axis of the atom, is the pathway of the cold or electrical forces which must be in the form of a vortex, the only continuous force in nature which contracts as it moves on. It will be seen that the channels of heat and cold at both ends of the atom are connected, which will explain the convertibility of forces, as a powerful vibration of heat channels will vibrate the cold channels where they connect, and *vice versa*. It will be seen just why it is that electricity moves in an opposite direction to thermism.

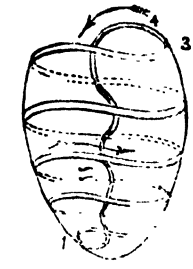

Fig. 72. Outline of an Atom.

10. **The more complete form of an Atom** is exhibited in Fig. 73, which is the diminished form of what is given in "Principles of Light and Color," p. 102. There are no doubt smaller spirals (spirillae), encircling the main spiral, some of which must be so minute and delicate as to feel the impulsion of Spirit.

The electrical forces that sweep down through the center of the atom become most intense at the small end, at which point the channels through which they come, vibrating at their highest speed, are thrown outward to move spirally around the outside of the atom as the principle of heat. Great heat is produced at number 2 by the swiftly flowing ether (caloric) and by the intense vibrations of the spiral channels through which they pass. These same ethers, getting well under way, pass down the atom to number 4, swelling the atom by their centrifugal force to greater circumference there than at 2, though at 2 the fierce vibrations and greater size of the channels doubtless produce greater heat than at number 4. Such thermal atoms as Hydrogen, sodium or potassium are swelled out by the heat forces almost the whole length so that the vortex itself is broad and well suited to encase the narrower electrical atoms, such as oxygen or chlorin, as has been shown elsewhere.

That there must be some larger spirals, as in 3, which become smaller at 5, to act as a barrier in just such a place, against being encased too far by other atoms, is evident from the fact of the unchemical union of atoms as of oxyen and nitrogen, to constitute the atmosphere. In this unchemical union the atoms encase each other only as far as 3, and thus

they are kept sufficiently rare and elastic to be breathed, but if they were encased as far as 5, it whould be what is called a chemical combination, as nitrous oxide or nitric acid, and being so condensed could not be breathed and are really a poison.

The spirals at 4 are just of the right grade of coarseness to strike our ordinary vision as colors, *thermal* excepted, it being slightly too coarse. Above the dark violet the color rays of the spectrum are too fine for ordinary vision and only those who have become evoluted in their interior vision can see them. As Professor Stokes has traced the solar rays ten times as far above the spectrum of visible colors as the whole length of the visible spectrum itself, it can be seen what a wonder-world of exquisite colors there must be to those whose inner vision has been opened up, even in this life, and especially in the more refined life of the future, as hinted at by Professor Tyndall. As each musical octave has just twice the number of vibrations of the octave below it, so has each chromatic octave twice the number of vibrations of the one below it, so that if there are only eight other octaves in sunlight, the eighth one must be 256 times as fine as the ordinary visible light. Our scientists are apt to suppose that this higher realm of forces belongs to the supernatural, and therefore does not come under the range of scientific investigation. All use of the term *supernatural,* belongs to the old ignorance, for nature reaches upto infinity and must extend through all celestial worlds as well as to the coarser grades of matter which come under the

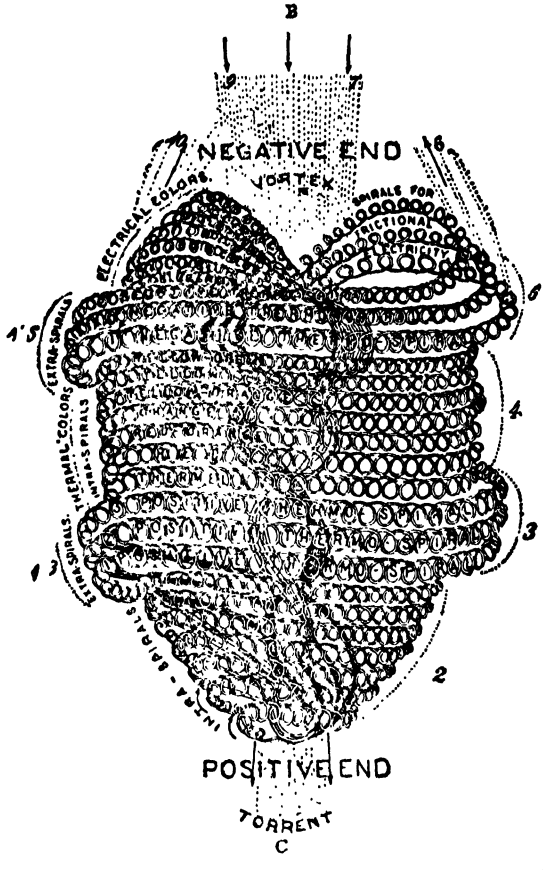

Fig. 73. An Atom more fully represented, with streams of ether flowing into and out of the atomic channels. The thermal ethers are drawn on into similar sized atomic spiral channels in the atom above and the electrical ethers are drawn in the form of a vortex from B to C and pass into similar channels of the atom below.

ordinary vision. This finer field is the highest department of science and the different grades of color which are the measure of the universe, qualitatively considered, are the bridge which connects grosser nature with nature in its more celestial departments.

11. **The Color Scale.** The three most fundamental colors are red, yellow and blue. I believe there are seven thermal and seven electrical color-spirals as signified in Fig. 73. For the sake of brevity, however, I will give simply the Newtonian color scale and two complete octaves above it, which are presumably the highest refinement of vision possible in the earthly human life. Commencing below and going upward toward refinement, the scale is as follows:

Third Grade Colors

four times as fine as the ordinary colors, and beautiful beyond the conception of those who have not seen them. This grade of light, being able to penetrate opaque substances leads to clairvoyance in those who get in rapport with it.

- Psychic-Violet.
- Psychic-Indigo.
- Psychic-Blue.
- Psychic-Green.
- Psychic-Yellow.
- Psychic-Orange.
- Psychic-Red.

Second Grade or Fluorescent Colors

twice as fine as the common colors;—seen by Baron Reichenbach's Sensitives, 60 in number—are less perfect for clairvoyance than the psychic light. They include the Roentgen or X rays.

- Odic-Violet.
- Odic-Indigo.
- Odic-Blue.
- Odic-Green.
- Odic-Yellow.
- Odic-Orange.
- Odic-Red.

Trans-Violet Colors, sometimes improperly called *Ultra-Violet.*

First Grade Colors

Generally more beautiful when *transmitted* as in colored glass, than when *reflected.*

- Violet.
- Indigo.
- Blue.
- Green.
- Yellow.
- Orange.
- Red.

It will be seen in the Solar Spectrum that the violet has a more reddish cast just before it fades out, thus showing that it is progressing toward the Odic-red. At the bottom of each scale is Thermal, the warmest color, which is seen as a kind of a beautiful bluish red in the Odic and Psychic scales.*

12. **Atomic Channels,** as a pathway of ethers, in order to possess the simplest and most beautiful forms, must be in spirals, with whorls

*The heat of the ordinary colors can be measured in part by a thermometer (see Sir Engle-field's experiments in "Principles of L. and C.," p. 222). An apparatus has been made which shows that different colored rays emit different kinds of musical tones.

sufficiently close to prevent the undue escape of these ethers and yet far enough apart to allow them to be attracted outside of their own channels into the similar sized channels of contiguous atoms. 6 and 10, Fig. 73, represent thermal ethers being drawn outward by similar spirals of the atom above, while 7 and 9 are electrical ethers sweeping down from the atom above into the vortical channels of this atom and emerging at the torrent end where they pass into the same sized channels of the next vortex. The flow of ethers causes those vibrations of their channels that produce a suctional power on surrounding ethers.

13. **Chemical Affinity**. Why does Chemical Affinity always deal with contrasts? Why does an acid attract an alkali, or an electrical color a thermal color? Turn to Fig. 73, and it will be seen that the red channel, on the outside of an atom, e. g., becomes the blue channel at the vortex. When the red ethers pass, it always tends to kindle the blue vibrations, the red and blue channels being thus connected. When the blue channels are set into vibration by a sweep of the blue ethers, the red channels are also kindled. This is a beautiful provision of nature for keeping up a balance of forces and thus preventing the extreme action which would cause ruin. But how is it possible, then, it may be asked, to have extreme cold when we wish it, or extreme heat, if the spirals are thus ever balancing matters ? From the fact that a thermal vibration started by an electrical channel may not have any ether (caloric) to give the effect of heat, or *vice versa* as to a blue channel. The duality of the two great divisions of force must be remembered, namely, that the vibration alone cannot produce thermism or electricity, but the proper grade of ether must go with the vibration. The heat of red pepper is not balanced by blue ethers and it burns, but the heat of a red strawberry is balanced by the blue element of an acid and it does not usually burn. The highest harmony comes from this balance.

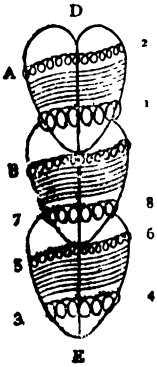

Fig. 74. Polarized Atoms.

14. **Polarization**. Atoms must be so formed as to receive the electrical ethers in only one direction and the thermal ethers in the other. The electrical ethers are the polarizing force of atoms. Thus, in Fig. 74, the strong vortical force of the atom B, draws in the atom A up to the large thermo-spiral 1, or in case of excitement, as far as the spiral 2, in which last case it would be called a *chemical union*. But this chemical union would be difficult to bring about unless there is a chemical affinity, and this affinity requires that the atom A should be more narrow and electrical, while B is broader and more thermal. The electrical current

sweeps vortically through the atoms from D to E; the thermal current sweeps spirally around the atoms from 3 to 4, 5, 6, 7, 8, etc.

15. **Magnetism.** When currents of electricity are somewhat powerful, the transverse channels that wind spirally around the outside of atoms, draw the contiguous layer of atoms transversely to the first layer and the conflicting streams of ether deflect a portion of these currents until they form circuits and whirlwinds of force. These curved forms of electricity are called *Magnetism.** Place iron filings on a piece of glass or cardboard and a magnet when held under it will sweep these filings into curves, thus showing the direction of the currents themselves. The vortexes formed by a very powerful magnet are able to draw many thousand pounds. Remembering now the unity of law that rules throughout the universe, we may know positively that mental, psychological and physical magnetisms work on the very same principle and have those ethereal whirlwinds that attract to themselves objects suited to their grade of force, such as sensitive human beings. These magnetisms reach sometimes but a few feet, and sometimes in the case of psychic magnetism, a great number of miles. But this subject will be treated further under the head of hypnotism.

16. **Various Scientific Minds,** trained so constantly in the material and grosser aspects of things, may claim that I have been running too wild in this realm of atoms and it would be impossible to convince them of the truth of my position without giving them a vast number of explanations and illustrations, many of which I have already given in the "Principles of Light and Color," but which are quite beyond my time and space to do here. The sad part of the matter is that those minds that have the least experience and skill in the finer forces are usually the most bitter against them as being too dimly stated and inexact. And yet those who are supposed to give exact demonstrations are ignorant of the principles of force and the processes of Chemical Affinity, the ubiquitous law which rules through the mental as well as the material world. People who lack intuition can scarcely understand that a straight line is the shortest distance between two points unless it is demonstrated to them. It is tedious to deal with these slow minds, but it is to be hoped that in fifty or a hundred years, the world may come to a true conception of these grander realities, especially as Edison, Tesla, Crookes and others are revealing the wonders of the occult side of nature.

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* For fuller explanation of magnetism see "Principles of Light and Color," pp. 129, onward, 434 and 481.

17. **Ideas.** According to Locke and some others, the mind was originally a mere tablet or blank sheet of paper on which the external world through the senses formed its characters and impressions. But mind consists of spirit and a physical brain working in connection, and being perhaps the most highly organized affair in the world, it is quite absurd to make it thus a mere dead negative tablet. The great principle of duality which shows that the external and internal world must ever work in correlation, should settle this matter, the one being the key molded to and unlocking the other, while the other is the lock fitted to and receiving the key. Thus, the mind longs for the beautiful, and nature is full of beauty to gratify it. It longs for music and has those rods and vibrating surfaces just fitted to receive the waves and vibrating harmonies from without. It has a faculty for perceiving colors and the world is full of colors to gratify it, and so on with the infinite phases of the subjective in man just answered to by the infinite phases of the objective in nature. As the mind unlocks and appreciates the universe, so does the universe develop the mind, colored rays of light developing the perception of color, fine tones of music developing the musical faculty, luscious fruits developing the chemistry of taste and so on. The trouble has been that the idealists have made the mind all in all, ideas being wholly innate and independent of nature; while the sensualists and materialists have made the external world supreme, all knowledge, all ideas being impressed on the mind through the senses. Locke, however, admitted that ideas are gained also by reflection.

18. **Perception** includes the Knowledge received from the external world through the senses and passed upon by the organs of the mental system; **Conception** consists of ideas or plans formed in the mind itself, although the facts on which they are built originally came from the outer world through perception. **Inspiration** consists of ideas breathed into sensitive minds from spiritual realms, from human beings or from nature itself, and must always act in connection with a physical brain. **Autovolution,** or **Self-Exaltation** is induced by high contemplations, or by throwing the mind intensely out of or beyond itself until the psychic forces become predominant. All of these processes are the sources of Knowledge and necessary to the Education.

19. **The Sensorium.** On the outside of the convolutions of the cerebrum, or principal brain, is a layer of reddish gray matter, called the Cortex. This cortical portion is the realm of sensation, of intellect, and of nerve enkindling power. The cerebral cortex includes the machinery for co-ordinating and projecting nerve force to the uttermost parts

of the system. The part of the cortex covering every faculty of the intellectual, moral, and spiritual organs (see Fig. 84) may be called the real **Sensorium**, the book of life in which the records of thoughts, memories, events, passions and volitions are stored away to be opened up perhaps in this life as well as in the life to come. Amativeness, Combativeness, Self-esteem and the other social and energizing organs produce their sensations only by aid of the sensorial portion, and their effects are recorded in that portion.

20. **Consciousness.** How is it that man attains to the majesty of **Mind**? How is it that he differs from the mountain, the rock, or the tree, from being endowed with consciousness? This is one of the great mysteries of all time, and thousands of minds have exhausted their skill in trying to cope with the question. While neither man nor angel can solve the whole question, yet can we not enter at least into the vestibule of this mystic temple? Suppose we take a man, who has always been reared in a dungeon or a cellar, into a fine landscape. There is the mountain, the forest, the lake, and the sun, with colors resplendent, which become pictured on his retina. Spirit and spiritual forces kindle and illuminate the brain, carrying the imagery through the optic nerve to the phrenal organs, which are quivering and sensitive with life. Dead matter alone would have no more power to move, to feel, to think than a stone, but it does not seem so wonderful that spirit, combining with these marvelous organs of the brain, and painting these pictures upon them, should at first give a dim consciousness of the reality, and a more and more vivid consciousness by practice.

21. **The Central Region of Consciousness** includes the frontal lobes of the brain, where reasoning and perception take place, but the other organs contribute somewhat to the same. Animals have consciousness and reasoning powers in an imperfect degree, have often acute sensations and some of their perceptions, for instance, by means of smell or sight are more developed in a certain way, than those of human beings. A dog is able to trace the course of his master or other human beings by the sense of smell but has not the refinement of human olfaction or taste, as he will smell and eat things that we consider disgusting. When the blood and nerve ethers are drawn from the front brain, unconsciousness ensues and we call it *sleep*. When by a severe shock or by narcotics the brain becomes congested, the pressure of blood upon the nerves shuts the ethereal currents away from the front brain and a very imperfect kind of sleep takes place.

22. **Brain Formations.** Before proceeding further, I deem it important to present the general features of the brain, so that its relations to mind may become all the more clear.

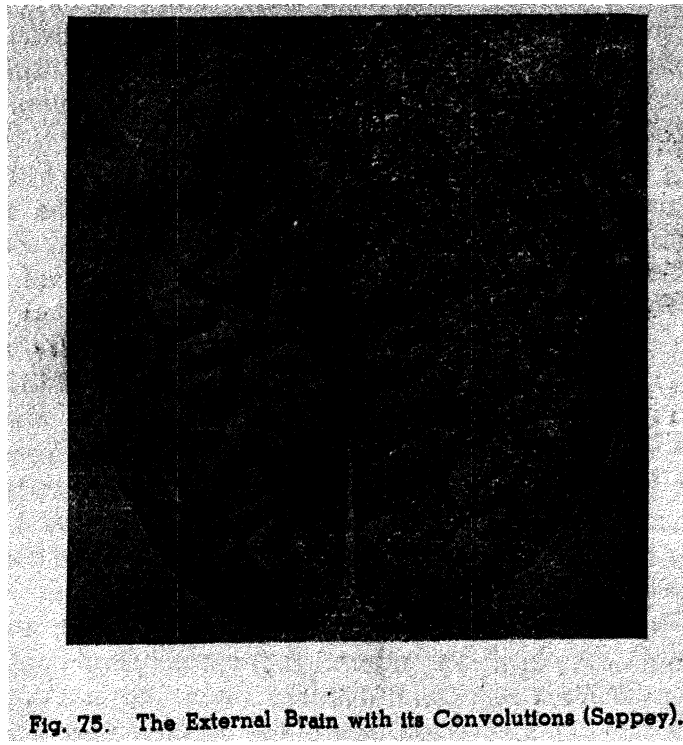

Fig. 75. The External Brain with its Convolutions (Sappey).

1. Fissure of Rolando : 2, 2, the anterior parietal convolution : 3, 3, posterior parietal convolution : 4, 4, accessory parietal conv. : 5, 5, deep fissure which separates the parietal from the occipital convolutions : 6, 6, interior frontal conv. : 7, 7, frontal convolution which gives birth to the middle frontal and external frontal conv. : 8, 8, middle frontal conv. : 9, 9, external frontal conv. : 10, 10 internal occipital conv. : 11, 11, middle occipital conv: 12, 12, external occipital : 13, 13, interhemispherical fissure : 14, anterior extremity of the corpus callosum : 15, its posterior extreme.

The weight of the cerebellum in the adult male averages about five and a quarter ounces, while the cerebrum is eight and three-fourths times as heavy. In the adult female the cerebrum is about eight and one fourth times as heavy as the cerebellum, while in infants, according to Cruveilhier, it is twenty times as heavy. The cerebellum (little brain) is the centre of the animal energies, while the cerebrum is the realm of the intellectual, the spiritual and the directing forces. It will be shown hereafter, however, that all the grand machinery of the cerebrum would be helpless without the aid of the cerebellum, just as the cerebellum needs the life-giving power of the cerebrum.

In figures 77 and 78, from Starr, only a few of the general groups of nerve fibers are given. These fibers are millions in number and

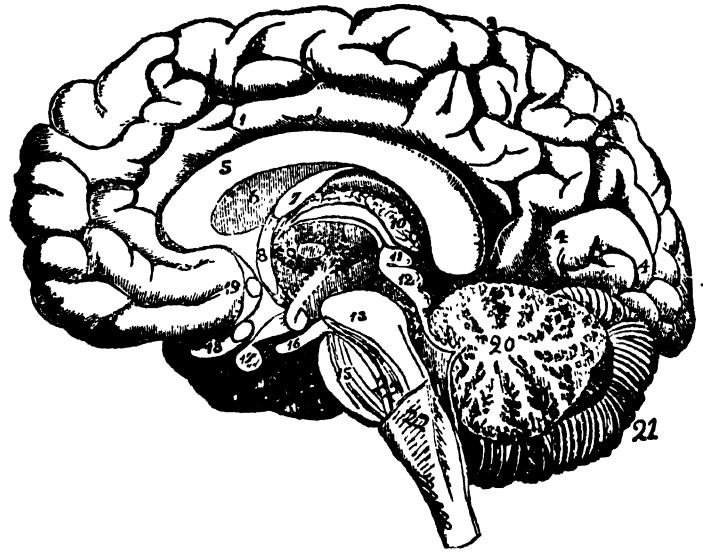

Fig. 76. Vertical Median Section of the Brain.

1. Convolution of the Corpus Callosum; 2, and below, the calloso-marginal fissure; 3, the parieto-occipital fissure; 4, 4, the calcarine fissure just above the numbers; 5, the corpus callosum (callous body); 6, the septum lucidum; 7, the fornix; 8, anterior pillar of the fornix descending, then turning upon itself (see dotted lines) to the optic thalamus; 9, the optic thalamus (bed-chamber, the origin in part of the optic nerve); 10, the velum interpositum (interposed veil); 11, the pineal gland (pine-nut); 12, the corpora quadrigemina (the four-twins body); 13, the crus cerebri; 14, the valve of Vieussens (above the number); 15, the pons varolii (bridge of Varolius who first described it, connecting the cerebrum, cerebellum and medulla oblongata); 16, the third nerve; 17 the pituitary body; 18, the optic nerve; 19, points to the anterior commissure indicated by an oval mark behind the number; 20, 21, the cerebellum, the tree-like interior of which at 20 is called the arbor-vitae (tree of life); 22, 22, medulla oblongata; 23, occipital lobes; 24, frontal lobes.

constitute the white parts of the encephalon and spinal column. All white nerve fibers have an axis cylinder for conducting the nerve fluids and an insulating sheath to prevent their being wasted, just as an ocean cable has an insulating sheath to prevent the electrical currents from escaping into the ocean.

The bundles of nerve fibers moving in all directions, as shown in part in Figures 77 and 78, illustrate the facility with which the nerve force can be transferred to all parts of the cortex of the encephalon, as well as between the brain and bodily organs. More than this the finer ethers must have a free passage way through the cortex itself.

Fig. 79 gives some of the leading brain centers first discovered by Ferrier and since confirmed or slightly modified by various other physiologists. These realms of power are in the cortex, though of course the interior ganglia and other organs must have their influence. While a lesion of the anterior lobe may cause blindness, this condition is more surely brought about if a portion of the occipital lobes is sliced off or otherwise injured. If the occipital lobe of one hemisphere is injured or ablated, *hemiopea* or the blindness of one half of each eye takes place. If both lobes are destroyed, total blindness occurs in human beings, although birds and other animals have been known to have some vision after these lobes have been removed. This may occur from the visual image brought near the back brain by the optic nerve and dimly reflected by the very walls of the occiput, which have received optical force from former visual influences. Munk discovered the cause of hemiopea and pointed out the fact of mental blindness which tends to make one forget the meaning and imagery of vision, and which is presumably caused by the injury or removal of a larger segment of the occipital lobes.

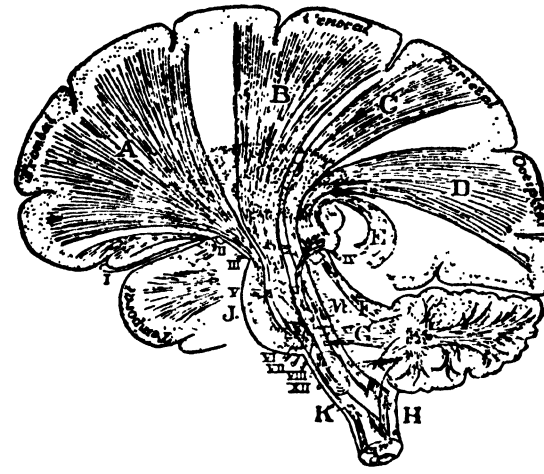

Fig. 77. Fibers within the Brain (Starr.)

A, tract from the frontal gyri, (convolutions) to the pons nuclei and cerebellum; B, motor tract; C, sensory tract for touch; D, visual tract; E, auditory tract; F, G, H, superior, middle and inferior berebellar peduncles; J, fibers from auditory nucleus, the inferior quadrigeminal body; K, motor decussation in the bulb; Vt. 4th ventricle. The numerals refer to cranial nerves.

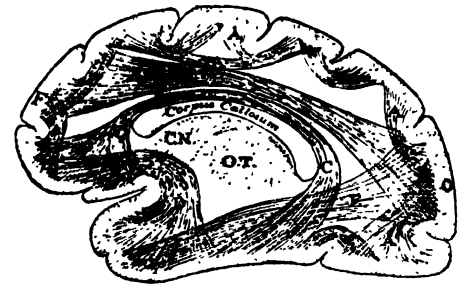

Fig. 78. Lateral View showing Association Fibers (Starr).

A, A, between adjacent gyri; B, between frontal and occipital areas, cingulum; D, between frontal and temporal areas, fasciculus uncinatus (hook-like bundle); E, between occipital and temporal areas, fasciculus longitudinalis inferior; C, N, caudate nucleus; O. T., Optic Thalmus; F, frontal, O, occipital gyri.

Professor James of Harvard University sums up matters as follows:

"Hitzig, Goltz, Luciana, Loeb, Exner, etc., find whatever part of the cortex may be ablated on one side, that there usually results a hemiopic disturbance or both eyes, slight and transient when the anterior lobes are the parts attacked, grave when on occipital lobe is the seat, and lasting in proportion to the latter's extent.

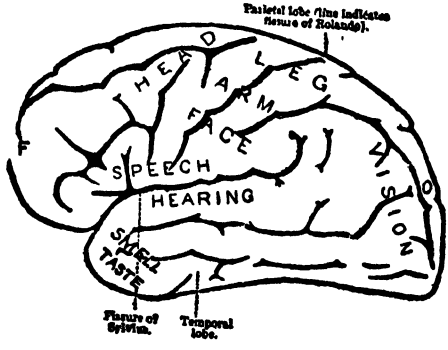

Fig. 79. Centers of Power in the Human Cortex, from Ferrier's Experiments, taken from Kirke's Physiology with the words Smell and Taste added. F, frontal, O, Occipital.

The **Motor Tract** is prominently located at the phrenological organ of firmness, and extends some distance along the fissure of Orlando, as electrical and other experiments on monkeys and human beings have proved. Fig. 79, gives only a few of the motor points. These phrenal locations, though having their forces mainly in the cortex, must have their countless nerve fibers which reach to every part of the body. Concerning these, Kirke's "Physiology," p. 648, thus speaks:

The position of the centers is for the leg above, those for the arm, face, lips and tongue, from above downward. Destruction of these parts causes paralysis, corresponding to the region affected, and irritation causes convulsions of the muscles of the same part. Again a number of cases are on record in which aphasia, or the loss of power of expressing ideas in words, has been associated with disease of the posterior part of the lower or third frontal convolution on the left side. This condition is usually associated with paralysis of the right side (right hemiplegia).

23. **Course of the Motor Current.** The following I have taken from Ribot's "Diseases of Memory":

Let us take this movement in its complete form. Is the starting point an act of volition? Then the impulse, originating according to Fernier, in a particular portion of the cortex, traverses the white substance, reaches the corpora striata, passes through the crura cerebri, thence to the complicated structure of the medulla, where it passes to the other side of the body, descending the anterior columns of the spinal cord to the lumbar region, and then along the motor nerves to the muscles.

Ribot then proceeds to say that this impulse is carried back to the cerebrum again, which is evidently a mistake. Sensory impulses make the complete circuit to and from the cerebrum, but motor impulses only to the muscles.

24. **The Cells of the Brain,** billions in number, which constitute the gray matter of the cortex are agents of sensation, of thought, and of motor power. Later I shall show how this realm of cells projects and receives currents of nerve force to and from all parts of the system. "According to the estimate of C. Franke, there are in the entire body of a

full-grown person, a number of fixed cells represented by 4,000,000,000,000. The cells in the blood are not fixed, and for these the best calculations give 22,500,000,000,000, or in the entire body 26,500,000,000,000 cells (Donaldson). Twenty six and a half trillions of these important little objects, are almost beyond conception. These cells are of various forms and sizes, having off-shoots and branches in various directions and being from one eight hundredth to a five thousandth of an inch in length. The cortex, which is said to average about one eighth, or one quarter of an inch in thickness, as one author has it, is found under the microscope to be divided into the following five layers (See Fig. 80); 1, superficial layer; 2, thin layer of closely packed small ganglion cells; 3, the middle layer, the largest and most important of all, has large pyramidal ganglion cells, with processes running from the apex vertically toward the surface and lateral and other processes; 4, numerous ganglion cells, making the granular formation of Meynert; 5, spindle shaped and branched ganglion cells of moderate size, arranged chiefly parallel to the surface. It is broken up somewhat by groups of fibers that pass to the outer surface.

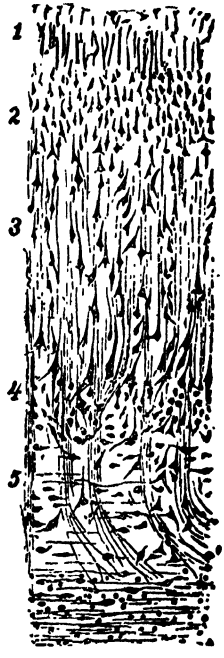

Fig. 80. The layers of the Cortical gray matter of the Cerebrum, after Maynert.

Ramon E. Cajal, the eminent Spanish histologist, has discovered some new and striking features of the brain. He compares the cortex to a wonderful and rich garden with trees and bushes that have leaf-like and plume-like growths, roots, and shoots that reach down into the white matter below it, and minute fibers that answer as electrical conductors. His theory that memory finds its principal realm in the retina is entirely contrary to the nature of things, as I shall aim to show later.

25. **Volition and Mental Action.** In explaining this mystery of the ages, it will be necessary to build on a scientific basis of chemical affinity as already explained elsewhere, assisted to some extent by clairvoyant perception. It seems to be my mission to explain the circulation of the Nervous System, and I must expect to be misunderstood and criticised by all those slow minds who look with dread on everything that is out of the beaten tract, in just the same way that Harvey was condemned for announcing the circulation of the blood, by the fogies of his day.

In the first place, I have already shown, that if we follow nature, we shall inevitably be forced to the conclusion that all forces in the world

must go forth as **fluids**. This being so, electricity, mental force, nerve force, being forces, and mighty ones at that, must be fluidic.

I have also explained largely in this work and still more fully in the "Principles of Light and Color," that blue and red substances, also violet and yellow, etc., form a chemical affinity with each other. I have given a colored diagram at p. 476 of that work, showing the finer color radiations that come from human brains, as seen by clairvoyant eyes. Fig. 81 will give an outline of the matter with the mere names and locality of the colors.

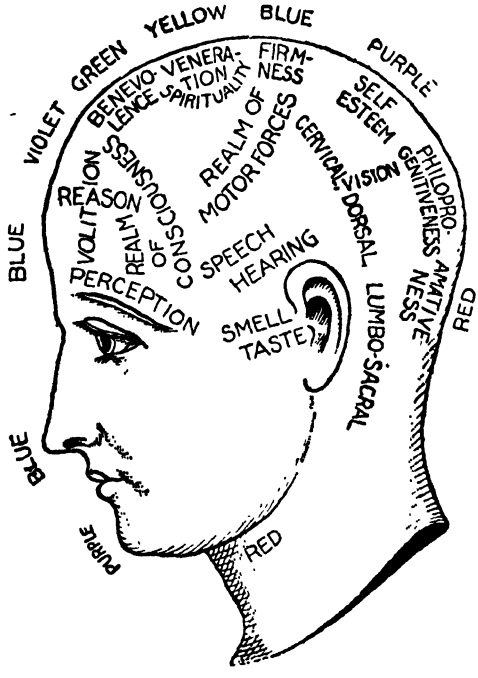

Fig 81. Leading Centres of Brain Force.

The **Perceptives** which take in the knowledge of the external world are just above the eyes. The word **Reason** is placed at Causality, the central reasoning faculty, and the realm of Volition and the culminating point of **Consciousness**. The other reasoning powers and perceptives should also be included in the term consciousness. A realizing sense of things or a condition of being *awake* is a state of consciousness, which is the opposite of *sleep*. The region of *Veneration* and *Spirituality* is the home of spiritual aspiration and inspiration, and the culminating center of the psychic ethers, which from their fineness and lightness gravitate to the highest points. **Firmness**, clothed with the blue electrical power that sweeps up from the spinal column, is the centre of Executive force. Reason is the throne of Volition, the Court of Judgment for his human kingdom, while Firmness is the ambassador who puts into force the decrees thus received from the front. The pathway of these motor forces extends downward and toward the front, ascertained by Ferrier and others, and these forces are able to control head, eyes, tongue, mouth, shoulders, arms, hands, legs, knees etc., Another pathway of motor force, discovered in part by Dr. Joseph Rhodes Buchanan, in his experiments on mesmerized subjects, reaches downward in another direction and includes the cervical, dorsal, and lumbo-sacral region of the spine. Self-Esteem seems to receive some of the blue forces connected with Firmness and some of the red forces below blended into a purple. Philoprogenitiveness or Parental Love is located in the

very occipital lobes attributed to vision. Is there any discrepancy in this? No more than there is in the fact that the tongue fills the offices of taste and speech, or the nose those of respiration and smell. The inner portion of the occipital lobe may answer as a reflecting board without interfering with any other function of the lobe. Amativeness is located in the warm, red cerebellum, of which it is one of the leading functions. We shall see shortly how this, though one of the leading forces of the animal system, is a great stimulating principle of mental action. The animal forces of the lower brain send out red emanations and thus have a general chemical affinity with the upper and lateral brain. The words **Speech** signifying a facility for clothing thoughts with words, also the words **Hearing, Smell** and **Taste**, have their answering qualities in the portion of the cortex signified by their position.

Besides the foregoing qualities and positions, it may be stated that the whole of the front and upper brain, extending nearly as far back as Firmness and including a portion of the motor track, has a direct connection through the medulla and its nerves with the lungs. If we *will* strongly to have the forces of the brain pass on into the hands or other parts of the body, we shall perceive that the lungs become an important agent in executing this volition, working in connection with Firmness.

26. **The Chemistry of Mind**. Through all of these ages, we have been dwelling merely in the vestibule of the Temple of Mind. Now we must make the effort to find the key to some of the grand interior departments.

In the first place, I will speak briefly of the style of ethers which pass through and kindle the different faculties of the brain. All the reasoning with perceptive faculties, Benevolence, Veneration, Spirituality, Hope, Ideality, Sublimity, or in short the whole of the front and upper brain up to Firmness, (the sincipital realm), have psychic ethers as the quickening principle. These amazingly subtle forces of thought and perception must have lightning activities and intuitions as their agents of power, and those whose inner vision has been opened can testify of the superlative beauty of their color-radiations. Firmness and all the other organs, including the cerebellum, have to depend upon the animal ethers for their quickening. All nerves, the optic nerve excepted, and all ganglia, transmit animal ethers. The exquisite images made on the retina by the light, can be conducted to their sensorial picture ground only by so refined an agent as the psychic aura.

Some may wonder how it is that ordinary human brains are so inactive and so imperfect in their range of thought, if these high grade psychic ethers are the vitalizing power. The truth is that the force is so

small in amount or is so obstructed by imperfect physical conditions' that it requires a highly developed clairvoyance to see the color radiations at all, while a powerful grade of minds will be luminous with their radiations. Brains and bodies must be built up with better foods, more pure air, more sunlight, more contact with those who are magnetically developed, in short by more refined and happy conditions.

At last we have prepared the way for that question of questions. How does Thought work? How does Volition send out its mandates? During wakefulness, when Thought begins to work, the interior vision, perceives a flashing out of the cells, or rather a combustion of the fine cellular essences, that have been stored away during sleep. This is caused by ethreal streams sweeping over the whole frontal tract, which is the dwelling-place of the blue mental forces. What causes this stream? By what chemical action is it made to move? To bring about permanent magnetic or electric currents, a circuit must be formed. What is the pathway of this circuit? Notice in Fig. 77, a bundle of nerve fibers moving directly from Reason to Amativeness in the cerebellum. That is the natural pathway of the blue reasoning forces as they are projected by the little cellular explosives of the front brain and drawn by the chemical affinity of the red elements of the cerebellum which, although coarser, can act more or less chemically. The cerebellum becoming thus charged, sends its forces along the lines of nerves connecting with self-esteem (see Fig 78), thence to Firmness with all its motor centres and so on until it reaches the frontal lobes again, thus making a complete circuit. This being done, it becomes easy and natural for it to continue its flow, so that the realm of Thought and Consciousness is kept in a bright, active condition, ready to receive or send out messages from or to the other parts of the brain or body. A strong, active stream gives great brightness and quickness to the thoughts on the one hand, while on the other hand, healthy cellular formations will cause a more active stream. Volition, when it is necessary to reach a certain part of the body, brightens up the mental streams, and aided by the cerebellum quickens, the portion of the motor tract which connects with that part of the body, causing those little explosions of the cells that send the ethers to their destination and thus producing *muscular contraction.* Why do these ethers cause muscular contraction? Because they are blue and electrical, for all electricity is contractive. But how do we know that these ethers are blue? Because they come from Firmness, which is a fountain of blue forces. Thus wonderfully does nature provide the right kind of forces for the right place.

In the light of this subject it should be doubly clear as to how it is that alcohol or the narcotics can draw so much blood to the brain as to

crowd upon the frontal cortex and prevent all consciousness by thus inducing a poisoned sleep. In a true, natural sleep, the blood flows back upon the cerebellum or body, the mental ethers also flowing back to some extent become too feeble to produce those cumbustions that awaken thought, while refined currents pass over the cells and stock them up with recuperative force, ready for use in the waking hours that follow. In the poisoned, congested sleep, the recuperative currents are mostly shut off and the brain is not put into a fit condition for healthy action.

It may be seen also how a clot of blood may at times press upon and clog the motor center that connects with the arm or leg and causes a paralysis of the same. Of course a lesion of the spinal column or the course of a nerve may cause paralysis of that which is below it, but generally the cause is in the brain.

This chemistry of the brain, which shows the correlation between the frontal and cerebellar portions, explains why it is that many clergymen, scholars, thinkers, and geniuses are very strong in their sexual natures. The sexual nature cannot be too strong, if it is balanced and purified by the reasoning and spiritual powers. No phrenal organs can be too large and active if they are held in check by the contrasting organs, and possess a healthy action. I have often had patients speak of having great pain in their front brain, pointing to the region of causality when they said it. "And you have pain here also, have you not?" I remarked, as I placed my hand over amativeness. Their answer would be "yes." In such cases neither of these organs are too large, but simply inflamed from an imperfect condition of the blood and too feeble a flow of the vital ethers. Passes should be made, outward and downward over both the front and back brain, and the body and especially all extremities should be well massaged; or perhaps still better, solar sweat baths should be taken.

Another important fact may be explained by this law concerning the distinction between the sexes so far as reasoning is concerned. Man is stronger in his amativeness and he is also stronger in the analytical reasoning that comes from a more active causality. Nearly all the philosophers of the world are men. Woman, from her superior psychic force, has a greater amount of *intuition*, a method of reasoning which is so swift that she herself cannot keep track of the intermediate steps, so that even when she may have reached farther upward toward the goal of truth than man, she will not always be able to make him apprehend the fact.

Far be it from me to assert that large amativeness must necessarily go with large reasoning powers, for there are bull-necked persons with

small front and upper brain, like Pope Alexander VI., whose influence was like a pestilence to all around them. What I mean to say is, that, other things being equal, a person will possess a greater mental as well as physical and social power who has a well-developed amativeness, than one in whom amativeness is small. Although the world is progressing, the fact that the intellectual and moral development is still so far behind the power of the animal nature, leads to excesses, which fill society with countless wrecks of human beings who should rise to a noble destiny.

27. **Swift Sleeping** comes from having such a good supply of psychic aura, that the brain cells may be built up rapidly, so that it is unnecessary to have a long term of sleep. Sometimes in a mesmeric sleep, when the psychic forces are predominant, a person will be recruited as much in an hour as ordinarily in all night. Sometimes, however, persons that are feeble or elderly and nervously active will use up the cellular forces rapidly while awake and thus need a good nap in the daytime. While Napoleon could thrive with five hours' sleep and others with still less, a majority of persons will need seven hours or more to prevent fearful conditions of nervousness and exhaustion.

28. The **Psychic Realm** which is the most intense at Veneration and Spirituality, becomes superbly beautiful in a high nature and has an exalting influence on the reasoning faculties. The left brain is the receptive and intellectual side of the encephalon. The left organ of Causality, is seen to have a tinge of violet in the midst of its blue, and this being the chemical affinity of the psychic yellow above, is able to attract more or less of the ennobling forces of that realm. This fact should make us all the more earnest in studying into and appropriating these exquisite and powerful forces, compared with which, as we shall see hereafter, all other forces are but feebleness itself.

29. **Influence of Mind on the Body:**—I have shown elsewhere how the body and the external world influence the mind. The following, from Prof. Elmer Gates, of the Smithsonian institution, of Washington, will show how the mind influences the body:

Bad and unpleasant feelings create harmful chemical products in the body, which are physically injurious. Good, pleasant, benevolent, cheerful feelings create beneficial chemical products which are physically healthful. These products may be detected by chemical analysis of the perspiration and secretions of the individual. More than forty of the good, and as many of the bad have been detected.

Suppose six men are in a room. They feel depressed, remorseful, ill-tempered, jealous, cheerful, benevolent. Samples of their perspiration are given to a psycho-physicist. He can detect all these emotions distinctly and unmistakably.

For each bad emotion there is a corresponding chemical change in the body, which is life-depressing and poisonous. Every good emotion makes a life-promoting change

Every thought is registered in the brain by a change in the structure of its cells, a physical change more or less permanent. If a man changes his bad thoughts to good ones, cells for good thinking will develop : others productive of evil will shrink. Let him practise daily the calling up of pleasant thoughts and memories, an hour or more, if possible, and the result will be beneficial.

III.—PHRENO-PHYSIOGNOMY.

1. The **Science of Mind,** in my opinion, should combine Phrenology with Physiognomy, just as cause and effect are combined, or just as the functions of the brain should be considered in connection with the polarized lines of these functions as manifested in the face.

2. **Phrenology** considers the human mind a unity with a diversity of faculties which occupy special sections of the brain, just as the body is a unity with a diversity of hands, feet, limbs and other organs. To suppose, as some of the old theorists have done, that every style of love, and passion and thought and perception is lumped together in one central mass of brain, is to make the mind a chaos, without system or law. Phrenology aims to systematize the different faculties of the brain, and to learn, not from "bumps," as the ignorant call them, but from certain widened or enlarged or depressed parts of the head, what traits of mind are well-balanced and what are deficient or extreme, so that imperfections may be corrected and nobler traits implanted.

3. **Critics.** It is not generally fashionable to speak in favor of science until it is one or two centuries old. Slow minds are euphemistically termed "conservative." The world *conservatism* would be beautiful if it should mean the conserving of Truth, but the so-called conservative is very apt to conserve error. Numerous persons come up to my mind in this connection. Prof. William James of Harvard University, has written a somewhat extensive and highly esteemed work on Psychology. This work seems to me to be much more clearly thought out and much more able than Herbert Spencer's work on the same subject, and certainly founded more closely on nature. When he comes to speak on Phrenology, however, he speaks rather slightingly and shows the usual misconception of the subject. He says :

"Take the 'faculty' of language. It involves in reality a host of distinct powers..... It is plain that the faculty of spoken language alone is so complicated as to call into play almost all the elementary powers which the human mind possesses, imagination, association, judgment, and volition..... There is no center of speech in the brain, any more than there is a faculty of speech in the mind. The entire brain, more or less, is at work in a man who uses language." (Vol. 1, p. 28 etc.)

In answer I would say, What kind of science of mind could ever be formulated from the study of the brain if we were to say that there is no special meaning in any one part of it and that we must consider the whole brain at once before we can determine about any one part? Phrenology says that a portion of the frontal region which, when large, pushes the eye outward into fullness, shows that there is a natural perception and memory of words, as the expression of ideas, and calls it *Language*. The physiologists have found a portion of the brain a little back of the same place, which they call *Speech*. Is that any better? Every phrenologist understands and teaches that one's language must be modified by Causality and the other reasoning powers, to make one's words thoughtful; by Ideality and Sublimity, to give beauty and loftiness of idea; by Benevolence, to give kindness of expression, and in reality by every part of the brain. The difference between them and Prof. James, is that they have systematized the functions of the brain far more extensively than he has. Our physiologists are so determined to find nothing correct in Phrenology that when they have been forced by their own experiments to see that there is a realm of language not far from the eye, they call it *speech* instead of *language*, so as not to look so much like *caving in* before an enemy. Broca in 1861 discovered that in cases of aphemia, which is an imperfect style of speaking or remembering words, there was an injury of the brain near or back of the eye. Professor James quotes the following perverting statement from Lange:

> Instead of one soul, Phrenology gives us forty. Instead of dividing the latter (the brain,) into effective elements, she divides it into personal beings of peculiar character: — *Geschicte des Materialismus.*

I do not believe there is at this time a Phrenologist in the world that teaches any such thing. All the organs are seen to open up into the general brain and mind is thus shown to be a unity in its diversity. Lange's remark is on a par with saying: Instead of one body, physiology gives us forty. Instead of dividing it into effective elements, she gives us personal beings, such as arms, legs, hands, feet, head, lungs, etc.

The learned George Henry Lewes admits the "immense services Gall has rendered to Physiology and Psychology," and makes important suggestions about having a more distinct anatomical and physiological basis for the different organs of mind, a matter which has been considerably neglected by phrenologists since the time of Gall and Spurzheim. He is fond of quibbling, however, and I will quote the following for its somewhat amusing character:

> Phrenology has another important point to determine; namely the relation of the size of the brain to mental power. Is the size of the brain to be taken absolutely, and its functional activity in the purely mental direction, to be measured by its absolute bulk?

A galvanic battery of fifty plates is five times as powerful as one of ten plates; a cord of twenty threads is five times as strong as a cord of four threads, other things being equal; and in like manner, we should expect that a brain of fifty ounces would be twice as powerful as one of twenty five ounces. Nevertheless, we find no such absolute and constant relation between size and mental power as would justify the phrenological position; the weight of the human brain being about three pounds; the weight of the whale's brain being five pounds; the weight of the elephant's being eight and ten pounds. If, therefore, the function of the brain be solely, or mainly, that of mental manifestation, and if size be the measure of power, the whale and the elephant ought to surpass man, as a Newton surpasses an idiot.

So says Mr. Lewes, and to make a bad matter worse and finish up the matter entirely, he says that if the size of the brain is to be considered as compared with that of the body, then a monkey or a rat is superior to man. But now, for fear he may think we place him and other human beings on a par with a rat, let me hasten to say that a superior human intellect depends on the quality of the brain; on the quantity of the brain, as compared with that of human beings generally; on the size of the brain, as compared with the body; on the balance and location of the phrenal organs and on the swiftness of the mental ethers which kindle the organs into action. If we draw a line on human portrait from the eye to the middle ear and another from the eye to the middle of the upper part of the forehead, the largeness of the angle will give a conception of the amount of intellect. In human beings it is often considerably greater than a right angle, while in a rat or other animals, it is a very acute angle. Fig. 82, copied from a photograph, will show these lines, the dotted line being at right angles from the frontal line. Fig. 83 shows the minute angle of a rat's brain. This method, though perhaps not a fair test as applied to all animals, is yet approximately correct.

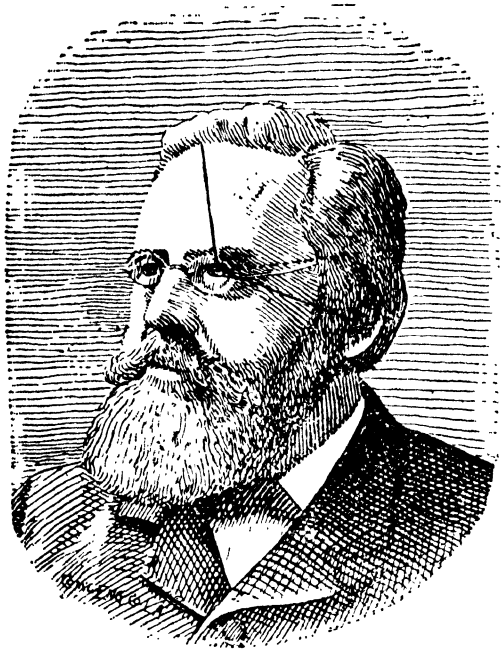

Fig. 82. Angle of a Human Brain.

4. **Largeness of Brain**, other things being equal, gives more power than smallness of brain. This is founded on such a universal law

that it should scarcely need debate to settle it. A giant is more powerful than a dwarf, a large battery or engine than a small one, a cannon-ball than a bullet. A great brain of well-balanced organs, with a strong body and vitalizing fires sufficient to quicken and energize the whole mass, is fitted to grasp great problems and be a leader of mankind. But somewhat smaller brains often have advantages over the larger ones, as the quickening ethers frequently interpenetrate them better, their thoughts move more rapidly, they are apt to be more eloquent of speech than the great thinkers, and have more tact in the business world. The motto common among children of "Little head, little wit; big head not a bit," has a little side of truth in it, inasmuch as large heads move more slowly usually and their wit comes a little later. The large head may formulate the laws that revolutionize mankind, but lesser brains are better for interpreting them to the people.

Fig. 83. Angle of a Rat's brain.

European races have the largest average size of brains in the world, while the Australian aborigines, who are lowest down in the scale of being, have the smallest. There are cases of enormous heads caused by some abnormal growth of skull or unvitalized conditions of brain, who never become eminent, but this does not affect the general rule.

5. **Physiognomists**, desiring to glorify their own pet department of study, too generally commence disparaging Phrenology, the only thing that can give them a scientific basis on which to build. One physiognomist has been going all over Europe, visiting museums and galleries with a leading purpose seemingly of destroying phrenology. He has discovered that Lafayette had a small head with a sloping forehead, that Gambetti had a small head, that the Emperor William I, of Germany had a small head, etc. But Lafayette was not a great man, although so beloved by the American people, and his forehead shows perceptives so large as to give a somewhat sloping character. Gambetti was a brilliant man, an inspirational man and an orator, but not a person of all-round greatness, or one who makes new eras. The Emperor William I. was great by his position rather than by any innate greatness, and he knew enough to lean upon a great-headed and mighty-willed man like Count Bismarck. Our physiognomist conveniently forgot to notice such heads as those of Cuvier, Oliver Cromwell, Thackeray, Gladstone, Daniel Webster and a host of others who have made their mark on the world's history. Broca nd Manouvrier found the average cranial capacity of modern Parisians

to be 1560 cubic centimetres, while the weight of eminent men averaged 1665, as ascertained by Manouvrier.

6. **Prof Annie Oppenheim**, B. P. A., has become skilled in reading character by aid of both Phrenology and Physiognomy, styling herself a phreno-physiognomist. She was born in Austria and gives lectures in London. She has become thoroughly conversant with anatomy, physiolgy and kindred studies, and has probably cultivated her psychic perceptions more or less. She created quite a sensation in London by being able to go through a whole audience and pick out a person just from a description of his leading traits of character. The truth is that a scientific and intuitional phreno-physiognomist would prove decidedly dangerous to all deceivers and criminals, but greatly helpful to all who aim at a high career.

7. Phrenologists are accused by Mr. Lewes of totally neglecting the Anatomy and Physiology of the Brain and Nervous system since the days of Gall and Spurzheim. He declares that they "have not taken a single step," and that " all the eminent physiologists of Europe who have devoted themselves to the study of the nervous system, unanimously reject a theory which does not keep pace with the advance of science... although every one of them is ready to admit the importance of Gall's method of dissection, ready to incorporate whatever results Gall arrived at, which can be in any way confirmed." The Neurologists of Europe looking at everything from their materialistic standpoint, no doubt see a deficiency among the Phrenologists of to-day which should be corrected, but when Lewes says they have not taken a single step, he is mistaken. Dr. Joseph Rhodes Buchanan's Sarcognomy, which gives the correlations of the brain with the different parts of the body, is an important feature of progress, and the many experiments made on the different organs of the brain by Dr. John Elliotson of London, the Fowlers of New York and London, and especially by Dr. Buchanan in New York and elsewhere, not only proved the general correctness of the location of the organs but added new features, in some instances correcting the conclusions that had been arrived at by studying the brain anatomically. Dr. Buchanan in the presence of William Cullen Bryant, the poet, and other persons of note, played all kinds of tunes, so to speak, on the different organs of sensitive brains, which proved in the most vivid manner what are the different functions of the brain.* The organs of sensitives, or of persons in a mesmerized state, are usually charged by placing the ends of the fingers over them, or by a magnet, though Dr. John Ashburner

* For fuller account of these experiments see " Principles of Light and Color," p. 471.

who translated Baron Reichenbach's work on odic force, gives an account of his use of crystals as follows :

Take a female of impressibility in a condition of lucid sonnambulism ; apply to her organs of adhesiveness or of pure affection the points of rock crystals and she is excited to the tenderest manifestations of pure affection. Change the direction of the crystals, point to amativeness, and the woman, if her organs are at all full, is unable to control her actions. She burns with desire. Reverse the ends of the crystals, the feelings are calmed. Blowing or breathing on the organs dispels the feelings."

When the organ of language is aroused, the subject has a tremendous fluency of speech ; Ideality makes him soar off into the poetical ; Self-esteem makes him feel too important to stay with ordinary people ; Benevolence makes him tender and loving ; Alimentiveness will arouse a voracious appetite and a madness of hunger ; Tune will perhaps set a person to singing, and so on. Dr. Ashburner once charged a lady's Destructiveness and he only saved her from knocking everything to pieces by blowing against the organ.

8. **Physiologists.** It is high time that these physiologists and neurologists should cease to put on airs when treating of Phrenology. If I were to address them I would say : Gentlemen, does it not behove you to be a little more humble, a little more docile in matters which you do not understand ? The phrenologist has to grapple with both physical and psychological problems, which open up almost into infinity, and because you can find some flaw, you jump on him with both feet and condemn the whole system. What qualities of wisdom have fitted you to be "Sir Oracles" in this matter ? You call yourselves Neurologists, and yet what do you know about nerve force ? What is it, and how does it act ? What do you know of the chemistry of vision, of respiration, of pulsation, of muscular contraction, of the correlations of the brain ? What do you know about the real process of force, especially of chemical force ? These things can be understood at least in all their fundamental bearings, and if you do not understand them, you are in the background. If you are not satisfied with the work of the Phrenologists why not tackle the matter yourselves ? It is one of the grandest and most useful of all sciences in the world, and well worthy of your highest efforts. The Mental Philosophy of all ages has been founded too generally on abstractions and theories without any basis of nature. Phrenology is true Psycho-physical science. Do I make a mistake in calling it a science? No, for its basis is everlasting, however short it may still come of being a completed edifice. The fact that hundreds of thousands of character readings from the cranium have been given which the subjects will generally admit are more correct than their own parents could give, shows that their basis is fundamentally correct. But is not this due to Physiognomy some may ask ? Physiognomy, of course, helps, and would

help far more if it were better understood, but the fact that the phrenologist can give a correct reading of character when blindfolded, shows that he builds on science. Can you physiologists do as much? Can you diagnose or prognose a disease without liability to commit errors? Then pray be a little more modest in your expression of opinions.

9. **The Physiology of Phrenology** may be traced in a number of the organs and will be more and more evident as we become better versed in the more refined side of nature. Persons of a powerful system send a broad tide of blood and vital energy upward in a way to widen the brain at the ears; and we say such a system has large Destructiveness, or rather that rough grade of energy which may lead a person to destroy if not held in by reason. These heads so broad at the ears are exemplified in bull-dogs, lions, tigers, wolves, vultures, and other savage beasts. *Alimentiveness* is evidently developed by means of the pneumogastric nerve which passes in front of the ear to the stomach, with nerve fibers to and from that organ, so we say that persons whose faces are broad in front and slightly above the ear have a good power of digestion, and are apt to have good appetites. We have already seen how a tide of blue electrical force sweeps upward through spine and brain and tends to push the cranium upward near the crown of the head, and causing rigidity and firmness, it is generally termed Firmness, or by Dr. Buchanan Hardihood. The expression, "Keep a stiff backbone," so often used, recognizes a scientific principle. We have seen how Firmness is a proper center for all those motor forces that require electrical or contractive action. Aided by Chromopathy, we may naturally conclude that some of these blue spinal currents are deflected as far as the next organ behind and below Firmness, which we call Self-Esteem, where this color, combining with the redder vital forces below becomes a purple. We may easily see, then, why this vital electricity at this point will cause the contraction that draws the head somewhat back when Self-Esteem is strong. Lower down than Self-Esteem are the various kinds of love which are manifested in the warm color *red*, Amativeness being a darker grade of red than that which emanates from the other social organs. The cooling, high-grade blue of the front brain tends to balance the more passional region of the lower back brain. Benevolence is a noble center of love as a principle, love for mankind and a gentle feeling toward even the animal world. Its beautiful green radiation receives its warm elements from the divine yellow of the spiritual group above it, and its rational blue from the reasoning powers below it. In Fig. 81, these potent color forces of the invisible man are represented with much general accuracy, but the term violet may mislead somewhat by seeming to come between the reasoning

powers and Benevolence. A small amount of violet emanates from the left side of the reasoning powers, but the violet here represented comes from farther down the brain toward the temples. The realm of the spiritual forces is the natural centre of the psychic ethers which, from their great refinement and lightness, gravitate toward the highest frontal head. In a high nature these forces are indescribably beautiful and at times, lifting a person above the world into the perceptions of a more glorious universe, they give a joy which is unspeakable. The Alexandrian philosophers taught that states of *ecstasy* are the only process by which we can come into rapport with the Divine, but were not aware that this power came through any faculty of the brain. This highest part of man, placed in the very dome of the human head, when properly evoluted, becomes the realm of Inspiration, the illuminated window that opens toward celestial life. It is the realm of true Religious Aspiration, without which the upper head would have an unlovely flatness, and men would be so absorbed in the grosser material conditions around them, as to be far less removed from the animal world. Being the highest part of man, Evolution requires a longer time to develop it than it does the lower brain. Those who dwell on the material plane, being weak in these organs, cannot understand these subtile forces and are apt to consider it visionary to talk of them. When I speak of this part as the central realm of Religion, many minds knowing the spirit of murder and superstition that has ruled among the religions of the past, will be repelled at the idea, but the spirit that would torture or kill people who differ from them has no resemblance to genuine religion, being founded on the brutal part of man. When Religion and Philosophy go hand in hand, they will link heaven and earth together.

The phrenologists are doubtless right in placing Hope in connection with the spiritual group, as a full development of these psychic forces gives the buoyancy of feeling which causes a happy and hopeful state of mind.

Ideality and Sublimity belong to the psychic realm, and having violet emanations, attract by chemical affinity the glorious yellow of the upper brain which must kindle up the conceptions of the beautiful and the lofty.

The whole of the lower brain seems to be connected with the nutritive and animal system generally. Amativeness, as we have already seen, affinitizes with the front brain, and, on the one hand, helps, from the circuit which gives life to the whole motor and rational system, while, on the other hand, it controls the sexual system. It is probable that the whole cerebellum has its leading field of action in the Pelvis, which of course includes the sexual as well as the hypogastric system.

Even these simple and imperfect hints with reference to the physiology of the brain, will give some conception of its magnificent office as the physical side of Mind. Some whole volumes on the subject barely mention its mental characteristics as a whole, without having the least conception of the quickening ethers that must kindle all the departments of mentality. With reference to the latter, I stand immovably upon nature, in which forces of every kind go forth as fluids.

10. **Phrenology is Worthy of the Attention and Efforts of the World's Greatest Minds.** The Phrenologists of the day have done much, but there is need of some mind of greater analytic and also synthetic powers than any that have yet appeared, to raise the science to its grand possibilities. It is a lack of synthetic skill in a Phrenologist or Physiognomist to cover the whole picture of brain or face with perhaps hudreds of supposed qualities as inhering in every quarter inch of its surface, many of which are the merest imaginations without any definite scientific basis, or even contrary to known facts. One Physiognomist has adopted an immense number of outlandish names of supposed qualities founded on some trivial theory, often, applying different words that have the same meaning, to different parts of the face. The coming Phrenologist should study Dr. Joseph Rhodes Buchanan, a gentleman of much philosophical acumen, who has brought the marvels of psychometry before the world, has systematized sarcognomy and written with burning words against the despotisms and superstitions of the day. His mind is not always analytical, however, though broad enough at times in its generalizations. When he proclaims a special organ of Distance, he does not seem to realize that this meaning has already been recognized in the organ of Size, which includes the distance between the parts of one or more objects. When he speaks of an organ of Memory, he ignores the fact that memory depends upon every organ of the brain and the activity of its nature. Thus the author is deficient in the memory of names, but above the average in his memory of numbers. Even in the matter of numbers, however, it depends considerably on whether a subject interests him. For instance, he always had a great interest in human beings, and when a boy studying geography, he could remember the population of all the leading cities and countries of the world at one reading. Blind Tom can remember a whole piece of music from once hearing it, because he has a passion and vivid perception of all music, and so on with other faculties. It is high time to realize at this late day that every part of man and the universe are fundamentally divine, only the perversion of that which is innately good being imperfect. The Fowler and Wells school of Phrenology follows mainly the general plan of Gal and Spurzheim, but have

simplified the nomenclature somewhat and filled out some deficiencies. In giving the general divisions of the brain, however, they speak of the region of Self-Esteem and other of the surrounding parts as that of "Selfishness", as though God and nature had filled man with elements of depravity. Selfishness is a fearful deficiency. The word *Selfhood* or *Self-Reliance* would have no stigma attached to it and could represent the region of Self-Esteem, Approbativeness, Firmness and Conscientiousness, which last is firmness of principle. Another term like *Self-Protection* could cover what is designated as Combativeness, Destructiveness, Alimentiveness, Secretiveness, Acquisitiveness and Cautiousness, and the portion of the back brain covering Continuity, Inhabitiveness, Friendship, Philoprogenitiveness, Conjugal Love and Amativeness come under the head of Social Life. Moral and Spiritual Perception includes Veneration, Hope, Spirituality, Benevolence, Ideality, and Sublimity, as the ideal and sublime, require a refined spiritual perception. Intellect includes all the Reasoning and Perceptive powers. The Intellectual and the Spiritual Groups have the psychic ethers for their quickening power. The word Destructiveness now so commonly used, signifying that we have a faculty whose main business is to destroy and ruin things, strikes me as being aslander on nature, the purpose of which is ever beneficent. I believe we should not have the vanity to use new names and disturb an established nomenclature for the sake of a Little petty credit to ourselves, but in this case I think there is need of a new name, and I would suggest *Vital Energy* as a better term. See Fig. 84, which gives these localities.

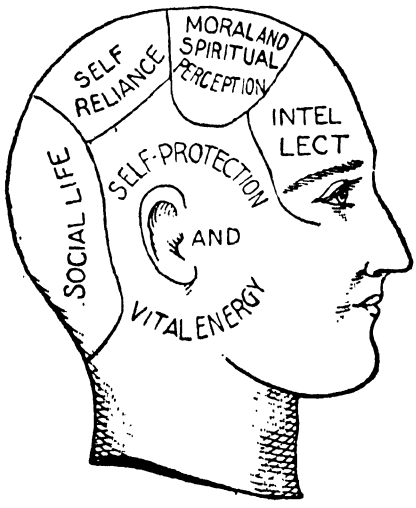

Fig. 84. Divisions of the brain.

I wish my reader to understand that I am not attempting to formulate any system of Phrenology or Physiognomy or to give the details of the same. My field is too vast in another direction. I shall hope, by my long study of the color forces and the chemical affinities, to assist in laying a broader foundation for these sciences and thus preparing the way for the coming master, who must give a new illumination to the world on the Anatomy, Physiology, and Psychology of phrenal action.

11. **A Synopsis of Phrenological Organs.** Fig. 85. I will have space here for only a brief account of each faculty.

Amativeness, Love between the sexes.—Abuses: secret vice, over use

Conjugal Love, Matrimony, love of one.—Abuse: a determination to marry whether conditions are right or not.

Parental Love, Philoprogenitiveness, love of offspring and pets.—Abuses: over-indulgence, failing to require obedience.

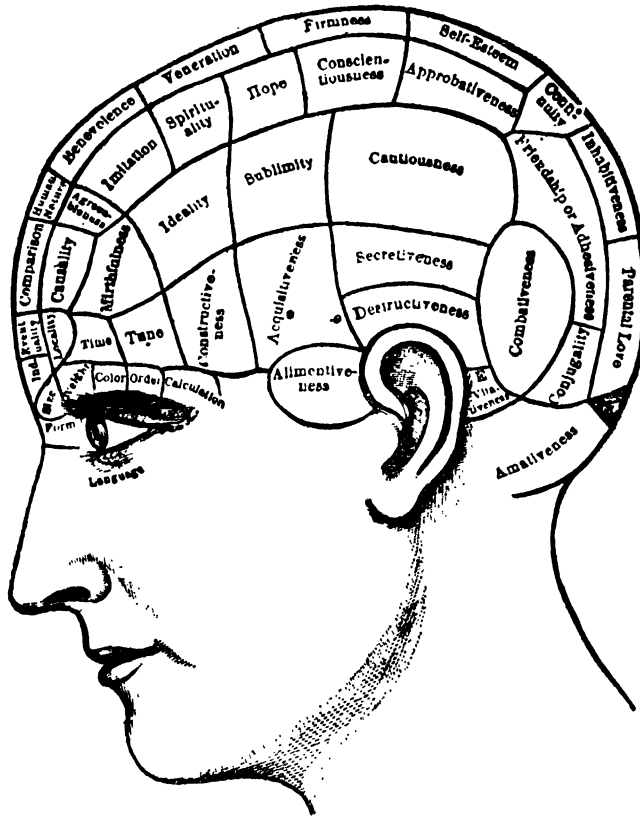

Fig. 85. Organs of the Brain. Scheme of Fowler and Wells,

Friendship, Adhesiveness, Sociability.—Abuses: clanship, attachment to unprincipled persons.

Inhabitiveness, love of home, patriotism.—Abuses: a tendency to underrate or wrong other countries, localities.

Continuity, Concentrativeness, one thing or one place at a time.—Abuse: aversion to moving abroad.

Vitativeness, love of life.—Abuse: too great a fear of death.

Combativeness, aggression, courage.—Abuses: love of contention, tendency to assault.

Destructiveness or *Vital Energy*, energy in execution.—Abuse: cruelty, murder, harshness of speech or deed.

Alimentiveness, hunger, appetite, power to digest.—Abuse: gluttony, drunkenness.

Acquisitiveness, desire to accumulate, to lay up against need.—Abuse: miserly conduct, selfishness, avarice, theft.

Secretiveness, tendency to conceal and be prudent.—Abuse: deceit, dup licity, lying.

Cautiousness, tendency to be prudent, to shun danger.—Abuse: excessive timidity, despondency, melancholy.

Approbativeness, love of approbation, fame or glory.—Abuse: vanity, love of praise when undeserved.

Self-Esteem, self-respect, dignity, courage to stand firm in one's own strength when necessary.—Abuses: pride, haughtiness, a disposition to look down upon others, aristocracy of wealth or power.

Firmness, strength and resoluteness, self-centering power, in its higher phases immovableness for what is deemed right.—Abuses: stubbornness, inability to get out of old ruts.

Conscientiousness, firmness for right and justice, equity.—Abuse: constant worry over some supposed sins of omission, etc.

Hope, a buoyant feeling with reference to the future, expectation.—Abuses: over-confidence in the future, reckless adventures.

Spirituality, intuition, perception of the divine, faith.—Abuses: superstition, over-attention to the spiritual to the neglect of the body, etc.

Veneration, looking upward with admiration and respect to the divine in spiritual things and with great esteem for superior human beings—Abuses: religious bigotry, worship of false and imperfect ideals of Deity, etc.

Benevolence, a rational principle of love for all human beings as well as kindness to animals—Abuse: providing merely for the temporary wants of the poor to the neglect of those co-operative and fraternal systems which do away with poverty itself.

Constructiveness, mechanical skill, power of invention whether mechanical or otherwise.—Abuse: impoverishing one's family to construct some presumably wonderful machine, etc.

Ideality, love of the beautiful and ideal, a refined taste.—Abuse: over-ornamentation, spending more than can be afforded for beautiful things.

Sublimity, appreciation of the grand, the lofty, and the picturesque.-Abuse: living so constantly in the ideal and the wonderful as to forget the practical duties of life.

Imitation, a tendency to copy or pattern after a power of mimicking.— Abuses : caricaturing worthy people; wholly perverting the truth of things to get up a laugh, as humorous papers constantly do.

Mirthfulness, appreciation of humor, wit and fun, a quick perception of the ludicrous that tends to bring out a healthy and hearty laugh.— Abuses: making fun of aged or plainly dressed people; caricaturing things that are important for human good.

Individuality, fondness for studying the life of individuals; observation; fondness for seeing and knowing.— Abuses: an overweening curiosity, that leads one to pry into the business of others, etc.

Form, perception and remembrance of shape, pleasure in modelling.

Size, ability to measure sizes or distances by the eye.

Weight, power to balance, climb, keep the center of gravity.

Color, quick perception of tints and colors

Order, love of method and systematic arrangement. Abuse: overprimness, interference with freedom by set forms, etc.

Calculation, quick perception and remembrance of numbers.

Locality, remembrance of places and directions.

Eventuality, memory of facts and events, historical skill.

Time, power to measure duration, keeping time in music.

Tune, sense of melody, pitch, harmony, etc.

Language, quick memory of words and their use.—Abuse: verbosity, use of high-sounding words, tautology.

Causality, power of grasping causes, analytical reasoning.—Abuse: overpositiveness when facts are lacking.

Comparison, aptness in comparing, reasoning from effects to causes, or induction, analogical reasoning. Abuse: quoting for analogies that which has no real analogy.

Human Nature, natural quickness in reading character.

Agreeableness, suavity of manners, and being bordered by Causality, Mirthfulness, Imitation and Human Nature should include much genial good sense in a cultivated mind. Abuse: the sacrificing of truth for effect, so common in sensational newspapers and speakers, especially if Approbativeness be also large.

12. **Dr. Buchanan's Theories.** Dr. J. R. Buchanan is a writer of much ability, cerebral physiologist and a noted anthropologist. His "Therapeutic Sarcognomy," is a very elaborate work, worthy of the study of every student of the different methods of human upbuilding. I had intended to give his scheme of the phrenological faculties, but on close examination of it, as given in his Journal of Man, I would prefer a

different use of names, the nomenclature, though not so different, so far as the real meaning conveyed, from the generally established systems, would tend to confuse the mind of the ordinary learner, by its great diversity of new names unless I had more space here to give the author's explanation of them. Several of these I think could be improved. Thus he has a faculty of *Reason* and a faculty of *Judgment*, but what is Judgment but the use of reason? His faculty of *Memory* as I have already shown, must be inaccurate. He has ambition in one place and love of Approbation in another, although Approbativeness is usually considered the foundation of ambition. He has the words Hatred, Jealousy, etc. as parts of this divine Temple of Man, this Temple which is the effect of a perfect Cause and hence should of itself be perfect in its fundamental structure. The learned Doctor, too, has omitted to speak of several of the motor centers, which numerous scientists have established in the brain, although he has established other centers that they are still ignorant of, and should understand. It behooves other phrenologists to study into some changes in the locations of organs that he has made, as he has experimented extensively upon sensitive and mesmerized subjects. Dr. Buchanan has written in a masterly way on the subject of education and uttered the most burning words on the medical depotisms of the day.

13. **The Center of Mentality.** To show how clairvoyance outruns science, I will state that, in 1841, Henry Hall Sherwood, M. D., of New York published in a work on the "Motive Power of the Human System," an account of the discoveries made through a clairvoyant who had been blind from infancy. The leading discovery consisted of a kind of a sun-center in the very middle of the brain, which sends its rays to all parts of the cerebral cortex, and the cerebellum. All the organs of the brain were seen to have small bright centers or poles, but the two poles of Causality on the one hand and of Amativeness on the other were especially bright and powerful, thus harmonizing with the philosophy of mental and motive action which I have already explained. Now comes a work on "The Brain and its Functions," by the wide-awake Scientist, J. Luys,* Physician to the Hospice dela Salpetriere, France, in which the anatomical proof of the correctness of the vision of the blind seer has been given.

Fig. 86 is photo-engraved from the diagram of Dr. Luys, with the addition of A for Amativeness and C for Causality. Dr. Henry Hall Sherwood was not sure what this central organ, that seemed so luminous, was, but suggested that it might be the 3rd ventricle. This diagram

*Since writing this I regret to have to announce his decease.

shows that it was the optic thalamus contiguous to the 3rd ventricle which thus holds the position of honor as the sentinel station that telegraphs to or receives telegrams from, all the organs. Dr. Luys has made a special investigation of this organ and I quote the following from his work:

"The central mass of gray matter, which is usually designated the optic thalamus, and of which the anatomical structure and general relations were scarcely known until the present day, is an ovoid body of reddish color, situated in the very middle of the brain, a fact easily verifiable by a pair of compasses. It is in a manner the center of attraction for all the fibers, the grouping and direction of which it thus governs .....From a physiological standpoint, the optic thalami are intermediary regions interposed between the merely reflex phenomena of the spinal

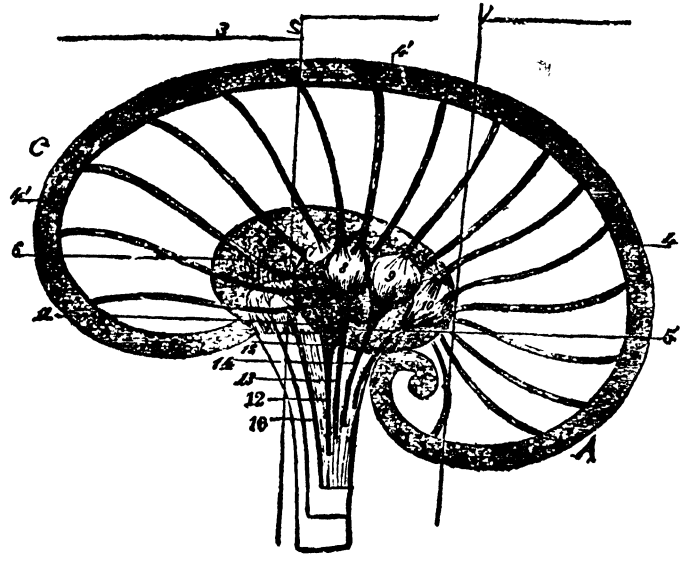

Fig. 86. Diagram of the Converging Fibers, and their Relations to the Central Gray Ganglia.

1. Converging fibers of the posterior convolutions of the brain; 2, converging fibers of the middle convolutions; 3, converging fibers of the anterior convolutions; 4, 4', 4'', cortical periphery as related to the central gray ganglia; 5, optic thalamus; 6, corpus striatum; 7, anterior (olfactory) center; 8, middle (optic) center; 9, median (sensitive center); 10, posterior (acoustic) center; 11, central gray region; 12, ascending gray fibers of visceral innervation; 13, gray optic fibers; 14, ascending sensitive fibers; 15, ascending acoustic fibers; 16, series of antero-lateral fibers of the axis going to be lost in the corpus striatum.

cord and the activities of psychical life.....We are led to consider the masses of gray matter, usually described under the name of the optic thalami, as essentially central regions which are the bond of union between the various elements of the entire cerebral system. Through

their tissues pass vibrations of all kinds, those which radiate from the external world, as well as those which emanate from vegetative life. There, in the midst of their cells, in the secret chambers of their peculiar activity, these vibrations are diffused, and make a preparatory halt; and thence they are darted out in all directions, in a new and already more *animalized* and more assimilable form, to afford food for the activity of the tissues of the cortical substance, which only live and work under the impulse of their stimulating excitement."

Dr. Luys then goes on to show that the corpus striatum is somewhat complementary to the optic thalamus and sums up matters as follows:

"The function of the optic thalamus in particular seems to be that of receiving, condensing, and transforming, like a true nervous ganglion, impressions radiating from the sensorial periphery, before launching them into the different regions of the cortical substance: and that inversely, the corpus striatum, in connection with exclusively motor regions, appears to be a place of passage and reinforcement for stimuli radiating from the different psychomotor zones of the cortical periphery."

It follows that we not only have a clairvoyant perception of the central and peripheral machinery of mind, testified to by several clairvoyants, but an anatomical proof of the same. It solves a mystery of mental action by demonstrating how a knowledge of the external world, received through the senses, may be reflected by this luminous center to all the organs of the brain for them to consider. We will take an example from the lessons of vision, for instance. A great mountain comes before us. It is painted upon the retina. The optic nerve, a part of which connects directly with the optic thalamus, carries the image of the mountain to that luminous center, which, immediately, by a reflex action, sends its miniature image of the same to the different organs of the brain for them to pass upon. Form and Color cognize its shape and hues; Size gives an opinion of its height and distance; Veneration, Ideality and Sublimity are filled with awe at its loftiness, its snow-capped summit flashing in the sun, and are led into visions of some ineffable and more glorious world toward which it points; Constructiveness considers the process of its formation; Acquisitiveness wonders if there is not some gold or silver to be found there, and so on with other organs;—but Reason, sitting upon the throne of judgment, co-ordinates the whole, considers the opinions of all the other faculties and determines what, if anything, is to be done about the vast object before it. To make matters still more clear, a general image of all objects is thrown upon the occipital lobe of

the brain and less clearly upon other parts, for the psychic ethers which convey these images are marvelously active, and from their fineness are capable of even transcending the nerve channels themselves.

Just here it may be well to speak of the fact that all external objects are inverted in their images as thrown upon the retina, and yet we see everything right side up. This is proof positive that another reflection must take place in the interior brain, which brings the images back the same as in nature. May not the images strike the slope of the upper back brain diagonally in a way to invert them as they fall upon the lower occiput?

14. **Hints in Phreno-Physiognomy.** I shall aim to give a few correct principles of Phreno-Physiognomy, rather than a great number of imaginary ones.

Force of intellect is signified by the amount of brain in front of the ears, especially by the anterior projection of the forehead. The finest balance for an effective personality includes also a prominence of the lower and side face as a result of the animal forces, as well as a fullness and width of the lateral, occipital and motor regions to work with and balance the frontal activities. Fig 87, as well as 88 and 89, is copied from the "New Physiognomy" of Samuel R. Wells,* which is the best work of the kind before the public, so far as I have seen. The finely balanced head at the left represents harmony and power. If all human beings were like him, there would be but very little need of human enactments of any kind to regulate him and make him do his duty to others, being a law unto himself. As we move toward the right in this diagram, intellect and moral power constantly decrease and animalism relatively increases.

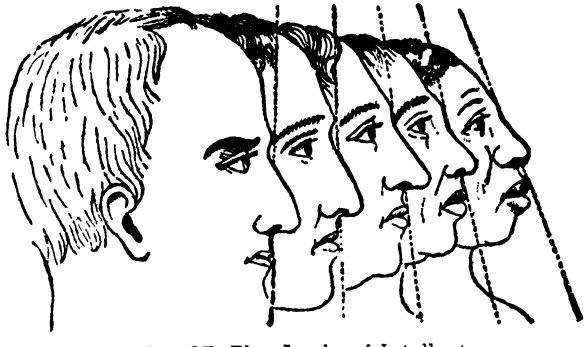

Fig. 87. The Angle of Intellect.

The beastly head at Fig. 88 has not sufficient power in the front and upper head to balance his lower as well as upper back-brain, the

*Fowler and Wells Co., 27 East 21st St., New York.

currents from amativeness have carried his lips outward into vulgarity, and his nose betokens the liquor drinker. The whole face shows the unhappiness that results from such extreme conditions. The highest beauty comes from a nice balance of the spiritual, intellectual, and physical elements.

Fig. 88. Sensuality.

Fig. 89. Four Historical Heads.

No. 1, in Fig. 89, gives the outlines of the monstrous head of Pope Alexander VI., who, in a corrupt age, bought his way to his high office and was guilty of murder, robbery, lying, and rape. His intellectual qualities were small, his benevolence seems entirely wanting, his flat, low upper head shows an almost absolute lack of the spiritual and religious, while his large firmness, self-esteem and especially animal propensities are immense, throwing the head far back of the ears, especially at the base of the brain. The prominence of his eyes shows large language, in harmony with the historical accounts of him.

Zeno, the stoic, is represented by No. 2, in figure 89, showing the intellectual, moral and religious portions of the brain far larger than those of Pope Alexander VI., but not very large social and amative organs, for which reason it may have been all the easier for him to exemplify the unemotional life of the Stoic.

The outline of Father Oberlin's brain is given in number 3. (Fig. 89) He was a greatly beloved clergyman of Switzerland, with good reasoning powers but still larger perceptives and religious faculties. He worked for the practical upbuilding of the people.

No. 4 (Fig. 89) is an outline of the head of Philip II., King of Spain, his small reasoning powers and perverted religious training, combined with his great veneration, made him a religious fanatic. And this, combined with immense firmness and self-esteem, made him despotic in his rule. Such an example shows the danger of a religion which does not work hand in hand with reason and science.

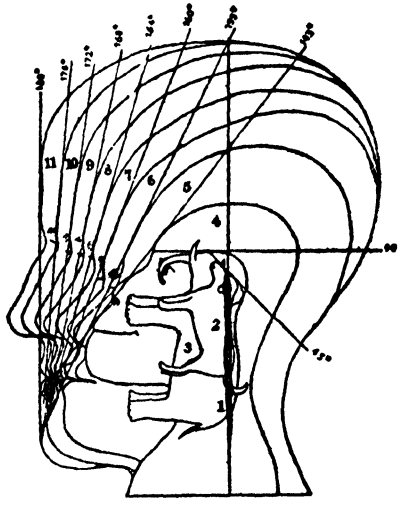

Fig. 90. New Composite Facial Angle, after Professor Sizer.

1. THE SNAKE. 2. DOG. 3. ELEPHANT. 4. APE. 5. HUMAN IDIOT. 6. BUSHMAN. 7. UNCULTIVATED. 8. IMPROVED. 9. CIVILIZED. 10. ENLIGHTENED. 11. CAUCASIAN, Highest Type.

Fig. 90 is a diminished copy of a diagram which I have given by permission from Professor Sizer's work, "How to Study Strangers." This new method of measuring the intellect of the animal and the human world was first given by the Professor before a gathering of eminent scientific men and literati at the residence of Cyrus W. Field, in New York in 1857. Fig. 1, represents the snake, which in common with other reptiles has its face on the same side of its body as its spine. The dog (2) has sufficient brains to push the angle of its face about 45° out of line with the spine; the elephant face, (3) makes an angle of 90° with the spine, or in other words, is at right angles with it; the ape (4) has a still higher angle of intellect, being, 143° beyond that of the snake; the idiot (5) carries the line of the face to 155°; the Bushman has still more brain, coming within 20° of the Caucasian, and after going through the different grades of improved, civilized and enlightened humanity, we finally reach the angle of highest development, which is just half a complete circle beyond that of the serpent, the lizard, the turtle and reptiles generally.

15. Whilst **Prominence of the Front Brain** is generally the sign of intellect, yet there are many cases in which the Perceptives are so projected that it makes the forehead seem to recede. Thus Lavater's head, Fig. 91, has fair reasoning powers but remarkable perceptives. If his reasoning powers had equalled his wonderful powers of observation, he might have made Physiognomy far more of a science than he did. These brains which have a receding character from having the portions directly above the eyes well developed, though not so gifted in the weighing of principles, may yet have great practical and executive skill, and accomplish an important work in the world.

Fig. 91. Lavater

In Fig 92, the Philosopher has developed his reasoning more than his perceptive powers, and drawn the vital aura of his body so constantly to his upper brain as to rob the physical organs of their rights, as signified by the shrunken lower face. He does some grand work, but needs a little more attention to practical affairs and to out-door exercise

16. **Forms of Noses.** I have already shown how the ethereal currents of the body, by constant flow in a certain direction, carry with them certain particles of matter which when segregated may elongate or broaden an organ of the body. With this principle in view, is it not evident why a long full nose formed by the streams of force that issue from the intellectual organs is generally considered a sign of power and often of intelligence? The **Roman Nose,** Fig. 93, the feature of energy, of conquest, of execution, is like a bold promontory on the face. Whence comes its special character? Presumably from two contending currents, one from the intellectual region which tends to carry the nose straight forward and a counter current from the lower energizing region (Destructiveness) which causes a break in the nasal contour. The middle form, with its projecting point, resembling the nose of Ralph Waldo Emerson, is considered especially shrewd and intelligent, and must come from an extra strong force from the intellectual region.

Fig. 92. The Philosopher.

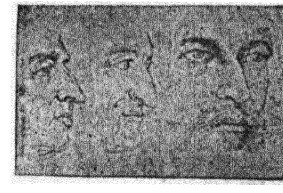

Fig. 93. The Roman Nose.

The **Greek Nose,** Fig. 94, which is almost continuous with the forehead, is the nose of refinement, of art and of the sculpture-loving character which so distinguished the ancient Greeks. Considering the ideal character of those Greeks who possessed this kind of nose, also of such moderns as Milton, Spencer, Titian, Canova, Byron, Shelley, and many others who have the same, does it not go to show that currents from the higher brain had an influence in elevating the bridge of the nose? As these higher grade Greeks were such masters of sculpture, such builders of temples, does it not signify that the organs of Form and Size had something to do also with levelling up this part of the nose?

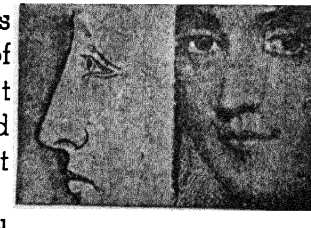

Fig. 94. The Greek Nose.

The **Broad Winged Nose,** sometimes called the "Cogitative Nose," may result in part from the currents on each side of the brain, and is exemplified by Lavater, Fig, 91.

The **Jewish or Acquiline Nose**, common with the Hebrews, Syrians, Turks and Arabs, denotes worldly shrewdness, and is sometimes called the *Commercial Nose.* When turned into high purposes this nose manifests a very decided ability. The width at the base, in this style of nose, probably comes from those side currents that issue from Acquisitiveness.

The Snub Nose belongs properly to infancy and childhood and is sometimes called the *nose of undevelopment*, the mental currents usually being too weak to project a full-organ. Fig. 95. will exemplify this statement. Fig. 98 is a very decided snub nose, and is copied after a portrait of Socrates. Does such a nose belie the science of Physiognomy? No, for the magnificent front head of his religio-philosophical brain redeemed him. But even the nose is not a weak one, being at least prominent and broad. His lips and chin have a certain prominence which betokens animalism, but this was converted into a great advantage under his grand will power and moral purposes.

Fig 95. The Nose of Childhood.

The remark of the Physiognomist Zopyrus has often been quoted, charging that Socrates was "stupid, brutal, sensual, and addicted to drunkenness," and was answered by Socrates himself to his disciples, to whom he said, "By nature I am addicted to all these vices, and they were only restrained and vanquished by the continual practice of virtue."

Fig. 96. Fig. 97. Fig. 98.

The only way in which I can account for the snub nose in Socrates is the fact that in his youth he was very passional and the region of amativeness radiatad its forces so strongly into the frontal organs as to deflect the currents from the intellectual regions, upward, and thus gradually give an upward turn to the nose itself. In infancy when the mental forces are feeble and the animal forces of the lower brain are active, the nose is thrown a little upward into the snub form. In mature years, if the mind is properly developed, the upper frontal currents, gaining strength, tend to straighten out the nasal contour, although some inherited conditions may make it impossible to eliminate the upward curve entirely during one generation.

17. **The Mouth and Lower Face** must be touched upon very briefly here. All of this region finds its leading development in the vital or animal system. Amativeness drives the chin farther forward, projects the lower lip farther outward and downward, and gives an upward

curve to parts of the upper lip (See Fig. 98, and for an abuse of Amative ness, Fig. 88.) Those who "keep a stiff upper lip" manifest *firmness*

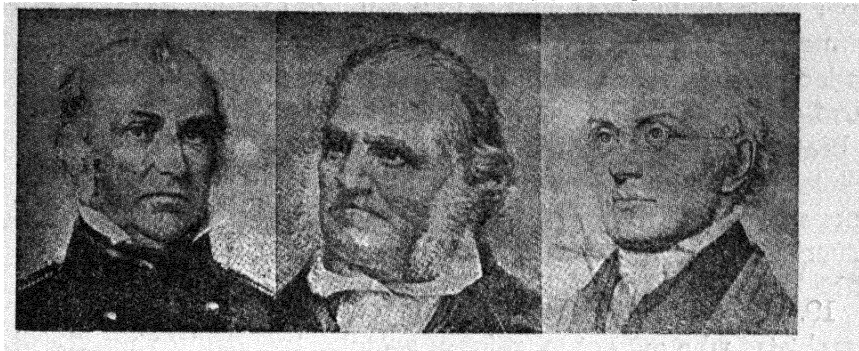

Fig. 99. General Baker. Fig. 100. Audubon. Fig. 101. Chief Justice Story

especially when the middle of the lip is straight and rigid. The experiments of Ferrier show that the upper lip may be moved from the motor realm, but we have seen that the motor realm is under the control of firmness with its contractive forces. Self-Esteem, which is to some extent allied to firmness, is close each side of the manifestation of firmness and tends to draw the lip inward somewhat. **Audubon**, Fig. 100, is an excellent example of both Firmness and Self-Esteem. In his youth he wore long curls and looked almost effeminate. In this picture of his mature years, after the battle of life and his great achievements in ornithology, he has an appearance of great manly force, with his firm lips, emphatic lower jaw and bold forehead. General **Baker**, Fig. 99, of California and Oregon fame, or rather of national fame, eloquent, brave and noble souled is presented here as a remarkably well-balanced and highly developed face and head. Chief Justic **Story** of Boston, Fig. 101, famous as a legal authority, had a countenance of great dignity and great refinement.

A narrow, square chin bespeaks a gentle, refined love; while a broad chin, more on the masculine style, tends to a more impulsive and violent love. A square lower jaw partakes of the energizing forces of the vital system. The muscle which elevates the extreme points of the mouth (the levator anguli oris), seems to be influenced by the organ of mirth, so as to give the mouth an upward tip in merry natures, while that which depresses the angle of the mouth, in times of gloom, (depressor anguli oris) may possibly receive an influence from the hypochondriac region. The face of the youth, Fig. 96, shows great delicacy of nose, lips and chin and yet a goodly amount of strength, though Fig. 97 shows a greater development of animal forces.

Fig. 102. James II. of England. Fig. 103. Louis XVI. of France.

18. **James II.** Fig. 102, who resorted to the most abominable tyranny and cruelty to establish Romanism in England, had such a narrow upper brain that he was unable to see things except through a narrow channel. Having a low as well as a narrow forehead gave him a feeble intellect, and being narrow in the lower brain also, made him a coward. King **Louis XVI.** of France, Fig. 103, was considered very amiable and his brain was much broader, but being retreating and somewhat low, his intellectual power was rather small. It is one of the misfortunes of a monarchy that it must take whatever rulers come in the regular line of succession, however corrupt or feeble they may be.

19. **John Most,** Fig. 104, is one of the regular dynamiting Anarchists, who expect to reform society by destroying it, which is exactly opposite to what the Socialists are aiming at. The Socialist expects to reform society by appealing to the front and upper brain, but such men as poor Most have but little front and upper brain to appeal to, their forces having gone down below or behind, as signified by the lower face and the small amount of head in front of the ear. To be sure there are Anarchists of learning and intellectual power, who, disgusted with the tyrannical laws made by selfish legislators and sustained by imperfect judges, which lay the heaviest burdens upon the poor, have actually ranked themselves among the anarchists, a strange proceeding for any thoughtful mind.

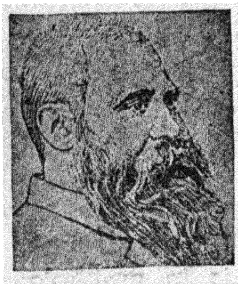

Fig. 104. Herr Most.

20. Compare now the head of John Most with that of the late **William Morris,** a man who, though wealthy, could mingle with and feel for the poor, himself a Socialist and one of the great men of England. Power and balance are seen in his forehead, nose and lower head. I quote the following from "Munsey's Magazine:"

William Morris is without doubt one of the most gifted and versatile men of his time. He has won brilliant success in a dozen different fields. He is a poet, designer, inventor, and manufacturer; he has his own weaving establishment, his printing-house, and a dyeing plant of his own contrivance. To the tattered and homeless masses of London he is familiar as an orator of great power, in commercial circles he has the repute of a man of wealth, and among the lovers of art and literature he is hailed as a leader.

Morris has of late thrown himself heart and soul into the socialist movement. He is a determined foe of the capitalistic system, which, he asserts, has killed the beautiful in the nineteenth century, and has plunged us into a morass of ugliness from which there seems no escape. His disgust with existing conditions is, however, tempered with an unbounded and optimistic belief in the future—differing in this from Ruskin, whose conception of a remedy for present evils lay in a return to the primitive conditions of the past.

21. **Henry Ward Beecher,** Fig. 106, was well developed in the psychic and intellectual realm, had fine language, a forcible nasal organ, large mouth, as orators usually have, a fine development of the amative and social forces, and such a tide of inspirational and magnetic power, that a whole audience would sometimes be melted under the spell of his eloquence.

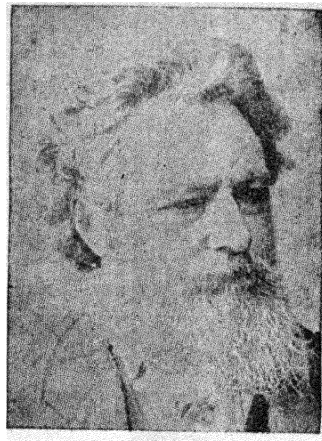

Fig. 105. William Morris

22. **Nordau** of France, Fig. 107, has a well-developed upper and lower head, eyes that are called "frank and open," and a width of the head and lower face which betokens, physical energy. Small eyes are not always a sign of a lack of frankness, as some suppose, but may be covered up in part by an overhanging brow, or at least may be redeemed by superior features elsewhere. His fine, aesthetic method of managing his beard is a proof that when we follow nature in this matter, we attain to something more beautiful than when we destroy this protective covering.

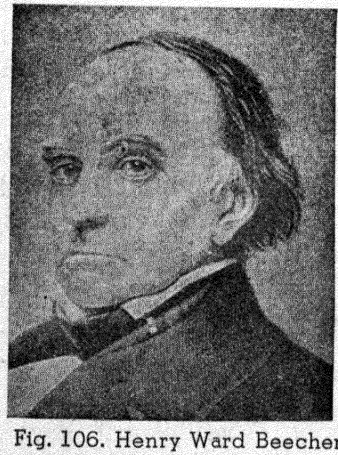

Fig. 106. Henry Ward Beecher,

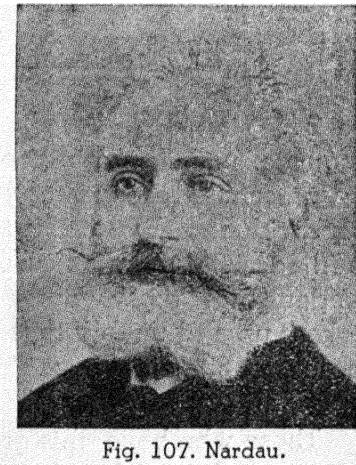

Fig. 107. Nardau.

23. **Goethe** and **Webster** had heads and faces and forms which may be considered as attaining to sublimity. Eckerman was in the habit of calling Goethe godlike. His intellectual portion, though remarkable, manifested itself in prominence and width rather than height. Schiller had more of height and spirituality. Goethe had superb eyes and nose, a mouth fitted for speech, and hair like a halo of glory around his well-balanced features. Like nearly all great poets and geniuses, he was conscious of an inspirational power and said: "I should hold myself assured of the gift of prophecy, belonging of old to my family."

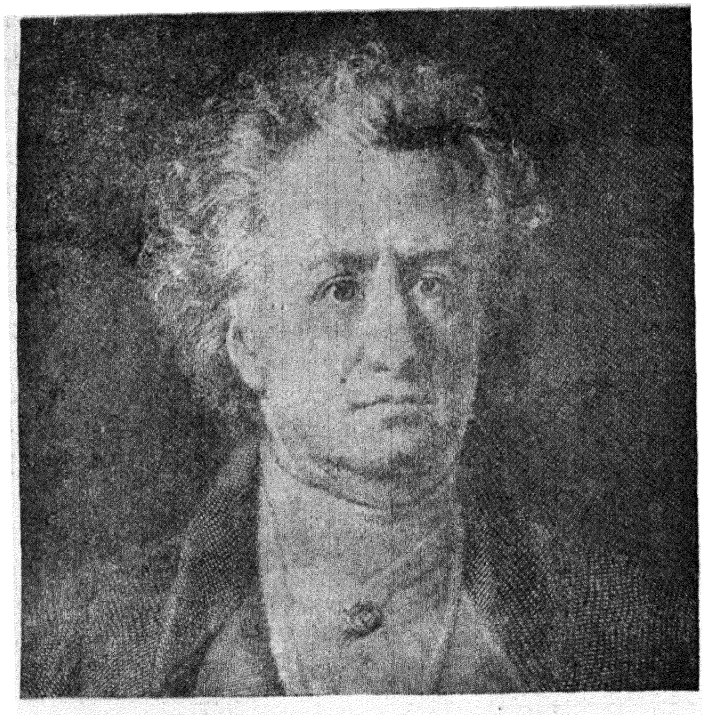

Fig. 108. Johann Wolfgang Goethe (A. D. 1749-1832).

24. **Daniel Webster's** magnificent dome of thought, his gift of language, manifested in prominent eyes, and the magnetism of his voice and personal presence, made it natural for him to control senates as well as individuals. Persons meeting him for the first time would sometimes be filled with surprise and awe at his presence, and it is not to be wondered at that a young clergyman in Massachusetts was entirely broken up and unable to proceed with his sermon, by what he termed "those great, terrible eyes."

Those who have this great frontal and upper development have a grand storehouse of magnetism, if the bodily organs are kept in brisk working order. Webster would have been still greater, if his powerful form had been quickened by sun forces over his whole body and by self-psychology, instead of depending upon alcoholic stimulus as he sometimes did.

25. **Lord Bacon (Francis).** Persons of large frontal and upper brain, sometimes called *sincipital*, or in other words, *religio-philosophical*, as in Daniel Webster, Herbert Spencer, William Howitt,

Confucius, etc., have usually great elements of mental, and moral power. Lord Bacon's is an example to show that even such a brain, under tremendous temptations, may be swerved from the right. After giving the world many noble and masterly things and founding more fully the Experimental School of Philosophy than had ever been done before, he had not the firmness to resist great temptations and for the time being fell. In the engraving, Fig. 110, it will be seen by the relaxed form of the upper lip, that firmness was deficient. Nevertheless, his generosity was immense, and his writings aimed at the high and the good. He lived in a corrupt age, having been born in London in 1561, while his decease occurred in 1626.

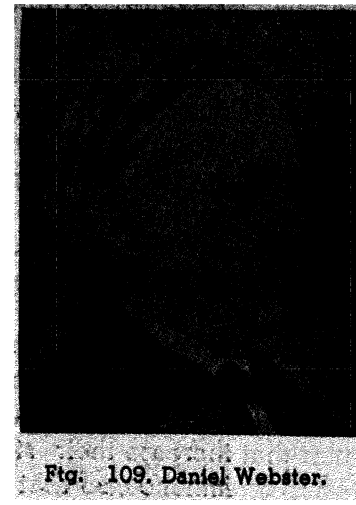

Fig. 109. Daniel Webster.

26. The **Eyes** should have a brief mention here. When the eyes are pushed out into fullness, we have already seen that the organ of Language is well developed. The eyes and mouth are especial realms of *Expression* and become all the more fascinating as a sweet and lovely disposition is cultivated. Eyes that are called black are really dark brown and are usually in analogical harmony with the darker blood of the venous system, or which leads to dark or black hair and a brunette complexion, while blue eyes are usually in contrasting character with the more rosy and blonde complexion common to the Vital Temperament, in which arterial blood is most active. The black eye is more piercing, more electrical and more powerful, and sometimes when the Muscular temperament is combined with the Vital, may become dangerously passional. The blue eye is more beautiful and refined in its effects, though not always so enduring. What is called the "stony" gray eye is supposed to be hard and unfeeling. The blue gray is most common with those who are eminent in science and literature.

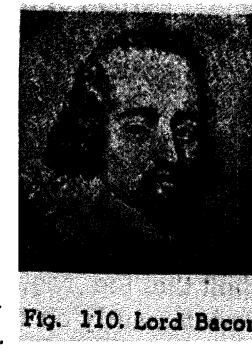

Fig. 110. Lord Bacon

27. **Retrospection.** I have thus touched briefly upon the chemical and physiological relations of mind. Aided by the etherio-atomic law, I have aimed to make clear some leading mysteries of Psychology, which have so long been a kind of *terra incognita*. I have shown how the

front brain, the realm of Reason and Consciousness, acting with the Cerebellum, develops a circuit of forces, in which Firmness is the pivotal point that takes command of all motor centres of the system. We have seen that the front and upper anterior brain are the proper pivots and directors of our ship of state, while the upper posterior and occipital brain are great propelling agencies. I have shown that there is a physiological and psychological character in all functions of the brain, and that these functions receive their life or quickening power from the ethereal forces that flow through them, just as all forces in the known world operate through the agency of fluids. By understanding atomic law and the sweep of these fine streams through the phrenal organs, all of which belong to the external or cortical portions, we can see how it is that any organ becomes enlarged in proportion as it is active, as the blood and ethers that pass to and through them, carry particles of matter that increase their size and thus push the skull outward into greater prominence, so that the practised eye of the phrenologist may read character on mathematical principles. We must remember that the white portions of the brain consist of nerve fibers which carry impressions or motor forces between the body and brain or between parts of the brain itself. We must remember that the external gray, cellular portion of the brain called the cortex, is the realm of intellection, sensation and motor power, and that the impressions we receive from the outer world are co-ordinated and radiated to all the external organs by means of the optical thalamus and contiguous organs. This last fact was first discovered by clairvoyance and afterward verified by neurologists. Dr. Luys and others have shown the very ganglia connected with the optic thalamus, that dealt with olfaction, vision, audition and sensory impressions (see Fig. 86). Psychological scientists admit that the region of language and other phases of intellect, is predominantly on the left brain; but do not seem to give any explanation of this fact. The cause of this seems to be that the radiations and impressions from the outer world send their currents into the left brain, which in common with the left side of the body constitutes the receptive region, while the right side is more efflux,* and deals more with organic and nutritive and emotional life. Left hemiplegia occurs much more often than right hemiplegia, from the fact that the right brain, which controls the left side of the body causes more damage physically than does the left brain which interferes with the right side when damaged. This may come from the fact that the right brain has more of the efflux, electrical forces and a lesion of the motor region must interfere with the contractive currents.

* For diagram explanatory of phrenal currents, see "Principles of L. and C.," P. 481

28. **The improvement of the Brain,** and of the bodily forces that connect with the brain, is a great achievement, and I will throw out a few hints for the purpose.

In the first place if one has a forehead that is somewhat low and retreating and desires to widen the gap between himself and a murderer or idiot, I will suggest three things: 1st, make passes several times a day over the whole forehead and around on the temples, or still better, have a developed magnetist do it occasionally. The ethers that pass from the ends of the fingers will kindle more or less of action there: 2d, get into a quiet state, close the eyes and think intensely of some familiar place at a distance until you are almost lost to the world around you, then will the ethers to the front brain. This will quicken and gradually enlarge those organs. While in this auto-psychological state, will also to have any other organs modified or any diseased condition of any part of the body cured, and in a few times you will be surprised at the result; 3d, study into works that make you think, into the discoveries of science, into spiritual and humanitarian principles and your front head will expand both upward and laterally, and have a nobler appearance. I have known the head of a young man to become nearly an inch higher in a few years from culture of his higher nature. A young man told me that by travelling in a commercial capacity, which caused him to observe men and things, his head had increased in circumference over the perceptives, a half inch in a few months. This enlargement of the front and upper brain fits one for a noble and happier life instead of living mainly as an animal. But the physical system must keep pace with the higher culture and must not be exhausted by over-study.

To facilitate the memory of words, and become more proficient in language, magnetize the outer edge of the left eye and the left anterior temporal region by holding the ends of the fingers there for some minutes at a time, or get some one that is naturally fluent to do the same to you.

If you find, on close examination, that you have a tendency, as most people do, to think or speak slightly of your neighbor, and the world at large, hold the fingers of one hand on each side of Firmness over Conscientiousness, and the other hand over Benevolence and Reason, meantime considering what unfavourable conditions may have caused your neighbor to err, or possibly what unfavorable conditions may have clouded your own mind in judging him. This will prevent the tendency to look at his interests through the diminishing end of the glass and your own through the magnifying end.

Organs that are too small should be animated by manipulation, or psychologically, as already hinted at. In the case of organs which are diseased or abnormal in their action, the extra heat should be dissipated by passes. To offset congestion of the brain, an abundant pouring of water, 105° F. to 115° over the occiput is very important — also very hot foot-baths, and downward passes.

A very safe and useful thing to do is to animate with warm, magnetic hands the medulla oblongata, as it tends to draw away any extra pressure of blood on the front brain, and to help the vaso-motor nerves.

Although the different parts of the system may be affected more or less by treating the head, yet it is more practical and useful to treat directly over the organ affected, or at least over the centres which reach the organs. The method of massaging the head only, or of electrizing the head only, is objectionable, frequently calling so much blood there as to cause headache.

Some metaphysicians will declare that all development must come from within; a mistake. We must have involutions as well as evolutions, and correct external as well as internal conditions.

29. **Opinions**. Aristotle described men with small foreheads as ungovernable, and he likened them to swine. While there is a truth in this, yet there are persons that are not anteriorly high, who are high in Veneration and Spirituality, which gives an inspirational element that redeems them.

Polemon held the contracted forehead as a token of mental weakness.

"There are thousands of handsome eyes," says Lavater, "to one handsome nose."

Horace Mann, the leading educator of his day, says: "I have learned a hundred times more from Phrenology than from all the works on Metaphysics I have ever read."

"The idiot nose is frequently inclined to stick straight out from the face," says a physiognomist. In other words the currents from the intellectual region are too feeble to carry the nose downward in the ordinary form as against the more animal radiations which shoot up from below.

Woman as compared with man averages a smaller nose, larger eyes, narrower chin, shorter limbs, smaller muscles, less angles, more curvature and a more silken fineness of skin.

IV.—PSYCHOLOGY

1. **A Definition.** "Psychology," says Professor James, "is the science of mental life, both of its phenomena and their conditions." According to this definition it will be seen that I have already been treating of this subject in the foregoing pages, and it will not be necessary to make any extensive canvas of the subject here.

2. **Herbert Spencer** is the best known philosopher of the present day and is a man of great erudition and research. In fact he is so venerated by certain minds, that if any one should attempt any criticism of their idol, it would be considered a piece of presumption. But it is both presumption and folly to consider a man so nearly infallible that he must not be criticised. Spencer has a noble, expansive brow as a realm of intellect, and as far as his portrait shows, his benevolence and veneration must have a good development. But at the region of Spirituality and Hope (see the light points in Fig. 111) there seems to be a great deficiency. His great head dwindles down to so small a point at the chin, as to be deformed, but this could have been covered with his beard and presented a more pleasing appearance; the vital forces with such a chin, must have been drawn to his upper brain to such an extent that it is no wonder he is an "invalid" as he calls himself. Still, he must have a wiry constitution as he has already reached 76 years of age.

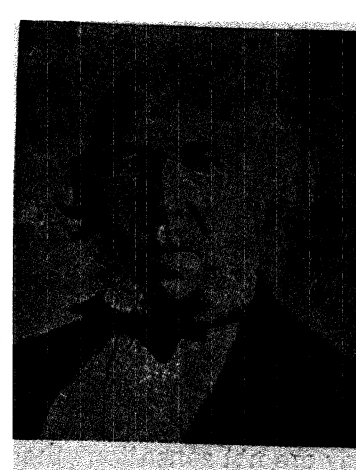

Fig. 111 Herbert Spencer

While Spencer has developed many truths, and has a cyclopedic brain in the way of knowledge, there seems to be a fearful deficiency in his lack of intuition and a great inability to perceive the spiritual relations of things. As a Psychologist he cuts the ground from under himself at the very start by his remark that "each individual is absolutely incapable of knowing any feeling but his own," also nothing is known or can be known of the substance of the mind." "The proximate components of mind are of two broadly contrasted kinds—Feelings and Relations between feelings." If the mind is such a lawless intangible thing that nobody can understand anything at all about it as connected with the generality of human beings, why does he attempt to write about it, and fill out two large volumes with his theories, for all ideas about an unknowable thing, must be mere theories. To his style of intellect so molded by the materialistic opinions of th

day, the subtleties of mind may be unknowable, but he should not conclude that all other minds are unable to grasp them, simply because he cannot do so. In fact he seems to be singularly deficient in analytical skill in this direction. The *feelings* that he speaks of as the components of mind, are not mind, but the results of mind. The least knowledge of psychometry would have shown him how sensitive minds can read another all through, even from a piece of paper or other object that has been handled by him. But aside from this, a person of analytic and synthetic power should be able to formulate with some minuteness the general laws applicable to all human minds.

The *substance* of Mind includes a physical brain working in connection with a very subtle *substance* which is termed Spirit. The two are blended, so as to work the better together, by very refined ethers, which, in harmony with all known forces of the world, move forward into or through that which is to be influenced.

In another place Spencer proceeds to show that mind consists of sensations, nervous shocks, etc., all of which are the mere effects produced through the agency of mind. To show the difficulty of knowing anything about mind he quotes the exploded doctrine of Hume, "that impressions and ideas are the only things known to exist and that Mind is merely a name for some of them." Careless thinkers may sometimes speak of thoughts, feelings and impressions as synonymous with Mind, but the true psychologist must at once see that Mind itself is the faculty which does the thinking, feeling, etc. To show the confusion of our philosopher's mind, even with regard to simple things, on p. 150 of Vol. I., he speaks of "*sensations* known as sounds," "as colors"; or on p. 153, of the "sensation called light." On p. 149 he says: "Musical sound is the name we give to the simple *feeling*, which is clearly resolvable into simpler feelings," and so on, confounding the *perception* of a thing with the thing itself. Sounds, colors etc., produce sensations, but they are not sensations themselves any more than a piece of music is a musician.

I am not criticising Mr. Spencer from any fault-finding desire in itself, but from the fact that his materialistic theories have perverted multitudes of minds. His knowledge is so extensive, his memory so well stored, that his facts wrongly applied are misleading a great number of minds and making it all the more troublesome for the apostles of a higher science to expose his theories. To prove his unfortunate theory that no one can understand anything of another's mind, he goes on and piles up a great number of facts to show the great diversity of tastes in different human beings. To the Average illogical

mind that will settle the matter, and he will see no need of any further study in that line, but a true science of phrenal and physiological attributes, will reduce the whole matter to absolute law. The following passage concerning motor nerves, is finely adapted to confuse the mind and to prove that we live in a kind of a lawless universe:

> If an exposed end of a nerve which goes to a muscle is wrongly touched, the muscle contracts. If it is ended by an alkali or an acid, the muscle contracts. If it is galvanised, the muscle contracts. If it is suddenly heated, the muscle contracts.

I admit that if I had not become acquainted with atomic law and the processes of electricity and thermism, I should be overthrown by the foregoing, which seems to show that opposite forces work in the same way. It is plain enough how a muscle is made to contract by a galvanic current, which being electrical, is the regular contractive principle, or if touched with the right hand, it might be made to contract, as that is electrical. But if suddenly heated, or treated with an alkali which is thermal, it is more troublesome to explain, for all heat is expansive as a fundamental principle. How then shall muscles be made to contract by means of an expansive force? I answer, 1st, as a regular or continuous matter, they are not thus made to contract; and 2nd, by studying atoms we find that the channels for electricity connect directly with the thermal channels, and under extreme action heat forces can be aroused and *vice versa*. Thus an acid is a cooling or contractive principle, but sulphuric acid is such a violent force that it is able to appeal to its opposite and rouse great heat. Again, frictionize any part of the body, and its first effect is to produce heat; its second effect, frictional electricity. In the case of the motor nerve, in animal life, the end is not thus exposed to all kinds of conditions, and we know that only vital electricity is used by volition for muscular contraction.

Spencer has a way, when his mind is a little misty on a subject, of projecting a fine lot of words and then letting it go at that, whether any mortal man can understand it or not. Thus, "Instinct," he says, "is compound, reflex action." Now what can that mean? A boomerang is a good example of "a compound reflex action," and so is a billiard ball when projected by a skilful player. But how does it apply to instinct? Neither this passage nor the context gives any idea of the matter.

Again he says: "The *cerebellum* is an organ of doubly compound co-ordination in *space;* while the *Cerebrum* is an organ of doubly compound co-ordination in *time*." How philosophical that all sounds, how mystical! It is so profound that neither man nor angel can understand it. Are there not men who will read such passages and say, How profound Herbert Spencer is! He's away beyond my comprehension.

Suppose that instead of that he had written the following: The Cerebrum is the great double-sided brain which is the seat of Intellection, Sensation and Motor force. The Cerebellum is the little, double-sided brain which is a pivotal point of the animal forces on the one hand, and which works in correlation with the Cerebrum on the other.

"Oh that's too simple," these lovers of the mystical would say, "It is not profound like Herbert Spencer."

This reminds me of two physicians, the one famous for his success in making cures and in the use of simple language in describing his case to his patients, the other puts in high-sounding Latin and Greek terms, overawes his patient, gets him away from the simple man, takes his money, and leaves him sick still.

Spencer has done a grand good work in developing the principles of Evolution, of Sociology, and other things, but it seems to me has made a great mistake in having anything to do with Psychology. If a man has not the patience and inspiration to go into basic principles, and a talent for grasping both spiritual and material potencies, he would better take some other subject. We have seen Spencer's confusion of idea on this subject as he attempts to conform to the old scientific ruts of thought, until after having reached his 627th page, he breaks out into the following discouraging admissions:

"See then our predicament. We can think of Matter only in terms of Mind. We can think of Mind only in terms of Matter..... We find the value of x only in terms of y; then we find the terms of y in terms of x; and so on we may continue forever without coming nearer to a solution."

Why could not some one more skilled in mental dialectics have whispered to him the following words:

You do not need to separate Mind and Matter, dear Mr. Spencer, for they are forever correlated. In fact, Mind includes Matter as well as a finer principle. Can you not see, Mr. Spencer, that you have made a mistake in following the old metaphysicians in calling *feelings* and *thoughts* mind, when you know that the Mind is the faculty or combination of faculties through which thoughts and feelings come? Do you not know that Mind is impossible without a physical brain, and that this brain must, then, be a part of the structure of mind itself?

In closing this little review of Herbert Spencer, I would say that I have meant nothing against the great Agnostic personally, as he has fought his way upward bravely against many difficulties; but I would warn persons who are seeking for information in the science of mind not to be led by his high literary standing to accept his theories on the subject, without the most thorough sifting of principles. If Spencer could have seen through the sophistries of the physiologists who oppose

phrenology, and thus have adopted the only science of mind founded on nature, his theories would have been luminous and powerful.

3. **The Psychic Body.** I shall now undertake a matter of vast importance, in fact that which is an imperative necessity in any true science of man, namely, a demonstration of the existence of a more refined psychic body within the ordinary coarser body of a human being. This psychic body is what St. Paul calls the "spiritual body," and others the *astral body*, while Aristotle and other inspirational souls have mentioned it. I call this invisible, interior body *psychic*, because it is of the grade of fineness to see by the psychic light, to hear and perceive and reason through the medium of the psychic aura, which, when unimpeded by the coarse fleshy conditions, is far more swift and keen of perception than the organs of the ordinary body. It is proper now to give proofs of the existence of such a body as one of the most marvelous facts of the universe; for if we have brain, eyes, mouth, face and body so refined as to be invisible to the outward eye, does it not seem as one of the most reasonable of all things, that, like the light or electricity it shall be incorruptible and imperishable, and being thus imperishable it shall survive the change called death, passing on as an immortal being to more ethereal realms suited to its high nature?

There are numerous cases, in which, from some great fall or shock, this inner, more important self, seems to have been shaken loose from its cruder encasement, until it was able to look down upon its body lying separate from itself.

Professor Varley, the eminent English electrician, was at one time able to see his outer body and to move back and forth in his ethereal body.

Very sensitive, highly developed natures frequently leave their external body and go forth to a considerable distance from it, seeing glories unutterable and talking with radiant beings, as in the well-known case of the Rev. Mr. Tenant of New Jersey, and very many others. In such cases a bright magnetic cord connects the finer with the coarser body and it often causes quite a struggle and considerable suffering to get the two forms together again. If this cord were to be served, it would, without doubt, result in death.

A Mr. W. of New Orleans, a very lovable and able man, was for some time in a death-like trance, in which no sign of life appeared. He was conscious of all the preparations for his funeral, and in great distress went to his mother and said repeatedly: "Mother, I am not dead, don't let them bury me alive!" But the mother could receive no impression from him. He then went to his sister, and exclaimed: "Sister,

I am not dead; don't let them bury me alive.'" She happened to be sufficiently clairaudient to catch his words, and she declared immediately that the funeral must be deffered, as she was confident he was not dead. Before long, signs of life appeared and he was saved from a horrible fate, which many a person has had to experience, as bodies have been found in coffins after burial that have turned over and evidently gone through a severe struggle. Friends should defer for a while, the placing of ice around the supposed corpse. Bishop, the famous mind-reader, often went into death-like trances and stated positively that his body must not be prepared for burial until a sufficient time had elapsed to prove that death had taken place. Instead of heeding his wishes, the physicians, who are generally very ignorant of such conditions, proceeded to cut him up. This has caused a lifelong grief to his mother, who declares that they murdered him. We have an account of a lady in South Carolina who was buried but who came to her husband and made him hear her voice, telling him that she was still alive. He immediately had her grave opened, when she came to life and has lived for years since that time.

Many persons whose legs have been amputated have had sensations in their feet and toes, thus showing that the psychic body is still there unimpaired.

The author, some time before coming to California, had a terrible fall on the ice, his whole weight striking on his right arm. With his left arm he reached to where his right arm seemed to be, but could not find it. On looking, he found he did not reach far enough to get hold of the visible arm by half a foot. For two or three weeks afterward when aiming to move that arm, the psychic arm would come up to just where he willed it, but the external arm rested unmoved like a piece of dead matter. Gradually it would come part way as far as the inner arm, until finally both arms worked together. To see him feeling in mid air to find his arm was a source of amusement to his friends. This inability to move the arm did not come from any blockade of the nerves of the arm, as the flexor nerves were not reached by the swelling. Besides when the psychic arm was felt to come up to the face, the nerves themselves did not move. Some lessons can be drawn from this. First, nerves alone, even with an unimpeded flow of nerve forces, cannot fill the whole demand of vital action, but must have this psychic body as a basis of life. Even animals must have a fine interior system, though presumably not highly enough organized to survive the shock of death. Second, even this psychic body cannot be called the complete *ego* or *self* of a human being, for without the external body, a human being is wholly cut off from the outer world around him, his form being invisible,

his voice being inaudible, his nerves or muscles being too fine to deal with grosser nature around him, while he himself would be a nonentity to the inhabitants of the earth. The body, then, is a part of one's self, so far as life in this world is concerned "Souls are the motor forces of the universe," said Thales; but even these souls would be helpless without bodily forces. Even the psychic body is made of refined matter and must have its interior soul principle, or element of pure spirit.

Clairvoyance gives some marvelous facts in proof of the psychic body. In the "Principles of Light and Color," I have given an overwhelming array of facts and principles from p. 452 onward in proof of clairvoyance. Clairvoyants have often witnessed, at the death of different persons, a white cloud emanating from the head and gradually forming into the image of the person, with the exception that the wrinkles of care and old age do not appear. A bright cord holds it to the body awhile, and then breaking, it moves upward toward a more ethereal atmosphere, in case the life of the person has been one of purity and aspiration, and lingers earthward for a time, if the life has been gross or selfish.

4. **The Mental System** can now be understood all the better from the knowledge of the psychic body, which as we have seen underlies the whole of the ordinary physical body, giving the cortical portion of the brain that exquisite fineness of invisible texture which fits it so well to be the wonderful storehouse of thoughts, feelings and perceptions. I have already shown that the whole sincipital cortex constitutes the sensorium or "book of life," on which all impressions, motives, thoughts and deeds have written their lasting characters. These characters being made on this psychic tablet, will pass on into the immortal life, where the clearer and more piercing light will show up the selfish and perverted traits of one's being in a fearful way unless they have been repented of and more or less erased by the impressions of nobler thoughts and deeds.

It has been a great mystery for ages, that when a person in the mesmeric state, promises to do something at some exact future hour or day, or have some condition brought about, it will take place according to promise, although when the subject comes out of this psychomic condition, he knows nothing of what has been promised. Thus he may have promised to hand some poor family five dollars at ten o'clock the next day. The time comes and he does it, without knowing why he feels such a special and perhaps irresistible impulse to do it. He may have promised that after coming out of this condition, it shall give him a sick feeling every time he attempts to use tobacco. He awakens, knows

nothing of what has been promised, but wonders why he should become so nauseated on trying to use tobacco and throws it away. The explanation becomes quite simple under the light of the fact that the more powerful psychic brain has been enabled to act with freedom, for in hypnosis the psychic ethers are in the ascendant and can give this nobler brain some of the power that rightly belongs to it, so that when it determines to do a thing it is apt to be done. It is much more acute than the outer brain and while it has the psychic ethers at its command formulates the conditions that will make it succeed even after the subject has returned to the rule of the grosser brain. This will help us to understand the wonderful power of statuvolism and Hypnotism to cure bodily ailments and affect mental conditions. When the psychic ethers have been drawn outward by concentrating the thought on some object, or when some person having mesmeric power throws a fresh charge of psychic elements into one's brain, the psychic brain itself springs into action, holds the grosser brain in sleep, seizes with its lightning forces the sensory nerves and holds them in chains so that surgical operations can be performed without any pain, and sends its swift psychic messengers to any part of the body which is diseased, with a marvelous power to cure.

5. **The Initiative of Volition.** We have now reached a point of vast importance, namely, how is it that Volition is able to receive those primal impulses which start the motor or even the mental system into special action? We have already seen that there are streams of ethereal force, which under chemical impulses, are sweeping everlastingly round and round through the whole brain as long as life shall last. These streams flow feebly during sleep, but more actively during the waking hours, kindling the cells into activity at the reasoning powers, where volition sends out its mandates. The question is, how can these frontal cells be kindled into such a powerful combustive action as to awaken the motor region, so that any part of the body can be controlled? How can the first impulse be given? We have seen that the whole frontal brain is under the control of the psychic forces, and that the sensorium itself, with its amazing subtleties is founded in the psychic system. It seems quite certain, then, that the special impulses of all volitions must come from the psychic brain itself, whose lightning activities can set on fire, so to speak, the whole cellular system. But is not the psychic brain also under the rule of chemical affinity? Yes, but its sweep of forces is greatly broader than those of the coarser brain and its amazing activities can at any time be turned upon the external reasoning faculties without any increase of its normal activities.

Now I think I hear a voice exclaiming: Are you not converting these grand processes of Mind and motive power into a mere matter of chemical affinity? I am showing that chemical affinity itself includes the Godlike power of spirit, on the one hand, and the whole universe of matter on the other. I am showing that by this process, human thought and aspiration reach up into a grander universe and become allied to the angelic and the divine.

6. **Memory.** A popular writer of the day says: "What Memory is and how it is carried on, nobody has yet remotely suggested." Psychologists are so ignorant of memory and other mental processes because they insist on ignoring the universal methods of force as manifested in nature. If we look at the matter naturally there does not seem to be much trouble in understanding the leading phenomena of Memory. A landscape, for instance, is reflected by the sunlight upon the retina, with forms and colors as in nature. These images are carried to the occipital lobe of the brain and reflected to some extent upon the surrounding organs. They are carried also to the optic thalamus and contiguous organs and then radiated to all the organs of the brain, as I have already shown, and thus photographed upon the sensorium. Lightning has often photographed faces and forms upon surrounding objects. Cannot these interior lightnings imprint their forms upon this wonderfully sensitive psychic picture-plate? To remember a thing is to hold the pictures on this same plate, for days, months, and years, and to make them all the more vivid, to turn on the luminous ethers, the existence of which I have already demonstrated. Another view is pictured on the top of the first one and still others on this. A million layers of pictures would not cause any appreciable thickening of the sensorium, so exquisite is the material used in mental operations. *Material*, did I say? Yes, for everything has a material as well as a spiritual side. There are two homely expressions which I have used to impress the nature of things on my students, *everything is something* and *everything is like everything*, fundamentally considered. I have shown elsewhere that a photograph is formed by the deposit of fine particles from the air, under the stimulus of light, and that shadow as well as light is a substance.* Now as the universe is in harmony with itself, the invisible acting on the same principle as the visible, we are clearly justified in saying that these mental photographs on the sensorium are formed of material substances. It is now well known that thought can be photographed, for thought has a concrete as well as an abstract side. If

* "Principles of light and color," p. 255, also P. 198. Several years afterward, Professor Crookes demonstrated before the Royal Society that light is a substance and that shadow is molecular.

thoughts can be photographed by our crude external apparatus, how much better can these inconceivably fine interior elements be photographed on the sensorium, which is memory's store. The clairvoyant can see radiating lines of force flashing from brain to brain, in the course of an excited argument, thus showing how thought uses material elements. A logical brain radiates blue elements, but one who mixes impulse or passion with his thinking, radiates reddish or purplish elements. Judge Edmonds, of the supreme Court of the State of New York, once informed me that he could get the purport of what Beecher was about to say by studying clairvoyantly the aura that surrounded his brain. Sometimes an aura was seen to be entering his brain, as if from some higher, inspiring source.

6. Memory of Sounds. Sound, so far as it sets the air into movement, affects the tympanum, and it also sends an ethereal element inward to the cochlea and auditory nerve which is impressed upon the temporal part of the cortex. So far as spoken language is concerned, or the expression of ideas through the voice, it comes farther forward into the frontal lobe or intellectual part of the brain. For expressing music or high or low tones, it deals with the short or long rods of corti and is also impressed on the frontal lobe, but a little higher up than the sounds connected with language. If the sounds are loud they send a more violent vibration upon both the external and internal ear, and thus convey their impressions to the sensorium. According to Dr. Luys, an acoustic ganglion connected with the optic thalamus, assists in sending auditory impressions to different parts of the brain. In the case of a musical genius, the rods of corti must be set into brisk vibration by the performance of a fine musical composition, that very distinct impressions will be made, which in some cases can be remembered on hearing it a single time. The organ of tune, being in the realm of psychic forces, easily communicates with the ideal and spiritual portions of the brain, and its uplifting power led Beethoven to feel that music is the only direct channel between earth and heaven.

Words uttered by an eloquent or magnetic speaker can be remembered much more easily than those which are given by a poor speaker, or than those which are simply read, although Lord Macaulay could grasp the meaning of words so vividly even when reading, that in one case he could repeat verbatim an article which he had read only once, forty years before. His organ of language must have been large. To intimate that we can not think without the use of words, as does Prof Max Muller and some others, is too absurd to need any argument, as it would prevent persons born deaf and dumb from having any thoughts, but this is contrary to all experience.

7. Memory of Forms, Sizes, Colors, etc., enables a person to remember human countenances, as one with these gifts, has a vivid perception of such qualities. The author, when at a concert in New York, where hundreds of people were present, was approched by a gentleman who suggested his name correctly although he had never before seen him. How did he do this ? By having seen a brother nearly a score of years before, hundreds of miles distant, which brother was only nine years of age at the time. The marvel was that most people saw no special resemblance between them when they were both side by side in childhood, but he discovered some family resemblance, so minutely carrying it in his memory all those years as to identify it in a great city, in the midst of a great multitude of people, and that when the author's face was partly covered with a beard.

To assist in developing the perception and memory of individual forms and faces, pass the ends of the fingers over the perceptive ridge and over comparison, but especially over the root of the nose. This should be repeated every day for at least a month, besides which it is important to mingle with people and study living forms, mental and spiritual expressions of the eye, mouth, and elsewhere. The knowledge of phreno-physiognomy will be a great help in reading and remembering traits of character as well as faces.

8. In **Remembering the Past,** *does the mind look through all the countless layers of impressions that have been placed upon the sensorium?* Evidently not. There may be a million layers of thoughts, facts, sensations, between something we wish to remember in the past and the present time. We should get hopelessly mixed if these layers were so transparent as to allow the interior psychic light to pass through them all. *Each layer of memory-pictures must be penetrated laterally.* The memory of ideas, facts, words, musical tones, forms, colors, numbers, etc. must be pictured mainly on the frontal portion of the brain, including, in some cases, the superior and lateral regions which are the true realm of the sensorium. That which pertains to the social life, affecting the posterior part of the brain, is transferred to the anterior brain which takes cognizance of it. But these layers do not cover the whole cortex, and there is ample room for the illuminating ethers to enter and proceed laterally through some former pictured event and its related circumstances. If, in recalling a past event, we were to look perpendicularly, so to speak, through all the intermediate layers, we would have to encounter thousands of memories before reaching the desired event, which would be a confusing process, and after reaching it, we would be apt to perceive the whole matter at once

and not with the consecutive steps with which past events so generally come back to the mind.

Let me bring up an instance which may illustrate this point. A gentleman calls upon me. His countenance seems familiar but I cannot give his name. He gives me his name and tells me he was at my office watching a wonderful military pageant. Oh, yes! He has helped me to guide my illuminating forces on to the line of sensorial pictures which relate to the Centennial Celebration in which military companies, floats and other gorgeous pageantry were so numerous as to require three days to pass my office on Union Square, New York. Then all kinds of memories come up gradually, including the Seventh Regiment which called forth enthusiastic admiration, the military companies from thirty or more states, the endless bands of music, the skilfully drilled Cadets from West Point, the beautiful novelties of the German floats, the densely packed mass of people estimated at two millions who viewed the sights from the sidewalks or from windows, and a hundred more things, all laid up carefully on this tablet of memory, come into view.

9. **Memory in Old Age** generally becomes more feeble and imperfect than in youth or middle age, as the system becomes more depleted of its ethers, the blood becomes more anaemic and less charged with phosphorus, and events and ideas do not make the deep impression that they do in younger life. Ribot in his Diseases of Memory, quotes the following singular cases:

> Through the effects of disease or old age, celebrated men have been unable to recognize cherished works of their own production. Toward the close of his life, Linnaeus took great pleasure in perusing his own books, and when reading would cry out, forgetting that he was the author, "How beautiful! What would I not give to have written that!" A similar anecdote is told of Newton and the discovery of the differential calculus. Walter Scott, as he grew old, was subject to similar forgetfulness. One day, some one recited in his presence a poem that pleased him very much; he asked the author's name. It was a canto from his "pirate." ... ..In a case cited by Forbes Winslow, a lady was driving out with the poet Rogers, then ninety years of age, and asked him as to an acquintance whom he could not recollect. "He pulled the check strings and appealed to his servant. 'Do I know Lady M ?' The reply was, 'Yes, Sir.' This was a painful moment to us both. Taking my hand he said, 'Never mind, my dear, I am not yet compelled to stop the carriage and ask if I know you.'"

"These phenomena of old age do not signify that the reasoning or spiritual powers go into the same eclipse as the memory.* Some persons who have been more or less paralyzed, have forgotten their own names. One person who had been an important official, exclaimed to his

*The writer, now in his seventieth year, realizes that his memory of events, names and other words is not so good as in former years, but his judgment is superior, and he has been able to improve some earlier writings.

friend, "For God's sake, tell me who I am". Some have had the picture layers of their memory so obscured by some lesion of the brain, or nervous shock, or paralysis, as to lose all their former memories and acquisitions of knowledge so that they have had to commence anew their course of education, but in various cases some shock or even disease would evidently sweep away the debris or cloud-like mists that shut off the psychic light from the sensorial surfaces and their former acquirements would return to them. Our psychological writers seem to be quite at sea in explaining these mental phenomena, as they do not build on nature's processes. Ribot says, "We may as well declare at once that we see no way of explaining the transition from unconciousness to consciousness." In another place he says, "Romberg among others has noted a remarkable and permanent development of memory after shocks, attack of small-pox," etc, which Ribot calls inscrutable." Instead of being inscrutable it should be considered most natural that some waves of excitement should be able to sweep away some of the mists and obstructions that cloud the mind.

10. **The Materialistic writers of the Day** find it impossible to understand memory or the mysteries of mind, as intangible things seem so unreal to them. It is hard for them to realise that there is more than one grade of electricity or of heat. Helmholtz denies that there is more than one grade of light, but now a grade of light called the *X* rays has been discovered, and the still finer psychic grade, which can penetrate opaque bodies as easily as ordinary light can penetrate glass, has been demonstrated by clairvoyants thousands of times. It is this exquisite grade of light, swift and searching, that illuminates the different layers of memory-pictures which give us the records of the past, and so long as we can keep our physical forces fresh and active and pay proper attention to the refined forces of nature, we should be reasonably clear in the line of memory and other mental action. Our psychologists are greatly mystified by the fact that some people lose their perception of musical matters, while their mind is clear on other subjects; some lose their memory of vocalized language and some of written language; some are said to lose their knowledge of Greek although they are clear in their own language, and a lady at child-birth is said to have lost all memory of a dearly loved husband so as to shrink from his presence as from a stranger, although her memory of events was clear up to the time just before her marriage and clear after the birth of her child, as to the passing events of the day. One great trouble is that they ignore phrenology and are unacquainted with the many layered system of picture-forms which when illuminated give us the effects that we call memory. It is evident to the phrenologist, that if some lesion or

other blockading power of the organ of Tune should occur, one's musical memory would be gone; or if the part of the cortex connected with language and hearing should be more or less blockaded, aphasia would take place; or if Form and Size should be perverted, a person may be able to vocalize language without remembering its written forms. As to forgetting Greek and remembering one's own language that is not at all mysterious, as Greek is a difficult language, not generally well acquired, while one's own tongue is impressed on the sensorium a whole lifetime and especially during childhood when impulsiveness and plasticity are the conditions. The case of the lady who forgot her husband, shows that all the memory layers in the region of Eventuality and perhaps some contiguous organs, had been sealed up to such an extent as to cover the whole period of their acquaintance with each other. The sad part of the matter was that the beloved memories connected with him were never brought back to her. I believe that a strongly magnetic hand held over her front brain for some time could have so animated the parts as to sweep away the obstructing elements and bring back the old happiness, and other organs could be quickened into action on the same plan. A musician's touch would be the best to waken the organ of Tune, and an artist's to kindle Form and Size. A very sensitive young man touched the head at Ideality of the poet William Cullen Bryant, and immediately soared aloft in beautiful language.

11. **Visions and Sensorial Impressions**. It is very common for writers on Psychology to term all visions mere hallucinations. The truth is that these writers themselves are often hallucinated in thus judging of things that they know nothing about. The sensorium itself is a great picture-gallery, a million-leaved treasury of memory-plates, which at times may be brought vividly into view, or which may receive new picture forms from some invisible source. Those in whom there has not been a sufficient evolution of the psychic forces, to bring up these images as conscious realities, are apt to consider all persons deluded who are able to perceive them. At times when a *sensitive* is nearly lost to the outer world, in the early morning for instance when not fully awake, he will see visions, or hear voices, or both. These visions or voices may be a vivid reproduction of that, which in past life, has been stamped on the sensorium as a picture, or, by the aid of the interior electricities the very voices or musical tones of past life may be called forth just as a phonograph, when the images on its plate or awakened into action, will give the voices of the past. This may be considered as only a vivid phase of imagination, and I will agree to it. *But what is imagination but a picture of realities or a reproduction of forms, colors, sounds, motions, perhaps of thoughts themselves, that have*

been impressed upon the sensorium. The creative part of imagination is the combining of these images into some complete whole, which the poet or sculptor may do. Thus Hiram Powers, in modelling his Greek Slave, took the images of nineteen female forms and combining the more beautiful features of each in his mind, produced his lovely whole in marble, so that it might be realized to the external senses. This is the higher phase of imagination, and constitutes an important reality. Hallucinations are an unwise use of these images or impressions. Thus a sensitive mind may have had the horror of devils, hobgoblins, etc., impressed upon him in childhood so that he thinks of it constantly, especially in a dark night, until the image on the sensorium becomes doubly vivid and finally leads almost to insanity. Mature minds too, may psychologize themselves incorrectly and thus finally become what is called hallucinated. In such conditions it is difficult to remove the impression unless the subject is got more or less into a psychic condition and induced to will away the false impressions. It is only psychic forces that are powerful enough to cope with psychic forces.

I have aimed at a somewhat critical study of psychic impressions in myself as well as others. I have spoken elsewhere of the ineffable glories of lights, colors, forms and motions that have been revealed to me as I have closed my eyes and from a half hour, to an hour, have attempted to see.* When I went into a church and closed my eyes awhile, I would sometimes see pillars and paintings and carved work which I supposed belonged to the church itself. On looking up I found that the whole ceiling and form of the room was different from my vision, which showed that I was simply reproducing forms and colors of some other church from my sensorium. At other times and places I would find that my vision with closed eyes was entirely correct, hence I was seeing clairvoyantly. On passing through the country on a railroad car, I would cover my eyes with a handkerchief and then remove it to see if my visions were correct. A part of the time I found them entirely correct and a part of the time they would evidently be some landscapes seen in former years. Although there are those who see far more accurately than myself, this experience and many others showed that clairvoyance is a reality. At other times numerous human forms would appear, which resembled the people seen in everyday life, but occasionally faces flashed upon me which were radiant and beautiful beyond all sculptor's art to equal, beyond all faces in our earthly life, that I knew must be dwellers in some higher realm of being. At one time I saw a form whose gaze was so all-piercing as to fill me with awe, and I knew it did not come from my sensorium, as it was far beyond any earthly experiences. A

* See "Principles of Light and Color," from p. 446 onward.

number of times I saw flowers and trees and landscapes that far transcended all terrestrial forms, one flower, for instance, appearing like radiating fire. Then I saw structures with novel and exquisite outlines and mosaic work, compared with which the finest palaces I have ever seen in Europe or America are but trash. Such visions I knew were not the results of imagination, for they transcended imagination. Many times I have heard words, some of which must have been reproduced from my sensorium, some of which were nonsensical, some were scientific and some were sublime. Take such an expression as "at a bee cove measuring off sitakores." I never heard of a *bee cove* or of *sitakores*, and cannot imagine where such an expression could have come from except from some jovial sprite who was trying to see how absurd he could be. At another time while at Cincinnati and when I was partly lost to material things, I heard very distinctly, a refined female voice which said that her name was Alice Carey; that a Mr, ——was present and that he had been a book-binder, in the early history of Cincinnati. I took his name and on inquiring of the oldest book-binder I could find, the name was fully remembered and identified. I could not prove the presence of Alice Carey as a spirit, not having been acquainted with her, but the finding of this man's exact name and the time and nature of his business, signified that his spirit had survived the change of death. Another case was that of Maggie R., who, as I heard, was suffering with some indisposition. One morning before I had become fully awake, I heard the voice of her father, who had departed from this life some time before, exclaiming very emphatically, "She's dead!" "Who is dead?" said I, "Maggie?" "Yes," was the answer. So sure was I that I had heard Mr. R's voice correctly, that I told my friends whom I saw, that I was confident that Maggie. R. had deceased. It turned out that I was correct. These may be considered very simple matters compared with some others that we hear of, but they go to prove the sublime fact of human immortality, for if man, in these coarse conditions can survive the change of death, the elements of a more ethereal life must be much more incorruptible and imperishable than the earthly grade of matter, and hence can survive any future change all the better. Does the reader see this point? We know that water and air can become impure, and that flesh and other food materials soon become putrid and disintegrated, but light, electricity, heat, etc., are incorruptible, and indestructible. So must the *perisprit* or invisible man remain intact as an immortal entity.

V. PSYCHOMETRY.

1. **Psychometry**, literally *soul measuring*, is a search into the more innate or fundamental nature of things. It was named and to some extent systematized by Dr. Joseph Rhodes Buchanan in the year 1842.

2. Psychometry reveals the amazing fact that *the very* **Forms, Conditions, and Properties of things** *are radiated and stamped upon all surrounding objects by ethereal forces, just as sunlight paints the images of all objects upon appropriate surfaces.* Persons who are sufficiently sensitive and in rapport with psychic forces to be conscious of these revelations are called psychometers.

3. Psychometry reveals the very **Nature and Environments** of minerals, earths, etc. (Geology), their history in the far past (Paleontology) the characteristics and original development of human races (Ethnology,) the hygienic and therapeutic character of different substances, and last and greatest of all, the physiological, psychological, and other qualities of human beings.* The very objects which one has handled, the paper upon which one has written, the clothing which one has worn, are all revelators of character and condition.

At the 150th Anniversary of Yale College which took place in 1850, the noble Rev. John Pierpont gave a poem on Psychometry, lauding Dr. Buchanan and ending as follows:

The very page that I am tracing now,
With tardy fingers and a careworn brow,
To other brows by other fingers pressed,
Shall tell the world not what I had been deemed,
Not what I had passed for, not what I had seemed,
But what I *was*! Believe it, friends, or not,
To this high point of *progress* have we got.
We stamp ourselves on every page we write!
Send you a note to China or the pole—
Where'er the wind blows or the waters roll
That note conveys the measure of your soul!

4. **Mr. Dawbarn**, formerly of New York, now of California, was once visited by a gentleman who handed him a letter from his *intended*. Mr. Dawbarn immediately told him that the lady was an opium-eater. The gentleman said he thought that was a mistake, and shortly afterward he wrote that he had talked with the young lady's parents, who were sure that she had never eaten any opium. Some time afterward he wrote Mr. Dawbarn that he had married her, said that she had been eating opium for years and that he would have given fifty thousand dollars if he had heeded his warning. At another time he psychometrized a letter from a mining company and pronounced two of the members rascals. The person who brought the letter thought they were all high-toned men. As events turned out, however, the two men made their character known by ruining the company.

* These subjects are illustrated somewhat fully by the work called "Psychometry" by J. R. Buchanan, published by the author, San Jose, Cal., and by the three remarkable volumes of Professor Denton called "The soul of Things," published, I think, by the Banner of Light Publishing Co., Boston, Mass.

5. **A Psychometric Reading of General Washington** by F. R. is narrated by Dr. Buchanan in his Psychometry, who placed on his forehead an autograph of the General's. The psychometer, of course, was not informed as to who the person was, whom he was describing. He proceeded as follows:

"I feel a greater sensation in the perceptive organs over the eyes, a swelling of the nostrils and a feeling of defiance. I should judge he was a man of intellect. Certainly when he took a course he would pursue it to the end. Nothing can alter his determination neither persuasion nor force."

(2. What pursuits and sphere of life is he fit for?)

"For a statesman, bold, independent and straightforward. He would make a good soldier too, if he had opportunity—a good commanding officer, who could plan well and perceive advantages. (What of his moral character?) He is a great man. He has a greet deal of what I call force. (How does he compare with other men?) He has a great deal more force, greatly excels them in power—he is still planning, but on a larger scale—he thinks more profoundly, acts from greater motives and on a large scale. He is superior to the ordinary run of great men—might be estimated among the first class—a much greater man than Jackson, because he had more intellect, but he would resemble him in force of character. I feel the excitement extending back from the perceptive over the moral organs and crown of the head. I consider him a great patriot and a man of great justice."

(What is his appearance?) "Tall, commanding; he would look more like my idea of **George Washington** than any one else."

6. **Mrs. Maria B. Hayden, M. D.,** at whose residence in New York I had my office for some time, was a very skilful physician and psychometer. She was employed by the Globe Insurance Company for some time, at $ 3,000 a year A gentleman who wished to be insured for $ 10,000 was pronounced "as sound as a bullet," by their physicians. They handed Dr. Hayden a slip of paper on which he had written, and she told them "he would be a dead man within eight weeks." They asked him to wait eight weeks. In seven weeks and two days he fell dead on his doorstep. In the case of a Southern gentleman, who applied for a policy of insurance to the amount of $10,000, she saw from his autograph that he was melancholy and diseased and would commit suicide. They risked his case, however, against her advice and lost it, as he suicided within the year. Some parties got control of the company, who with the usual stupidity of business men on such matters, discharged her, a fact which has been said "to have contributed largely to the ultimate wreck of the company."

7. **The External Effect of Drugs** was thoroughly demonstrated by Dr. Buchanan in his earliest experiments. He wrapped various medicines in papers and found that nearly half of his students, by holding the papers in their hands without knowing what they were, would feel their power very distinctly, much the same as if they had swallowed them. In several cases in which lobelia was held, for instance, they were able to

prevent vomiting only by laying the paper aside. The following news item copied from a New York paper will give an interesting experiment in the same lines:

"At the recent French Conference for the advancement of science, some interesting experiments were made on hysterical patients with drugs which were not actually administered, but were placed at the back of the patients' heads, and were used without their knowledge. Under these circumstances opium produced sleep, alcohol caused drunkenness, and absinthe brought on paralysis of the legs. In women, camphor gave rise to religious ecstasy, and in men convulsions; many drugs were employed, and all of them gave their characteristic effects, though they were all contained in phials or wrapped in paper."

8. **Bismarck**, Jan. 3, 1880 (From Dr. Buchanan's "Psychometry").

"This is a male. He desires to wield power—would like to attain eminence without chicanery (this remark was in contrast to a politician previously described) by his ability. He 'don't want any bombast or false statement.

"He holds an office of some kind and of great power—immense power, in state affairs. His word is respected. He is naturally authoritative and dogmatic, but modifies this appearance by his policy and by some wit or humor."

"Q. What are his leading motives?"

"His motives are selfish —self first, the public next. He is not philanthropic but patriotic.

"He has a great brain, a remarkable insight into governmental affairs, their rights and wrongs. He is a great statesman in high position. He is jealous of Russian power and despotism."

9. **Pompeii**. It will be remembered that this was one of the famous cities that was buried by an eruption from the volcano Vesuvius, near which it stood. It was situated on the river Sarnus, near the bay of Naples, Italy, and was destroyed A. D. 79. The following psychometric reading was given by Mrs. Denton, the wife of Prof. Denton, from whose remarkable work called the "Soul of Things," it has been taken. The Professor had in his possession a small piece of volcanic tufa "not larger than a small bean, obtained from the excavations at Pompeii. This was wrapped in paper and handed to Mrs. Denton, who was wholly unaware of its nature or whence it came." The following is her description.

"I see colored figures on a wall.

"Now I see a yard, but it differs from all I ever saw before. It is diamond-shaped, with the corner in front of me. I feel the influence of something back of me; it seems like a building. It is a very heavy structure. I do not see it but I feel its influence behind and on each side of me. This comes from some old country; the influence is ancient. It reminds me of Dickens's song of the Ivy Green,

'That creepeth o'er ruins old.'

"One side of this building looks out on the water: it may be the sea, for I feel the influence of some large body of water. The side of the building next to the water, and I think another side, have square towers rising up. I hear the rustling of long heavy curtains in the building.

"In front of me and to my left hand, the view is all shut out, and I have been trying for some time to find out the cause. It seems as if there was a great mountain, so high that I have to elevate my head to see the top of it. The abrupt rise of the ground here seems to have caused that yard to be made in the peculiar shape it is. That mountain looks volcanic, and there are smoke and stones and cinders and dust, all issuing from it in a dense body. They are thrown up with such force, that for a great distance, they form a perpendicular column, resembling somewhat a tall chimney, and then spread out on all sides. The mountain seems a hollow shell to a vast depth, the crater at the top being merely an orifice of small dimensions compared to the great cavern in the interior. The mountain has two peaks, the lower one much smaller than the other, but much sharper. I have been standing in the space between them, and I now go up a little higher. I hear the mountain below. What a depth that comes from! The influences that produce this eruption seem different from any I have ever felt before. How strange it seems that I did not see this at first; for now everything seems so insignificant compared with it. The amount vomited up is immense. It is no like lava, but spreads out in a great black cloud that rolls over and over and covers the country like a flood I can hardly believe that what I see is correct. It looks as if it would bury everything all around it. What a sight! There it goes, pouring, spreading, foaming, as it rolls down the mountain side in great black waves. It seems to me there is water too, running down the side of the mountain. At first all seemed dry; but now the mountain belches out water that sweeps everything before it. It is washing away the cinders and ashes that it previously threw out. I see the water rush through the cleft between the lower and upper peaks, and sweep a vast amount of material down. What a desolation it spreads over the land! It is not a dash and then over, but it continues to pour out for a long time. The lower part of the mountain seems entirely buried. It appears to extend for several miles, and makes it seem like night, it is so dense and dark There are occasional flashes that look like lightning, and others that are not as evanescent, seen through that dense cloud. They seem to be caused by irregular bodies of fiery matter, shot up from the crater. I can think of nothing but electricity that can produce the tremendous force necessary to eject this material to such a height that it falls miles away (Go below and see how it affects the country). There is utter ruin to everything below. I do not see any place at the bottom. It is a great barren field; or rather an immense desert of cinders and dust everywhere. (I do not feel the heat that I expected.) I cannot recognize any place. There is nothing visible that was there before. Even the water for a long way looks converted into and, being covered with a deep dark scum of this same material.

"I feel the influence of human terror that I cannot describe; it is awful. I see no one but the feeling is almost overpowering. I feel like screaming. There are many different sensations commingled; but there is a horror more overpowering than all. This is either Herculaneum or Pompeii. There is no fancy about this; it is too terribly real. Some seem to regard it as a judgment of the God's. There is wild agony, prayer and blind dread. Now I see them. Some wring their hands; others throw out their arms wildly. I see no one injured; that is, I receive no impressions to that effect.

"I feel the influence of some persons at a distance from here. Now, I see a very large crowd of persons, some hurrying along, and occasionally looking back; others seem to feel as if they could never leave, but are compelled to go to save their lives. The scene is agonizing in the extreme. I see one woman dart from the rest and rush back as if she had left a helpless parent or child to perish, that she was now determined to save; but she is compelled to give it up in despair, for there is a fresh burst from the mountain, and she sees there is no hope. A darkness almost as great as night is now around them. How wild they seem! Many know not what to do nor where to go. They act as

if they thought there was hardly any place left in the wide world for them. There is a town at no great distance to which many of them seem to be fleeing. I feel the influence dividing off in different directions; but I think many who escaped afterwards perished. Such is the impression I receive.

"Those flashes from the mountain have a slight tinge of purple.

"I am in the city now, and, under the material, I can see something of its previous condition. I am surprised at their structures now that I see them more clearly Their architecture is not of that massive kind that I have supposed it to be. The place resembles a modern town much more than I ever imagined. There is a good deal of taste manifested in the arrangement of the town and buildings, and much time and means have been employed in making it beautiful and cheerful. I see a large open space that looks like what we call a square. In the distance I see a long dwelling; but with this specimen, it is very difficult to obtain conditions as they were before the eruption." (*Soul of Things, Page 180. Vol. I.*)

All of this and vastly more was written on this minute lump of matter eighteen hundred years ago and is a good specimen of God's sacred scriptures of nature, which are more accurate and enduring than anything that has come through human pens. And yet there are infinite millions of such records, some of which have come down through an inconceivable procession of centuries and millenniums, even from the early formations of the world itself. If such records can be stamped on a stone or a bit of paper on which one has written, cannot the reader see how thoughts and pictures of the external world may be photographed on human sensoriums?

10. **Mining.** Psychometers have often been employed by miners as they can take a piece of ore, tell the surrounding conditions and trace out the leads and portions that are more profitable to work. I quote the following from Denton's "Soul of Things," Vol. 1, P. 241, Mrs. Denton being the psychometer, and the reading from a piece of amethystine quartz:

"I see a mound covered with tall grass andflowers; there are three terraces on the sides. At a little distance there is a marsh in which tall reeds and grasses grow, that have a straggling appearance. At a distance I see a few very pretty low trees and a stream." (See what is under the surface.) "I do not know where I am, but I see metal; it seems loose, as if in sand. It is yellow and there is a good deal of it, but it is in small pieces, like scattered drops; pretty close together in some places, however. I think it is gold; indeed I feel sure of it. What a tremendous amount. The sand containing it seems to lie in three streams, and at some distance south, I see another stream containing gold, but the pieces are more scaly, and lie nearer the surface."

"A few days afterward," says Prof. Denton, "I gave the specimen to my sister (Mrs. Cridge) for examination, she knowing nothing of it."

"I see mountains away off, but it is a plain where I am. I see a lot of trees that look like palms. This must be a torrid region. I can see a road that seems to have been made. There are rocks below, though it looks sandy above I see gold in great quantities and very near the surface, too. There is a good deal among the sand that could be got at very easily."

At one time Prof. Denton gave his wife a sample from a certain place which she described. Afterwards he gave her another kind of a subs-

tance from the same place. She described it and immediately discovered that it was the same place as before, and felt worried about it, as she feared she was wrong. A striking fact, as it shows that the different substances did not tell any falsehoods about their location, and that Mrs. Denton was so acute as to read their language correctly.

When Baron Reichenbach in his experiments connected with the odylic lights and radiations, found a greater number of women who could see and feel them than men, the medical men of Vienna sneered at the fact, and considered them all the more unreliable on that account. Prof. Denton with a more just and enlightened spirit perceived that women are more developed in the finer perceptions than men and said: "Women are much more susceptible of psychometric impressions than men, probably in the proportion of five to one.....When woman shall employ her psychometric power in a scientific direction, as she will ere long, some of our savans may tremble for their laurels. I affirm that by psychometry, a woman may have in one year a more correct idea of the condition of the earth and its occupants during the geologic periods, than any man without it could in a lifetime .....Woman's superior sensitiveness is frequently manifested and laughed at by man; and more frequently hidden on account of his ridicule.....Psychometry will yet be employed for the discovery and prevention of crime. In its presence, the faintest whisper is loud as the rolling thunder; and there is no cunning that can conceal an evil deed from its eye."

11. The psychometers all see the **Interior Conditions** of the **Earth** as a fiery mass of lava. A little boy named Sherman, possessing fine psychometric powers, received from Prof. Denton a specimen of gold ore from Briggs Mine, Colorado, and gave the following:

"I see something that looks like gold in a white rock. There is a great deal more yellow ore as it goes down. The pieces grow larger until it is nearly all ore.

"The vein starts at the top and cuts right through the rocks. It is quite broad.

"I can see lava now. The vein goes down a long, long way, and keeps getting richer as it goes down. It goes almost to the lava; but it is awful hot, and nobody could stay there. Some of it is melted. All around, the rocks are cracked, and there are great hollow places. All I can see is the red-hot rocks.

"There are different kinds of substances floating in the lava,—all kinds of metals mixed up. One kind looks blue. There are places where it has tried to come up, but could not,—big holes. The lava blinds my eyes."

"('How far is it down?') It is more than one mile.

"The lava boils up and seems to try awfully to get out."

"('What color is the rock above the lava?') Above the red, the rocks are a very dark green. There are holes miles up. I see a great deal of bright yellow stuff. I think it is gold. It is very pure

The vein is of enormous width deep down; it seems to be a mile wide.

"I see other veins all around here going straight down."

"The mine," says Professor Denton, "is in the heart of one of the richest gold districts of Colorado, and is surrounded with gold-bearing veins." *Denton's Soul of Things,* Vol. III, p. 337.

12. **The Earth's Early Condition** is seen by Psychometers to be igneous and furious, in harmony with the revelations of science. Some expressions of Sherman, when asked to look far back, give a vivid realization of its action, thus:

"I see the earth red-hot. There are black spots on it, as there are on the sun. There is a great deal of black smoke rising from cracks in these black spots".

" The water comes down at times in streams, sheets, and then flows about like water on a hot stove .....I hear reports like a cannon going off. I do not know what causes them. "

" Oh ! I see the world all lava, and it is all waves. There are little pieces of crust floating on top, that have cooled. I see different colors of metals,—one green, and another that looks like water. It looks like molasses boiling. It rises up like a large blister, and then puffs out, when it bursts and sends up some into the air.

" One of these bubbles rose up like a tall mountain,—the tallest I ever saw : it burst at the top ; and clouds of what looked like steam rose out of it, and then sank down.

" The lava is quite hard now and streams of soft lava pour over it."

" ('Come gradually to the present.') I can go back and forward in time by pushing the specimen up and down. I can see the men of the present; then early men; then bears and elephants and such things; then snakes, crocodiles and other reptiles; then birds; then animals like the trilobites and such things and shells; then little bits of insects; and then nothing at all but lava," *Id.*

Thus did this remarkable boy trace the evolutions of the inanimate and animate world from a piece of limestone. Afterward he drew in detail a great variety of the earlier animals, some of which were fearful-looking creatures.

13. **The People of The Planet Mars.** A number of psychometers, or perhaps more correctly speaking, of clairvoyants, have described Mars, its buildings, people, institutions, and physical characteristics. Being a a smaller planet than the earth and farther out in the cool realms of space, it cooled off and ripened for human life much earlier, so that its people as a whole are far in advance of us in science, art, morals, and both physical and spiritual development.

Homes in Mars. Mrs. Denton on June 11, 1873, got in rapport with Mars and described some of its co-operative homes as follows:

"I see immense buildings. They seem to be dwellings and are large enough to be the homes of thousands of people. Almost every thing I see here appears to be on a magnificient scale. One of the buildings is four or five stories high, with turrets and towers, and various designs both for ornament and convenience, which altogether relieve what might otherwise be a disagreeable monotony. This building is square, that is, it encloses a square, containing, I think, a full square mile. The lower portion is divided into sections, and between each section and the one adjoining is a wide arched way, or opening.

"In the centre of the land thus enclosed, stands a large circular building, much higher than this which encloses it; and in it there appears to be performed by machinery, and with almost incomprehensible speed and ease, a vast amount of that labor so common to every household, and which in our isolated homes constitutes, for so many mothers, wives and daughters, the drudgery of life.

"At the base of this central building, a wide, revolving platform extends entirely around it. From this platform a track or road runs in a straight line, to every archway referred to as between the various sections of the large square building; and over these roads, any person residing in a given section passes at will to any other section, by simply seating himself in the conveyance which passes to and from that platform at regular intervals of only a few moments, then stepping on the platform until it revolves to the road corresponding to the section that he wished to visit, he seats himself in a similar car, and is at his destination in a moment. These vehicles or cars are light and easy conveyances, but seem only intended for transit between these inner sections of the large square building.

"The grounds enclosed and corresponding to these various sections, are, in most instances, divided into plots of green, similar to our grass, and beds of choice and fragrant flowers of almost every conceivable form and shade. The sparkling spray from fountains of pure water, washes the flowers, cools the air, and beautifies everything around. There are here, blossoming and fruit-bearing trees and shrubs and arbors and shaded walks and very very much that is beautiful beyond description. Many of the trees and plants resemble those of the tropics of our own planet.....Such music I never heard. I have been trying to learn its source, but I cannot find it. It is clearer, sweeter and at the same time more penetrating than any I ever heard before." *Idem.*

14. **The Grand Traits of the Martians.** On June 13, 1873, Mrs. Denton continued her description of our noble sister planet, as follows:

"I see an immensely long building, with wide arched windows that descend to the floor. Some of these are open, and through a number of them I see persons who are apparently at home in the magnificent rooms they occupy. But, oh, such people! and such rooms! The people seem to be in advance of all I have seen on earth in many respects. They are physically and mentally our superiors. They seem to have based their physical culture upon scientific principles, until they have reached the very perfection of physical development. They have studied to live in harmony with all the laws of their physical life, until they appear to have no temptation to violate these laws. The result is a wonderful purity, harmony and completeness of the whole physical being.

"In their social life there is more leisure, more order, more individuality, than among us. They seem to live the idea expressed by the motto, 'Each for all, and all, for each' and to have this sentiment until they know no narrow, selfish ends in life, and have no desire for aggrandizement, honor or preferment that is not wholly subservient to the public good. Indeed, they seem to have controlled selfishness and all the baser passions, until they are the mere servants of the higher and nobler powers of the soul. I question whether they have what we recognize by the word 'governments', except it may be such regulations as they deem necessary for the more effective distribution of means for the accomplishment of desired ends. And in this, there is not, that I can now discover, any antagonism, and never discord. Their controversies, if they have them, seem only for the discovery of truth, never for the triumph of person or party. What we recognize as courts of justice or to them unknown or unemployed institutions. I sense no such difference in social conditions as we have here: I do not think they exist. I cannot find among them any persons who seem low or degraded, nor do I see such suffering as we meet almost everywhere on this planet.

"Mentally, they seem able to accomplish anything they undertake. They have studied our planet and have become very familiar with it. I believe they have traced us out as a people. I do not know how they have done this; but they seem to know a good deal about us. They seem familiar with other planets also. I believe we can in time learn to hold communication with them. Perhaps they are psychometers!" *Denton's Soul of Things*, p. 239, Vol. III.

This noble psychometer, Mrs. Denton, and several others, mainly agree in the description of a superior race and also of dark-skinned peoples that inhabit other parts of the planet who are as low down in the scale of being as ourselves, and lower than our most enlightened sections.

15. **Some Phenomena of Worlds.** I will now make a few statements of what I have learned through these psychic channels.

The highest grade of people on Mars live on the continent which our astronomers have named Secchi. This continent covers a space on the equator and each side of it for a considerable distance. The planet has become so cooled off that it is not oppressively warm at the equator. The lower and darker-skinned people dwell farther toward the poles.

The planet has become so refined and evoluted in its forces that *earthquakes rarely occur.*

The *great buildings* formed on the plan of hollow squares described by Mrs. Denton, in which a great number of people dwell together, much on the communistic or rather co-operative plan, are not used in the very most advanced part of the planet, although they would be fine examples for us in the transition between present conditions and the freer co-operative methods of the future. In the Secchi continent, they have their groups of beautiful homes with a central building in which cooking, laundry work, etc. are done for the whole. Provisions can thus be bought by wholesale, in common, and lands, flowers and trees attended to by persons employed. Sweepers with scientific methods for cleaning rooms without raising any dust go from house to house.

A very small amount of clothing is worn by either sex, by the more advanced people of Mars. Their bodies, thus exposed to sun and air, gain great power and sickness is never known, so well are the people versed in the science of life.

Among these high-grade peoples, *law-courts, prisons, hospitals, poorhouses, and old people's homes have been out grown.* Laws and principles of justice and love have been written on people's sensoriums, so that the external statue laws embodied in immense volumes are almost unknown.

Monopolies, trusts, money-sharks and corporations that tend to buy up communities, and even nations, are unknown, and the governments have become centers of Fraternalism, holding and controlling the railroads, expresses illuminating plants, water plants and centers of merchandise for the people and furnishing all things at cost. Competition is a system by which the stong trample the weak into the dust, a system which sets men at war with their neighbors and blunts the moral nature. When this is abolished and fraternalism put in its place, the people are encouraged to effort, and human love and harmony take a great bound upward.

Astronomers are right in supposing that *none of the known planets excepting the earth and Mars are inhabited.* When Professor Denton's

clairvoyants have described the inhabitants of Jupiter, they are evidently mistaken and have struck some other realm. Jupiter's vast bulk must require a long series of ages before it is sufficiently cooled to support human life, as it is said that one part of it is still luminous with heat. Some moons of Saturn are inhabited, but one of them at least is a dead world.

The two little moons which astronomers have announced as belonging to Mars are fragments of the complete moon that formerly belonged to that planet.

Our moon has been a dead world for more than a hundred thousand years. The hard outer shell of cooled-off worlds, being heated irregularly, finally bursts asunder like a glass lamp-chimney when irregularly heated, destroying all inhabitants so suddenly that they experience no suffering. The fact that our moon shows the same well-rounded side always to the earth would go to prove that the other side has been more or less hollowed out and eliminated, would it not? The earth's gravitation would of course hold the moon's heavier side towards itself.

The *asteroids* between Mars and Jupiter are fragments of a single world which was doubtless blown to pieces by *fervent cold* and heat on the same plan.

Our earth has been inhabited more than a hundred thousand years, the oldest inhabitants having been dwellers in what is known as China. Psychometers see the first inhabitants as hairy and monkey-like beings, who ate fish and animals raw, etc.

Neptune is supposed to be the most distant planet of the solar system, but I perceive that there is *one more planet* vastly beyond it. A world somewhat larger than our earth and having no moon. Being so far away in the cold realms of space it cooled off and became ripened a great series of ages ago. Its people are greatly in advance even of the people of Mars, for evolution is an upward progress, so that compared with us the people must be like gods and goddesses. Their *sky-travelers* and motor methods are amazing. Their atmosphere by chemical affinity with the cold elements of space around them, is highly thermal in its nature, so that the sun although so small awakens a fine luminosity, and kindles their earth itself into warmth. The people are angelic and I have named this planet **Celestia.** Astronomers have already perceived that Neptune has been influenced in its course by some power beyond it, and will undoubtedly discover it in a few years.

The people of Mars having evoluted more extensively than ourselves are quite beyond us in *science, art, inventions, clairvoyance* and *psychometric skill,* and know a great deal more about us than we

do about them. Such astronomers as Lord Kelvin of England, Flammarion of France, and I believe a Harvard professor, have noticed a series of great lights which have appeared and disappeared on a mathematical plan, in a way to show design and intelligence of the people there. From this fact, they have concluded that they are sending signals to our earth. I perceive that they are correct in this, but it will require a clairvoyant to interpret them. It will be sometime before we shall learn how to make lights big enough to be seen on that planet.

The usual labour day of Mars is about one quarter of the time, or not far from six hours, their complete day being about 24½ hours. In most cases the people engage in the kind of business which they have a talent for and most enjoy, but if they engage in that which is less pleasant, they receive greater pay. Their money consists of units of value which are stamped on a tough and pretty material that is not quite like paper and not quite like leather.

Let those *pessimists* that seem discouraged about our human race, considering that they are hopelessly in the line of selfishness and greed and ignorance remember that both Mars and Celestia have had to pass through virtually the same grades of brutality, plutocracy, priest-craft and despotism that have afflicted our earth, and let them remember that those planets, learning in part by mistakes, have ascended to a diviner Religion and Science, and Social development which has made human life happy and beautiful. Even on earth we are rapidly outgrowing many of our imperfections and in our advanced portions have risen considerably beyond the lower realms of Mars in which idolatry is still practised.

Telegraphy, I understand, is not practised in Mars, systems of *thought transfer* taking its place. For this purpose regular offices are established in which psychically developed persons officiate. In Celestia this thought-transfer system has been used for untold ages, and offices are maintained for the purpose, though most persons there have such a psychic development as to be able to communicate with their friends at a distance without any outside help.

Sky Traveling is almost the universal method of locomotion in Celestia for any considerable distances. The Celestians superseded the use of steam an immense period of time ago, but are now using a still grander and safer force than that which superseded steam. They get into their sky traveler, turn on their force, mount upward and when they wish can leave the birds out of sight in a moment. Every family has its private sky traveler. A man will sometimes take his family into his vehicle, and as he sweeps over valley, mountain, river and ocean, will teach his children the geography of the world from actual observation. At night coming to a city, perhaps on the other side of the world, he will find it

brilliantly lighted by wonderful and almost costless methods which nearly equal daylight. On landing he will be received with open arms by the people and pressed to accept their loving hospitalities, for man and woman having evoluted for so many ages, have attained to what we would call angelic love, as well as wisdom.

Neither Celestia nor Mars navigates the sky in *air ships* constructed on the principle of a balloon. They use wonderful and concentrated forces which lift their ships into the air by exquisite wheel-work. Mars has done away with steam, and as near as I can learn, they use solidified gases, which on being released gradually from the solid form, are immensely more elastic and potent than steam, and yet more safe. Would not solidified carbon-dioxide be a good material for use in our earthly ships, cars and other machinery? But a very little bulk of such a material, when its safe use has been acquired, would be needed to drive an ocean steamer across the ocean, and would thus save the use of hundreds of tons of coal a day, which fill a quarter or third of a whole ship.

What course is pursued when a world becomes filled with inhabitants? The example of Celestia which has been a full world for many ages, has been revealed to my consciousness, and constitutes a very satisfactory solution of the difficulty, as it seems to me. I have already given hints derived from this source, in Part Second of this work, p. 237. I will give the condition of Celestia in connection with this subject. The people there have been beyond all ravages of disease for thousands of years back, and their scientific attainments are so great, that every one understands the laws of life and of social upbuilding as exactly as we do the multiplication table. They have attained to the reign of divine law, and being thus a law to themselves, all need of governments has been done away with long ago, advisory committees taking the place of legislatures. Every family consists of just four persons, father, mother, son and daughter, and all children grow up into the full maturity and work of life. Do not accidents, it may be asked, destroy some lives and break in upon the harmony of things? Never. Almost every one is clairvoyant and can see the tendency to danger afar off, and every one has more or less of psychic development. Besides, the materials used in houses, sky travelers, freight vehicles and machinery, are so perfect that breakages do not occur. Channels for freight are sunk a little below the roadways where human beings pass, and although the freight vehicles sweep across a landscape like a meteor, no person is ever ground to death, as is so often done here. The regulations of sex are on the plan already explained in part Second of this work. The perfection of life both in Celestia and Mars is not considered as consisting in very great length of life, but in having the spirit so powerful as to break its

earthly bonds and enter the diviner life. A year in Cel estia is between two and three of our centuries in length, and it is hard to tell just the length of their average life, but as near as I can ascertain, it is not far from seventy of our years.

VI. HYPNOTISM OR PSYCHOMA

1. **Definition.** Hypnotism, from the Greek *hupnos*, means *sleep*. This is not a correct word, as it is a very different thing from what is ordinarily meant by the word sleep. Braid adopted this word because he was ignorant of the philosophy of the matter, just as all other writers on the subject seem to be. What is called hypnotism is simply a psychic sleep, that is, a sleep in which the psychic forces hold the ordinary physical organs in control. *Psychoma*, or psychic coma, would be a more correct word.

2. The **Rationale.** Those who have studied the foregoing subjects will not have much difficulty in understanding psychoma. I have already demonstrated the existence of the psychic brain and body. If we look steadily and intensely at some bright object or think intensely of some distant place, we send outward such a flow of psychic force that in many cases the psychic brain can become predominant and with its lightning activities can hold the ordinary nerve forces in that inactive condition which we call sleep. When it binds the sensory nerves, all sensation ceases and red-hot irons can be put against the flesh, or limbs can be amputated without any suffering. When it binds the motor nerves, paralysis takes place and motion is impossible. This method of bringing the psychic brain into action is what we may term Auto-Hypnosis or Auto-Psychoma or Self-Psychology. It gives a person great inherent power and freedom from the control of others, as well as greater acuteness of perception. If a person cannot get into the state sufficiently alone, and needs outside help, one of good psychic force and strong will-power, can project an extra amount of psychaura into the subject's brain and thus succeed in bringing him into the magnetic sleep.

3. **Friedrich Anton Mesmer** was born in a village on Lake Constance in 1734, studied medicine in Vienna, was vilified there because he cured a blind girl, and in 1777 was expelled from that city. It is considered monstrous for a man to know more than his fellows, and a masseuse in Iowa who saved the life of a child that a physician had given up to die, was fined and imprisoned under the despotic medical law of that state. In 1784, the French government appointed a number of learned men, among whom was our Franklin, to investigate these magnetic marvels and they came to the stupid conclusion that they were all mere

workings of the imagination, though somewhat remarkable.* In 1831, however, a learned committee appointed by the French Academy (1826), after a thorough investigation of five years, had to admit 'the importance of magnetism and the reality of clairvoyance. After abusing Mesmer and classing his discoveries as results of charlatanry and quackery, those convenient words for destroying those who differ from us, after three-quarters of a century it began to be too apparent that Mesmer was mainly correct after all. What was to be done? Must the bigots own up and have the whole world find out how unreasonable they had been? No. Blessed relief! Dr. James Braid of England helped them out of their difficulty by using the term Hypnotism instead of Mesmerism.

4. **Dr. James Braid.** I will quote the following from the excellent work on Hypnotism of Fredrik Bjornstrom, M. D., Prof. of Psychiatry in Stockholm, Sweden:

"To the English surgeon, James Braid, of Manchester, who in 1842 published his work 'Neurypnology,' belongs the merit of having taken animal magnetism out of the dark region of charlatanry and bringing it into the clear light of science; of having proved that its phenomena do not depend upon a fluid transmitted from the magnetizer, but on nerve forces working within the organism of the one magnetized, and finally, of having given the whole thing the more suitable name of hypnotism."

Dr. Bjonstrom is not the only one that labors under the delusion that Dr. Braid was scientific, had the "clear light of science," in thus signifying that magnetism is not a *fluid*, and that the power does not pass from the operator but works wholly in the nerve-force and imagination of the subject. What kind of science is it that thus contradicts the whole teaching of nature? I have shown that every force of the known world is a fluid and, of course, every force of the unknown or invisible world must be a fluid, also, as the universe is in harmony with itself. More than that, there are thousands of people who can see this magnetic fluid, or rather the coarser elements which accompany it, streaming from human beings as well as from all nature. Deny its fluidic nature and you can explain nothing. Charcot, Luys, Liebault, Bernheim, Bjornstrom, Kratt-Ebing and other eminent scientists have developed the phenomena of this subject and laid the world under obligation to them, but what do they know of its nature or its philosophy? We shall see who are the "charlatans." We shall see that "the clear light of science," is a misty

* Words of the French Academy in 1784: "Ce que nous avons appris, ou, du moins, ce qui nous a ete confirme d'une maniere demonstrative et evidente par l'examen des procedes du magnetisme, c'est que l'homme peut agir sur l'homme a tout moment presque a volente; en frappant son imagination . . . sur des sujets qui ont la foi." They also say "We have seen the imagination when exalted become powerful enough to make a person lose the faculty of speech in a moment." Why could they not have looked far enough into the subject to have perceived that imagination cannot do these remarkable things without using as an instrument some current of force like magnetism.

light so far as the subtle forces of nature are concerned. Whatever objections may be brought against some of the methods of Mesmer, when he spoke of magnetism as a fluid, flowing to and influencing other persons, he built on an eternal principle, and the sooner people find it out, the sooner they will begin to understand the matter. To say that imagination does it, suggestion does it, and hence there is no magnetic or psychic fluid that goes forth to execute what the imagination or volition may determine upon, is like saying the sun influences the earth, therefore, there is no such thing as sunlight. Everything has to work through agencies and these agencies are fundamentally fluidic Self-psychology is a grand reality in human development, but the same power that can project these ethereal forces throughout one's own system can project some portion of them into other human systems. These psychic ethers while moving naturally through the nerve channels are so fine as to be easily projected beyond and through all physical channels into other human beings, as well as into all surrounding objects. Psychometry shows how all objects radiate their very character upon everything in their vicinity. Is it anything strange then, that certain persons who are well charged with psycho-magnetic ethers can project them into some other brains and place their thought pictures so strongly on their sensoriums as to rule in the place of the subject's own ideas? A member of the Praeger family of singers would often amuse himself by making ladies turn around so that he could see their faces, although they were forty yards ahead of him. A Dr. Mendenhall of Indiana, while some distance beyond a wood chopper and out of sight of him, willed that his axe should be stopped. The chopper's hands moved more and more slowly and finally were brought to a dead standstill with axe in mid air. A lady in New York so often willed without saying a word, that a gentleman should come and sit by her side, or should go away and he would do so, or that a waiter from another room should come and bring her some delicacy to eat and it was done, while at another time, while coming from church, she willed that a young man, who was so diffident that he was almost afraid to speak to her, should come and escort her home, and he immediately came. At another time when she was ill and depleted of her magnetic forces, nobody would accede to her wishes unless she expressed them in words. Baron Dupotet mesmerized a person while outside of the walls within which this person was sitting. Rev. Chauncey Hare Townshend, A. M. of Trinity Hall, Cambridge, England, wrote an able work on this subject. One evening when he was in London, he concluded to mesmerize a young lady in another part of the city, whom he had previously got into

rapport with by magnetization. She promptly went to sleep at the moment he made the effort, and awoke in one hour as he willed it. In the morning she called upon him and asked him if he had put her to sleep. She said her people became somewhat alarmed, as they tried in every way to waken her, but in vain, until the hour was up, when she awoke greatly refreshed.

But thousands of cases could be adduced to show that persons radiate their thoughts and influences upon each other, sometimes when hundreds of miles apart. Sensitive persons are very apt to think of friends who are approaching or to know each other's thoughts. Some may say that the spirit may go forth and influence others. But pure spirit is almost infinitely fine and as we have seen, must work in connection with matter. A very fine element cannot control a very coarse one directly, but must act by graded forces; thus, spirit must act on very fine ethers; these reach coarser ones like motor nerve ethers; the motor nerve ethers reach a still coarser substance called muscles, and muscles move the bones, the coarsest of all. All forces require instrumentalities and in themselves are instrumentalities. To say that mental force or any other force is not fluidic is to contradict the universal law of things as seen in nature.

Another error of Braid, Bjornstrom and the other hypnotists who consider that they have reached the "clear light of science," is the assertion that the influence cannot go from an operator to a subject. This position can be overwhelmingly overthrown by such facts as these, 1st, all sensitives can feel the influence of certain magnetic persons even at a distance and that in the most vivid manner; 2d, clairvoyants can see streams of force passing to the subject, and 3d, some persons are immensely more effective than others in inducing psychic conditions, which shows that they radiate more power. One man in Boston made a stranger in a public audience follow him through the streets and into his own home by simply willing him to do so, another would fasten a man across the street as he was going. The late Dr. L. B. Brittan felled two men to the floor who had been selected for him, in a strange audience in Albany, although the men were several paces away. Prof. Cadwell went down to a seat on which were sitting a number of young men who had come to sneer and make disturbance, and drew one of them over the heads and shoulders of the rest, quite against his will. In short the number of facts that can be produced among orators, musicians, healers, commercial men and others to show that some men have a peculiar power of control over human beings and even animals, aside from all language, or force of suggestion, is immense. Some Christian Scientists and mental healers have ten times the power to cure

disease that others have, although these others may be quite asintellectual and quite as able to guide their patients, as the successful ones. They scarcely realize that it is the psycho-magnetic radiation from their person to their patients, that constitutes an important part of their power to heal, but have a vague idea that the truth alone will make them well. A young lady of Tennessee, will "conquer and ride in a moment horses and mules that no one else has ever been able to handle," and squirrels and birds, under her mysterious power, will come and eat off from her hand A one-eyed man of India, well known for his magnetic power, made a fierce tiger, that had destroyed several human lives, lie whining and crouching at his feet. One of the psychics of India, fastened ten men who were sneering at his power, so firmly to their seats by his will, that for ten minutes they were unable to rise, and the same man caused all the lights in the room to be extinguished by pointing at them and then relighted them in the same way. According to the common theory it must have been imagination or suggestion, on the part of these lights, that influenced their action.

Some persons have great developing power, being able to assist and increase as I have said, the psychic force which others possess. Major Buckley as described by professor Gregory of the Edinburgh University, induced clairvoyance in 148 persons, while some others equal to him in intellect would not be able to contribute enough force to develop this power at all. Dr. Fahnestock of Pennsylvania, who developed the phase of psychoma which he named Statuvolence, declared there was no such thing as magnetism, but he was repeatedly silenced, and brought to a standstill by overwhelming facts, which in a year or two he would seem to forget, and open up his absurd theories again.

5. **Methods of Inducing Hypnosis.** In Part I. of this work, (pp. 99 and 100) I have already given a practical method of calling into activity the psychaura, I will mention briefly other methods.

One method is to press the eyes and make a downward pass, exclaiming as this is done, *you can't open your eyes!* or *go to sleep.* Susceptible persons will find they cannot open them and that the spirit of sleep is already on them. The downward passes tend to draw away the coarser nervous ethers so that they may not interfere with the refined psychic force.

Some parts of the body are especially sensitive, such as the region of Veneration and Spirituality, the forehead, the root of the nose and the eyes, the region of the ovaries, etc., spots which have been called "hypnogenic zones." One person whom I pressed on the upper head, over the spiritual range of faculties, went in to such a death-like trance that it was alarming and I removed my hand. When he came out of it, he spoke of having seen indescribable glories.

6. **Different Stages of Hypnosis.** There is an immense diversity of hypnotic phenomena, owing to the nature of both the operator and the subject. If the operator has not attained to a high psychic and moral development, or should become unduly alarmed, the effect on the subject may be unpleasant. Charcot gives three general stages of Hypnosis, the lethargic, the cataleptic, and the somnambulistic. The Italian writers Tamburini and Sepilli describe the states as follows :

"The **Lethargic State**, as to *motivity*, increased muscular contractility, and reflex irritability; rapidly appearing paradoxical contraction; sensibility to aesthesiogenic excitation, especial to the magnet; as to *sensibility*, sharpened hearing; as to *respiration*, quickened and deep; the magnet affects the respiratory muscles; as to circulation, peripheral vessels distended, etc.

"The **Cataleptic State**, as to *motivity*, plastic flexibility of the joints, lessened reflex irritability; slowly appearing paradoxical contraction; the magnet without influence; complete insensibility ; as to *respiration*, slow and superficial; the magnet without influence, as to *circulation*, peripheral vessels contracted; the pulse waves do not change,

"The Somnambulistic State has a general and continuous contracture which cannot de released by repeated excitation," etc.

In the foregoing, the immobility of the cataleptic state is not sufficiently dwelt upon. The somnambulistic state is the one most affected by suggestion and the one most common in exhibitions. Sometimes, by placing the hand over the cervix, the muscles of the subject become as hard and rigid as a bone and the exhibitor unwisely places the ends of the body on chairs and allows people to stand or jump on it.

7. **Violent Exhibitions should generally be avoided.** Public exhibitors, to create a sensation, will place red-hot irons on the bare flesh, thrust needles through the tongue, etc. Dr. Luys, after making a lady believe that a rag baby is a real live one, will proceed to cut off its arms or stab it to the heart, causing the most fearful horror to his subject. Is it right to cause such terrible suffering to any one even if she could be made to forget it? In subsequent psychic conditions the experiences of past psychic states themselves come vividly to the consciousness, and it is reasonable to suppose that such violent emotions must make too great a scar on the sensorium to be wholly erased. The effect of red-hot irons and stabs in the flesh, may usually be healed by a suggestion that the parts shall be made entirely well, and yet there are times when unpleasant after-effects are experienced. On one occasion, perhaps these severe processes may have been justifiable, and that was when 300 sneering, skeptical physicians met in a New York Hall to

see the demonstrations made by Dr. Beard. When a powerful light which no mortal eye could normally endure, was thrown into the eye of the hypnotic subject without the least motion on his part, it created an impression on the audience, but when a red-hot iron was held on the subject's hand, without the least sign of sensation, the audience was conquered and groans came from every part of it. But such exhibitions and those which cause a lady to hold her hand for some time in the blaze of a candle, under the impression that she is clasping a bird, should almost never be given. In every case before bringing the subjects out of the condition, he should make them feel that their whole system is in good condition and they are going to be strong and happy.

8. **Hypnotic Phenomena.** I will proceed to mention various kinds of psychomic phenomena, omitting many of the details and authorities for the same. For these details consult Bjornstrom, Charcot, Luys, Liebault, Paul Richer, Kraft Ebing, Bernheim, Binet and Fe're', Beaunis, etc. The facts already established are multitudinous, and the books written on the subject would fill quite a library. Those who have become familiar with the principles alreay announced in this work will not find much trouble in understanding the mysteries connected therewith.

An earnest and continuous looking upon some bright object is one of the most common methods of getting into a psychic condition, or at least of getting so far toward it that an operator can easily complete the matter. A magnetic operator can often throw a force into another by looking strongly into his eyes.

Pressing one eye slightly when in hypnosis or influencing one side of the head will often produce a semi-somnambulistic or paralyzing influence which will affect all the opposite side of the body, showing that one hemisphere of the brain has been reached and its influence passed to the opposite side of the body through the nerves that decussate at the medulla oblongata. One side of the face may look happy and peaceful, while the muscles of the other side may manifest anger or fear. For all that, there is a fundamental unity of the ego, a unity in duality.

In full hypnosis every sense and faculty is quickened and made more active, because under psychic influence to such an extent that the psychic brain itself can act. Thus a psychic can sometimes hear voices that are miles away, or perceive the interior essences and teachings of substances in the wonderful way which we term psychometry, or perceive odors as proved by actual practice, ten or twenty times as far as ordinary persons, while the power of vision is increased a thousand-fold, in a way which we call clairvoyance.

9. **The Materializing power of Mind.** The will-power, the eyes, the voice in singing or speaking, the whole being, can radiate real

elements upon surrounding objects as already shown in psychometry. Thoughts and imaginations can paint real forms on a material surface, in a moment, which a psychic can perceive. Professor Crookes and the Psychic Society of England have pictured various thought forms. A strong-willed person can project a psychic wall by his imagination, and the sensitive going toward it, finds his passage suddenly blocked thereby. The operator hands a blank piece of cardboard to his subject, stating that it is the portrait of a certain person; immediately the portrait, deposited in some very refined elements, makes its appearance and is recognized. How do we know that a real portrait has been made there? From the fact that if it is placed among a number of other blank cards, the one with a portrait is always picked out correctly. In one case a lady after coming out of the condition, was handling the cards when all at once she stopped and asked in surprise how the portrait came to be there, thus showing that she was still sufficiently charged with the psychic light to see the figure. In another case, the subject received a smooth blank sheet of cardboard, and was told that it was a mirror. Immediately she looked into it and commenced rubbing from her own cheeks a smear of dirt which had been purposely put there. Besides this, she would instantly describe, as seen in her mirror, all objects placed back of her shoulder, out of sight of her external eyes, and when her mirror-card had been placed with a dozen other cards she could always pick it out and use it. Another very singular phenomenon which works in exact harmony with the laws of optics, is that when the operator assures the subject that a certain series of words has been written on a sheet of paper which is entirely blank, she can see it distinctly, and, moreover, if a mirror be placed by its side, she will see two images, the one in the mirror being inverted so as to read backward from right to left, just as is done in all mirrors, and this to the surprise of the hypnotized. All of these and many other facts tend to clear up the mysteries of an invisible and more glorious universe which is the more immediate realm of mind in its higher phases.

Colors as well as forms can be deposited on blank paper so that the somnambulist can see and describe them.

It should be understood that all these forms and colors are not *hallucinations* as writers on the subject persist in calling them, but very fine elements which the operator deposits by his will-power on blank surfaces, sometimes helped by the subject. The facts and principles already presented, prove this point and clear up the mysteries that are so inexplicable to writers on the subject. The operator should impress his images or colors as vividly as possible upon the surfaces, so that the psychic may the more easily see them.

10. **Hallucinations.** A hypnotized person may generally have his mind directed into any absurd or ridiculous channel that the operator may suggest, being made to see some persons who are not present and not to see others who are. Binet and Fe're' made their patient believe that when she waked she would not see one of them, Mr. Fe're' being the one that was to become invisible. When she awoke she was astonished that she did not see Fe're' (although he was directly in front of her), as he was just now in the room.

Moving along she ran directly against him, and this set her into a tremor. When he put his hat on and bowed to her, she saw the hat waving in mid-air, but no man under it, and she was astonished beyond measure. She declared that it could be explained by physics, and she climbed into a chair so as to reach above it and find some minute thread that held it, but in vain. When they put an overcoat on F. she saw it in mid-air and was still more astonished and called it "a hollow dummy." Various other tricks were played on her to her great amazement.

11. **Influence upon the Blood.** Many experiments have been tried upon psychics, in which they have been made to believe that a blister or red burn would take place on certain parts of the body, and in a few hours it would do so. Charcot often produced these by suggestion. In another case, a Spanish fly blister itself was unable to produce any effect, because the operator declared it would not, thus showing that a psychic force can be more powerful than a rude external force.

In mentioning this style of cures and effects brought about by psychic forces Dr. Bjornstrom says: All these experiences in some degree corroborate and explain the great influence of imagination on various purely organic and vegetative changes in diseases; they also explain the fully corrobrated effect of Homeopathic Count Maffei's wonder-cures by magnetized water and other means in themselves indifferent." This is the superficial view taken by the old scientists who are quite unable to understand that all forces are *things*, in other words are *fiuids*, as has been repeatedly shown in this work; that imagination, thought and psychic forces concretely considered, work by exquisite and indescribably fine fluids, that rule in human brains and bodies, when gross conditions do not impede their action; that homeopathic remedies under the power of trituration, receive the subtile elements of the atmosphere and in a multitude of cases cure disease contrary to the imagination or faith of those who use them; that colored rays of sunlight are entities which may be passed into water or other substances, as the most exquisite medicines, and that human magnetism may charge up the

nerves of the sick, or even substances which come in contact with the sick, in a way to effect marvelous cures even when they are least expected.

Dr. Luys, an esteemed physician and hypnotic scientist of France, has lately brought before the world what is pronounced a new and remarkable discovery, namely, a frame of iron or otherwise, after coming in contact with some person of healthy, cheerful and hopeful disposition, if placed around the head or body of another person will impart more or less of the same qualities to that person. It is a delightful thought that one by one of the great facts of mentality are being admitted by our physicians. Jesus exemplified this power by healing those who touched the hem of his garment, and the apostles by magnetizing handkerchiefs, and they were not the only ones to ascertain that different articles can be charged with the magnetic aura of certain persons. Mesmer advocated the same idea, and a multitude of magnetists in this and other countries for scores of years back have practiced it. A still better thing is to pass the magnetism from those who are especially gifted with this power to the suffering patient direct. Within forty years, it may be stated as a certainty that several millions of cures have been made by magnetic manipulation in this country alone, a vast number of which have resisted other methods. Magnetic massage given by faithful workers, who do what the physician is unwilling to do, vitalizes nervously exhausted systems and, on the safest plan, gives new cheer and power to both mind and body. And yet in nearly every state in the Union, physicians under the plea of putting down quackery, have persuaded our simple legislators to enact despotic laws against every one who attempts to heal without having had years of study in certain medical schools. What is this but the establishment of a medical trust, and why are the most successful healers, who are saving lives and blessing the community generally, the most severely prosecuted, except from selfish motives? In saying this I am not condemning the highest grade of physicians, as they are above this petty persecution.

12. **If Psychic Force Rules in Hypnotism, why does the subject fall into such Delusions?** Why does he believe everything that the operator tells him? Because the operator has gained the balance of power, and is simply sending his own mental images into his subject's brain The subject's forces of course aid in the matter, but must act in the direction which the operator's will chooses to give it. We shall see hereafter that when the psychic nature is free to act out its own high character, it is greatly more clear in perception and powerful in execution, than the ordinary mental condition.

13. **Somnambulism, or Sleep Walking,** has long been considered a mystery. "How is it", it is asked, "that the subject may scale dizzy heights and do that which is ordinarily impossible to him, and how is it that at other times he will be dashed to death or do such absurd things as to rush through the streets with only a night dress on ?" Because the psychic nature is working in part, often holding the subject so firmly that he cannot be wakened, or sometimes enabling him to think and write with great skill, and the ordinary mental system is also working in part, but neither the interior nor exterior man can work in an unimpeded way.

14. **Psychic or Hypnotic Cures.** How is it that cures and influences exerted while in a psychic or statuvolic condition are so powerful and enduring? How is it that Dr. Fahnestock could get a boy while in this condition, to will that his club-foot should come around straight and it did so? How is it that a delirious condition of insomnia can thus be brought into calmness and cheer and the sweetest sleep ? By the psychic forces do we say? But we have already seen that psychic forces rule in the mental and spiritual nature even in our ordinary condition. Why, then, do we not always have this power to master our diseases ? The following seems to be the explanation :

We have seen that the nerves of the body, the optic nerve excepted, use as their quickening principle the animal magnetisms or ethers and that the blue forces of firmness and vicinity are projected to all parts of the body as a motive power. But how shall we get a power fine enough to wield these lightning psychic forces and send *them* to every nerve and muscle of the system? By means of the psychic brain itself. I have already demonstrated the existence of a psychic brain and body, which dwells within the outer system. But why cannot this wonderful psychic system work at all times? Because in most cases it is clogged by the animal forces and not until these animal forces are held in abeyance by a fresh charge of psychic power can this higher brain project its potent forces.

15. **Some Admirable Results of Hypnosis.** A refined and intellectual lady, Miss M., of Connecticut, had fallen and sprained her back and for a time had scarcely been able to sleep night or day. Going up to her as she was standing, and making a downward pass over her eyes, I remarked, "You can't open your eyes." She tried to lift her eyelids and smiling gave it up. As she soon seemed a little unsteady on her feet, I led her to the sofa on which she reclined. After talking with her briefly I allowed her to sleep in silence. In about a half-hour, she said, "I think it is time to wake me up." Two or three upward and outward passes from her eyes enabled her to awake. The psychic sleep had done her

great good. Her nervous system was quieted and she had no trouble in sleeping at night.

A Rev. Mr. Townshend of London, held a young lady in a magnetic sleep for one hour. She remarked that it refreshed her more than the ordinary sleep of a whole night.

An excellent young lady whom I treated in New York some years ago, came to me in distress, stating that a young man made himself too familiar with her person, and that she had no power to resist him. I had told her that she must be entirely frank with me if I was to do her the greatest good. She also told me that another person some time before had made undignified advances to her which she seemed helpless to repel. I told her we would put an end to that. I then induced her to fasten her thoughts on her home which was about a hundred miles distant. After twenty or thirty minutes she described the people there, said her father was discussing a certain subject with a neighbour, which was afterward found to be true. She thus showed that she was in a psychic state though not fully in a magnetic sleep. I then impressed her with the importance of sustaining her womanly dignity and asked her to will that no man on earth should gain control over her. She willed it in earnest, and afterward, as long as I saw her, she could stand her ground against any one.

The following account is given by Dr. R. von Kraft-Ebing, Prof. of Psychiatry and Nervous Diseases in the Royal University of Graz, Austria The subject is Ilma S., who, before Hypnotism was used for her, was nervously exhausted, hysterical and the mere wreck of a being, whose trials made her desire to commit suicide. Hypnotism did much for her, and yet, it seems to me that if they had had less hypnotizers and had taught her to practice auto-hypnosis more, the final result might have been better. The author does not explain what he means by 11 i. e. what grade of hypnotism, but that is of little importance in case the subject is well in the condition.

"Feb. 1st.—Henceforth 11. produced almost daily to carry out the following therapeutic suggestions :

"1. You cannot and must not have any more attacks. (None have occurred since Jan. 7.)

"2. You cannot and must not fall asleep any more from looking at shining objects.

"3. You cannot and must not commit suicide.

"4. You must sleep from 9 p. m. until 6 a. m.

"The patient is as usual made to repeat these suggestions. She does it in a purely automatic way, save that with the third suggestion sometimes a mental struggle and a lively play of features occur. Besides she does not recite the third in the same business-like tone, as she does the other suggestions, but in a voice tremulous with excitement.

Attacks henceforth do not occur; careful experiments in which she is allowed to look at shining objects do not induce auto-hypnosis; no traces of *tedium vita* are henceforth observed; the patient sleeps from 9 until 6 o'clock."

Some of the great achievements of Hypnotism are the cures of *Dipsomania,* and even the most confirmed cases of Intoxication. I learn that an Institution in Chicago is having a remarkable success in this line and many cases are reported from different quarters. It is immensely superior to the common system of voilent or poisonous drugs which sometimes works great damage to the system. A. Voisin, a distinguished psychiater, publishes a number of remarkable cures of this kind. I quote his fourth case:

"This patient was also a woman, forty-five years old. For twelve years a widow, she had tried to drown her sorrow in the cup. Especially during the last seven years she had been in the habit of getting thoroughly intoxicated with wine or brandy several times a month. Her temper had become abominable; she had constant scenes and quarrels with her children; she did not care for home, she had constant thirst, and said she would drink until she became insane. She did not sleep any more, had the most horrible hallucinations, had to be watched at night, wished to smash everything, also had suicidal tendency; for several days had refused to leave her bed and had slimy vomits. She detested everything that she had loved before, including her children, God and religion.

"Only with difficulty was she persuaded to receive V., on the 18th of July, 1887. She turned her back to him, did not wish to see any physician, vomited and complained of pain in the pit of her stomach and of extreme thirst; she asked for wine. First ordinary means were used to alleviate the vomiting. These succeeded. On the 22d and 23d of July, V. tried in vain to hypnotize her. The third attempt on the 24th, was successful. Although she gave no sign that she heard anything, she was given the following suggestion; 'No thirst except at meals; not to drink between these; at the meals only two glasses of diluted; claret: to shun undiluted wine, brandy and *liqueurs*. This is the way fo regain your health and happiness.'

"July 25th. She had not felt any more thirst except at her meals. She was quiet and had not attempted to drink either wine or cordials. She was then hypnotized more profoundly than on the previous day. To the former suggestion was added; To sleep for six hours during the night—from eleven to five.

"26. Her sleep lasted exactly the prescribed time. She was calm and did not vomit any more; the pain in the pit of her stomach was gone, but she still had a headache. Lethargic hypnosis: the same suggestions with the addition: No nightmare, no headache.

"Aug. 2d. Everything satisfactory except her headache which remained in the daytime. At the request of her brother, she was then given the suggestion to occupy herself with her household duties and with her children; to regain a quiet temper; to go to church and thank God for health regained, etc.; to thank her brother for his sacrifices for her sake; to no more have any thirst, headache, sleeplessness or nightmare.

"On Aug. 4, she met V, with the most cheerful countenance, said she had been to church, and thanked V, with emotion. Her brother said that she had bagun to take care of her house, was on good terms with the children, slept well but had some headache. But her hand still trembled so that she could not write a testimonial needed by her son. She was then easily hypnotized, and V, again gave her the usual suggestions, adding that she would without difficulty write him a letter of thanks. The next day she wrote the testimonial wit hout trembling."

Thus in a little more than two weeks was wrought a physical, mental and moral revolution by the aid of these mighty interior forces. Showing that the smallest things are the greatest, the finest forces are the most powerful.

The great sun-land Hindostan, in which the sun so often comes on the bare skin of the inhabitants, has very many physically developed people. Dr. Esdaille, between 1850 and 1860, performed 600 surgical operations on hypnotized persons without the least sign of pain to the subjects, or without a memory of what had been done to them. Dr. Fahnestock of Pennsylvania would have simply the parts to be operated upon brought into a state of anaesthesia and have their consciousness as clear as ever. Thus when a woman was to be confined, instead of the fearful suffering that most *civilized* women undergo, she would bring the parts of the body to be affected under the condition and cheerfully look on without the least pain. The system itself must be in a better condition in every way for a successful result when the psychic forces thus rule. A person once in the statuvolic condition can generally bring himself, or any part of his body, into this unconscious state. Thus I saw a lady who had to have a tooth pulled, throw her jaws into the condition in a few moments and then have a painless operation.

I will quote a few cases from Bjornstrom.

" A few obstetricians have successfully used hypnotism to render delivery and obstetrical operations painless. But those who have done most to exhibit the great power of hypnotism and suggestion in the curing or alleviation of various internal complaints (especially of the nervous system), are first of all by many years Lie'bault and the physicians of Nancy, and in later years Bernheim with others, as well as some Paris physicians, such as the psychiaters Voisin and Luy's, also Fontan and Se'gard, two Toulon doctors, Delboeuf of Belgium.

" Some remarkable cases may be mentioned here.

" For instance, Voisin relates : " On the thirteenth of December, in 1885, I loitered about the square of a country town in southern France, while waiting for a train. A peasant woman, forty years of age, was led to me, who for six months had been paralyzed in her right arm; moreover, for two years she had suffered from various nervous ailments, indicating hysteria. After an attack six months before, she became paralyzed in her right arm, and after a second attack she had a contracture in it. The arm was now hanging lax and it could not perform the slightest motion; her wrist and fingers were so much bent inward that the long nails had caused wounds in the hand; the articulations of her fingers were swollen and tender. All attempts to straighten the fingers only produced severe pain and increased contracture. Feeling remained in the arm and the muscles were not atrophied. I hypnotized her within a quarter of an hour. She fell into a deep sleep and was insensible, and her limbs were completely relaxed. With loud voice I now ordered her to straighten the little finger of her right hand. She complied, but with great difficulty and with signs of pain. Encouraged by this success, I asked her to straighten the ring-finger; she did that also; then the middle finger; this seemed to be more difficult, but she succeeded at last, after which the remaining finger and thumb were easily straightened. Her hand was fully stretched, although it evidently

hurt the swollen joints; but she moved her fingers with increasing facility, and the contracture had entirely disappeared. Her arm was still immovable. I then ordered the invalid to move her arm and assured her that she could do it; she succeeded, at first with difficulty, but finally so that she moved it as easily as the left one. The bystanders regarded the cure as a miracle. Four months later, I received the information that the woman was well and could use her arm for every purpose."

" By the same means Voisin also succeeded in curing several mental diseases, such as partial delirium, maniacal exaltation with or without hallucinations, moral disturbances and irresistible impulses to evil actions.

" The third case was that of a girl twenty-five years old, with erotomania and maniacal attacks with hallucinations of sight and hearing concerning an imaginary lover These hallucinations ceased almost immediately after the first hypnosis, during which she was forbidden to see or hear the lover any more, and she soon became entirely well.

" The fourth patient was a seamstress, seventeen years of age, who had lost her step father. She fell into a deep melancholy, refused her food and had hallucinations. By suggestion under hypnosis she was soon cured.

" The fifth case was a hysterical married woman, twenty-five years old, with visual hallucinations, ideas of poisoning, hemi-anaesthesia and color-blindness of the left eye. She was relieved of all these symptoms and became well through suggestion under hypnosis.

" The sixth case, a woman forty-eight years of age, with severe melancholy, hallucinations of sight and hearing and suicidal tendency, was cured in the same way in three se'ances

" All these cases were treated at La Salp'trie're and the results were corroborated by the assistant physicians.

" Voisin has many times used the same treatment in his private practice and with equal success. One of his patients was a married woman, twenty-five years old, reduced to a skeleton, with melancholy of eight years' standing, the greatest distaste for food, offensive breath and pains in the stomach. By suggestion she was compelled to eat, first during the sleep, then also during the wakeful state, the pains disappeared, she gained flesh, and was soon cured in body and mind. Another woman with mania was in this way made not only to eat but also to become mild and kind to her husband.

" Voisin mentions several prominent physicians who have had equally favorable experiences of the practical value of the new method, such as Se'glas, Lombroso, Grasset and Dufour. Although the method is said to require very patient and varied application, yet the result is so rapid and radical that no physician should hesitate to try it in the treatment of the mentally diseased. After the hypnotic sleep has once been successfully produced (which, however, is generally difficult when the mentally deranged are concerned), therapeutic suggestion should be used after the first or second seance, as it is a neccessary adjunct of the hypnosis. You gently affect one hallucination at a time, without trying to gain too much all at once — which might confuse. The suggestions are given loudly, with precision and imposing authority. The patient is assured that a certain voice, vision, or fixed idea will soon disappear."

16. **The Cure of Bad Habits.** Dr. J. P. F. Deleuze, of France, a learned physician and a magnetic practitioner, wrote an excellent work on "Instruction in Animal Magnetism," which Thos C. Hartshron of this country translated and D. Appleton & Co. published in 1850. The work has many valuable hints, though it includes some of the imperfect ideas of that period, such as, that one should not be magnetized by the opposite sex, or should be treated by some member of one's own family. If

self-control is lacking, treatment by the same sex is best, otherwise by the opposite sex when convenient. One's own family can, of course, if magnetic, be very useful, but other things being equal, fresh magnetism from outside the family would be better, as there is too much equalization of forces among those that are always together.

In this work of Deleuze, Mr. Hartshorn quotes a large number of cases of the magnetic sleep, with excellent results, in the United States. The following is one of the cases cured by Dr. J. W. Robbins, of Uxbridge:

"A third patient had long indulged freely in the use of tea and coffee, and they had become, as she supposed, absolutely necessary to enable her to continue her labor Endowed as she was in her somnambulism, with the faculty of prevision of a character almost perfect in regard to the exacerbations of her own disease, and the effects which were to result from different agents, I desired her to examine the influence of tea and coffee upon her system. The result of her examination was an acknowledgment of their bad effect, and her consent that I should break her of the habit of using them. I accordingly issued the prohibition, accompanied with the penalty that they should taste unpleasantly, and be followed by nausea. The next day, to her utter astonishment, (for she retained, while awake, no trace of what had occurred in her somnambulism,) both her tea and coffee were not only offensive to her taste but the forced introduction of small quantities into her stomach, from the conviction that she could not do without them, was followed by distressing sickness of considerable duration. The various attempts which she has at intervals made to take them, have for months been followed by the same results."

17. **Bad or Inherited Conditions** are cured by these psychic methods, where other methods are entirely useless. The young or the middle-aged can be greatly changed. Liebeault hypnotized several thousand children and claims that only good effects were produced. A stupid boy would be enabled to stand at the head of his class instead of at the foot as before. Even an idiot would have his understanding opened, and reckless ones would sometimes be toned down. Mr. Hement who was president of a congress of teachers that met at Nancy, France, in 1886, declared that in cases that baffled the teacher's power, hypnotism should be used. How many restless, nervous or perverted conditions that baffle both teachers and parents, should be taken in hand by a high-toned hypnotist. Jesse Pomeroy, who is undergoing a life-imprisonment in Massachusetts for cutting a playmate to pieces, could no doubt have had the instinct for murder eradicated by these powerful methods. It will be remembered that some time before his birth his mother was in the habit of going into the slaughter yards to see animals killed, so that the boy came *honestly* by his love of cutting and stabbing. I learn that this disposition was manifested before the fatal act. If so, then was the time for him to reform. Children are often easily psychomized. What a great achievement, then, to turn their minds to a correct manhood, with a love of just and tender dealing with their fellows.

18. **Higher Illumination.** It is very reasonable to suppose that if the psychic brain can wield these forces so marvelously, even under imperfect conditions of the grosser physical nature, it could much better still, when emancipated from its fleshly covering, in the higher life, influence and enlighten earthly brains and bodies. An interesting example corroborative of this, occurred in connection with J.M.Peebles,A.M., M.D., who, in one of his trips around the world, hypnotized the purser of the ship on which he was sailing. Being a fine speaker, the doctor got behind the purser, and without uttering a word, willed that the purser should do the speaking. The purser then commenced and for some time gave the very words that Dr. Peebles had thought out for him, and made the very gestures that the Doctor was making behind his back. After a while, however, some higher influence got control of his subject and Dr. Peebles was helpless to move him. When the purser came out of his trance, he said he had seen such glorious beings and realms of beauty, that he proposed to take his pistol and end his earthly life so that he might dwell there all the time. Dr. Peebles told him, however, that if he should commit suicide, he could not go to that beautiful place.*

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* A book is lying before me, the title of which is "The Law of Psychic Phenomena," by Thomson J. Hudson, LL. D. The work is written in plausible style, and brings in many important facts, and being considerably in harmony with the theological bias of the day, is being read by thousands. The great object of the work seems to be to tear down all these proofs of human immortality that have given happiness to millions, and lead multitudes to despair at the thought that we are all, like the beasts, to perish forever from the earth. Will our clergymen encourage such an immoral doctrine? Mr. Hudson ignores ten thousand facts which would destroy his theory, and deludes the public mind already too ignorant on these subjects, by perverting a multitude of other facts. He says the ***subjective*** mind, which in one place he calls the soul, "possesses physical power; that is, the power to make itself heard and felt, and to move ponderable objects." By, this unscientifically used term ***subjective***, he means the psychic system, but does not give a particle of evidence that it is able to move what are usually called ponderable substances, or write upon slates, or practise clair-audience so that the ***objective*** mind, as he calls it, can perceive it. Mediums, he says, do everything by suggestion, or by thought-reading, or by their subjective mind, and cannot succeed if a skeptical mind is present. The truth is that millions of skeptical minds have been convinced of the possibility of spirit communion by these same mediums, imperfect as many of them may be. I will quote one case from a thousand, which alone would destroy Mr. Hudson's theories and prove that "there is no more death." A Mr. Riley went to see the late Mr. Chas. Foster of New York. Mr. Foster met him at the door, exclaiming: "You are just the man I want to see, as you are a great skeptic. Your father stands behind you and says his name is Riley." Riley then in thought desired his father, if it was he to make Mr. Foster write some facts of his life that he (the son) was not acquainted with, or had forgotten. Mr. Foster immediately gave such facts, which were afterwards found to be true. The most startling thing, however, is still to come. Mr. Foster told him that Mr.—was present,—although Mr. R. presumed that he was still living—and declared that his body lay at the bottom of Fremont's Peak. Before long Mr Riley saw an account in a newspaper of the body of a man at the foot of Fremont's Peak, bearing the very name

19 **Help from Higher Realms.** A majority of all magnetists while treating, feel a great accession of power outside of themselves, a power which sometimes comes with a burning force to kindle dormant systems into new life and sometimes with a very cooling electrical force to offset inflammation and fever. This higher agency psychologizes the healer until he sometimes becomes unconscious and is said to be in a trance, directs the movement of his hands into all kinds of new and wonderful methods of massage and pours down a new tide of life. Without this sustaining power but few magnetists could endure the draining off of their own life forces which go to the patient. The well-known healer, Mrs. Dusenbury of New York, would treat all day and up until midnight for a month at a time. Let any unaided man in New York, however strong, treat by her side for two days and nights, giving off his life forces to others, and he would be as limber as a rag. If this helping power is not distinctly perceived, the masseur or masseuse should treat a much smaller number of patients each day.

Zouave Jacobs of France, who sometimes healed a room full of patients at once, said he saw twenty angels at a time helping him. It sometimes required a score of policemen to regulate the crowds that came to him.

Dr. J. R. Newton, of this country, who healed scores of thousands of people, always felt a mighty helping power, could perceive in a moment what and where the trouble was, and would sometimes heal in a minute, persons who had been brought to him, and who for years had been helplessly paralyzed. A gentleman from East India came to this country to see him and gave an account of some of the wonders of healing which he saw him perform at Salem, Massachusetts. He says that after Dr. Newton had performed a number of cures of people in the audience, a woman came to him and asked him if he would come to her house in another part of the city and heal her husband who was helplessly lame. "I will heal him right here," he said, and asked the woman to fasten her mind upon him, and he would send a power to him. After a moment, he said, "There! he is cured. Now go and bring him here!" The woman left and before the audience was dismissed she came in with her husband sure enough, who had been healed. This is not, by any means, however, his most wonderful achievement. I know personally of cases which I should scarcely dare to mention here, as they would be considered almost incredible. Dr. Newton once remarked that he

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of his friend as signified by papers on the body. How much thought reading about that? Even Mr. Hudson will find it troublesome to twist these facts to suit his disheartening theory. Mr. Hudson, too, conveniently ignored clairvoyance, which gives such wonderful evidence regarding the loved ones gone before.

had made 3,00,000 cures. This is far too large an estimate, however, if by the expression permanent cures are meant; as in many cases, only a brief magnetic influence was sent to the patient which gave only a temporary relief and needed several repetitions. But even the doctor kept up the excessive giving off of his forces, too late in life, and after he was seventy years old became partially paralyzed, as no power, angelic or human, can entirely offset the ravages of age.

20. **The Wonderful Experiences of Bertolacci of France,** will show the power that the human mind can attain to when under the control of these diviner forces. He gave his experiences in a book published by Emily Faithful in London, 1864, and now out of print. These experiences commenced in 1853 in the early days of Spiritualism in France, and he and his family claim to have been instructed by spirits through the tipping of tables at first, later by means of the planchette. I will quote his salient points in his own language, omitting his particular theological bias.

I. One object attained was **Clairvoyance** in the somnambulic or sleeping magnetic state; with a view toward fitting the organs of the body to subserve the same faculty in the normal condition.

II. **Reading.** A book was placed in the hands of the somnambule, whose eyes were covered with a bandage, and who could soon read in spite of this, correctly, line after line, and page after page.

III **Reading** in the magnetic sleep from a **closed book** at any named page.

IV. **The Suppression of the Natural Sensations and the Creation of Imaginary Ones,** during the magnetic sleep, at the bidding of the magnetizer and subsequently the suppression or augmentation of the **Memory,** on being awoke, with regard to things that had taken place during the sleep.

V. The next step indicated to us was the passage to the **Magnetic Condition** by the act of vague contemplation. It consists in gazing intently upon a uniform body or a fixed luminous object.

VI. **The Direct Clairvoyance by Vague Contemplation** and which consists in seeing—while gazing into a bowl of water, upon a sheet of white or black paper, or any other mono-tinted surface—such objects alone as are indicated to them, those objects being under cover.

VII. **The Reading of Books** closed or out of sight by the same process. At first words only, then lines and definitely entire pages.

VIII. The direct, unaided **Clairvoyance in the Normal State.** By it persons and things are seen at a distance without gazing upon any fixed object, but simply by concentration of thought.

IX. Reading currently through the power of concentration of thought, in their natural walking state, the named pages of books closed or hidden from their view.

X. **Clairaudience in the normal state,** by which they are enabled to hear the sounds of things, and voices of persons, not only far beyond the ordinary range of hearing, but indeed from the most distant places. They also receive as by a voice speaking to them answers to all sorts of questions. This faculty which may be made good use of for an infinite number of purposes, is already employed by us to teach our students the pronunciation of foreign languages, without the assistance of a master, the pronunciation when wanted being given to them by a voice that seemed as though it were speaking in the air.

XIII. **Lessons were Learned by Heart** by reading to my students in their magnetic sleep, ordering them to retain in their memory, when they awoke, all they had heard.

XIV. Lessons were next learned by heart **by the pupils themselves, reading once over, in their magnetic sleep, one or more pages of a book.** When this began to become familiar, the action of the organs of outward perception upon the memory was submitted to the developing power of the soul's direct influence.

XV. **Lessons were Learned by the Simple Glancing at the Open Page of a book,** the students being in their normal waking state (psychozoic state—see explanation hereafter. E. D. B). In the beginning the inspection or staring was made to last a definite number of seconds, and that number being gradually reduced, after a short time, the duration of a single second or a mere glance at the page was sufficient for the students to retain the whole contents of it.

XVI. **Lessons are Learned by a Simple Act of Concentration from Books closed or Totally out of Sight.**

XVII. **Mental Dictation.** As the teacher desires to communicate a phrase to the pupils, they hear a voice dictating it aloud to them in the air, although no person is speaking to them at the time. (These words are uttered psychically, and they come through the psychic atmosphere to the psychic ears of the pupils, as truly as ordinary words come through the external coarser atmosphere. E. D. B.)

XIX **History.** The direct clairvoyance, gives the student a correct sight with regard to historical persons and facts treated of by the inspection of books, either open or closed, or at a distance.

XX. **The Sight of the Plants, Flowers, Minerals, Animals;** etc., described or mentioned in their books of Natural History and other

branches of science, as also such other useful details as may have been omitted by the author, or belong to a more minute study of the subject, is enjoyed in the same manner.

XXII. **The Students,** by the facilities they acquire for receiving inspirations, are so perfectly identified with everything belonging to the places spoken of in their study of Geography, that they feel as though they were on the spot.

XXIII. **Solutions are given instantaneously, by Inspiration, to Arithmetical and other Mathematical Problems.**

XXIV. **Microscopic and Telescopic Sights** by which the students are able to see the most minute and the most distant objects with the naked eye, as if they were looking at them with a microscope or a telescope.

The **Cures** wrought by Bertolacci and his three daughters by aid of these divine forces would be considered very wonderful by those who have not been conversant with his marvelous field of power. Burns, cuts reaching to the bone, would often be cured in eight to ten seconds, teeth would be pulled without pain, toothache often cured immediately and all cases brought to them were benefited or cured permanently. Contagious diseases were cured as easily as any other. The treatment of scarlet fever is thus spoken of:

"In the year 1857, the scarlet fever was creating great devastation where we were then living. One day my eldest daughter was suddenly visited with all the symptoms in a very violent manner. At the end of eight seconds of concentration and communion together with myself and some members of the family, the headache, fever, and every other unpleasant feeling had totally vanished. Many other contagious maladies have, at various times, been instantaneously arrested in a similar manner".

The above account I have condensed from Dr. J. H. Dewey's "The Way, the truth, and the life." The Doctor says, "A personal friend of the author lived for years in almost daily communication with the Bertolacci family and, assures us that the facts of their experience were more marvelous indeed than he has reported them."

These are some of the marvels of the hypnotic and psychic influence, which make the clamor against them, that is raised from some quarters, seem utterly absurd. We see how this psychic culture can give great moral and intellectual development, instead of injuring the mind; can save nervous systems that are a perfect wreck, instead of ruining them; can revolutionize to a certain degree systems which have been debased by bad pre-natal or post-natal influences; can eradicate dypsomania, hallucinations, and partial insanity; can cure disease and save a world

of fearful suffering, and can open the gateway to a perception of the diviner life beyond the earthly. Our more materialistic writers on hypnotism, call it a mere hallucination when their psychic subjects see the forms of some dear friends gone before, and consider it a triumph when they can prevent it. If Jesus Christ should come into our midst and speak of communing with Moses and Elias, they would hasten to eradicate such *hallucinations* or, like the Scientific American, would perhaps prescribe strychnine and iron to prevent all higher illuminations. Bertolacci and his family constantly appealed to spiritual intelligences for instruction and a helping power, and the swiftness and effectiveness of their work was uncommon. The philosophical mind might not agree with Bertolacci that it was necessary to have faith in Christ before these great results could follow; but the high spiritual aspiration which they constantly manifested gave them a great additional power. The Dervishes, after they have wrought up their systems into a psychic fervor by intense whirling movements, will plunge knives into their bodies and heal the wound immediately, or walk on live coals of fire, without any pain, all of which they profess to do through the power of Mohammed and for the glory of their religion. A kind of *faith cure* which lifts its votaries into a religious or spiritual atmosphere, opens up the system for receiving these high forces. The abundant use of sunlight on the bare bodies has given the people of India a wonderful psychic development, and combined with their religious fervor, this becomes still more effective.

21. **Statuvolism or Artificial Somnambulism.** I have elsewhere explained this method of getting into the psychic condition by the plan of the late Dr. Wm. Baker Fahnestock of Pennsylvania, but as it is very simple and of great practical importance I will quote still further items:

"I have had several to enter this condition after twenty sittings, and had them say, that if they had not interfered, and had let things take their own course, they would have fallen into it at the first sitting.

"All that is needful when it becomes necessary that they should awake, is, to ask them whether they are ready or willing to do so, and if they are, I direct them to do so at once, and they will awake at the word **now.** . . .

"This peculiar power of the mind while in this state, I have taken advantage of to cure diseases, and if the mind be properly directed while in this state, so as to make them resolve to be well, pains, contracted habits or diseases are removed by an act of their will, as if by magic, and will last until conditions are changed, or altered by influencing causes, or by a positive act of the subject's will. . . .

Perception. "The powers of perception in this state, compared with the same function in a natural state (he should have said in the ordinary state), are inconceivably greater, and it is impossible for those who have not seen or made the necessary experiment, to conceive the difference. Language fails to express it. . . .

Hearing. "Many individuals who are not clairvoyant often hear and use this faculty at a distance very well..... When they are desirous of listening, they can translate the faculty to any distance, and hear what transpires there as distinctly as if the thing to be heard were in the same room. I have had many subjects, two in particular, both gentlemen, in which the sense of sight was not perfectly in this state at the same time that the hearing was..... They have frequently told me what was spoken at a distance of several miles; and when taken (mentally), to a cocoonery at a distance of four miles, they declared that they could hear the worms feeding as distinctly as if their ear was within an inch of them. (This psychic hearing is called clairaudience — E. D. B.)

Clairvoyance. "Both gentlemen (mentioned above), were skeptical, and entered this state out of curiosity. They have both entered this state more perfectly lately, and are now most excellent clairvoyants. One entered it perfectly on the tenth, and the other on the twelfth sitting."

Power to Throw Special Parts of the Body into a Psychic Condition. Dr. Fahnestock gives many examples of this, but I will quote only one: "Mr. H.——whom I had previously taught, having had his forefinger smashed between two railroad cars, threw it, although suffering very much at the time, into this state readily, and declared to me that, from the very moment he had done so, until it was entirely healed, he had not experienced the least pain, although at the time he was obliged to press it into shape until the necessary bandages were applied.

"I will again remark, that *the mere entering into this state will not relieve disease. It requires that the minds of the patients, while in this condition, should be directed to the disease, and the desire or resolution formed on their part, that it shall be otherwise when they awake*."

I would simply add to Dr. Fahnestock's words, that in order to develop clairvoyance, passes should be made over the eyes, while in the state, and the subject should make efforts, with the eyes closed, to see distant objects.

22. **Psychozoism.** But there is a condition higher and more practical than that which European and American scientists designate as hypnosis. A psychomized person may have a wonderful clearness of

mental perception and a remarkable power over disease when in the condition, but is usually unconscious of everything that has occurred after being wakened, except when especially charged by the operator to remember everything. A superior condition is one that may be called *Psychozoism* which combines the psychic brain with the ordinary brain of the animal system, the Greek zoon meaning an animal. This is an advanced state and should be aimed at in the educational process of the operator. It will be seen that Bertolacci's subjects progressed from mere hypnosis into the psychozoic condition by being told to remember what they knew or perceived during the sleep, after coming out of it. Andrew Jackson Davis, when young, ignorant and untutored astonished the learned Rev. Dr. Bush when psychomized, by absorbing the contents of the works of Swedenborg and other profound writers without the ordinary process of reading them. When in the ordinary condition, he would forget everything. After coming into the state again, however, all that he had perceived, or learned, in former conditions was remembered, and after further development, he could remember in his ordinary condition, all that had occurred in his former life while in the psychic condition, in other words, he had become psychozoic. All lightning calculators are psychozoic, as they, while in their usual condition, compute with twenty times the rapidity of ordinary minds. Major Buckley developed clairvoyance in 148 persons, 89 of whom did not have to go fully into a magnetic sleep in order to read writing hidden away in boxes or nuts. If after the lapse of some weeks or months, they would find their power imperfect, they would make a few downward passes and clairvoyance would return. But even a psychozoist, when wishing to perform some special cure on himself or others, or to have his mind especially illuminated, should have a brief, silent concentration of mind as preparatory. In the process of evolution, the time must come as the ages roll by, when all will possess psychozoic power, and being thus able to come under the higher influences, will attain a greater elevation of character, or if some few persons should still be disposed to practice fraud, all their neighbors would be able to see through them immediately and render their efforts very unprofitable.

23. **Should Physicians only be Allowed to Hypnotize People and Should Laws be Made Giving them the Exclusive Right to do This?** Medical writers are constantly proclaiming the necessity of doing this, and if our physicians were a little more intuitive and impressible, they might be very proper ones to take charge of persons in this condition. But what are the facts, that we should commit all power to them? Their bias of mind is materialistic. Their studies and efforts have been on the material side of life, and they seem to be more conversant with human

bodies than with human souls. Almost any psychic could instruct them and should be listened to by them and not be sneered at, as is too apt to be the case. No, I should decidedly oppose any such laws, as we have despotic medical laws already, in nearly all our states. I would allow and encourage all competent persons of good moral character who possess magnetic power to give exhibitions of these marvelous phenomena, as it will enlighten the public and even be useful to the subjects themselves if managed with any kind of wisdom. If any harm is done, the operator can be prosecuted for malpractice. Under the next heading I shall refer to some dangers of Hypnotism and give directions by which the subject may generally shield himself from harm.

24. **Dangers of Hypnotism.** Like every good thing in the world, hypnotism so beneficent and beautiful in its possibilities, is capable of being abused. Young men and women will sometimes fascinate each other, manifesting that foolish kind of love which is blind to the fitness of things, blind to temperamental compatibility, and so instead of making marriage a haven of peace and exalted happiness, it becomes an infernum, and their children are apt to become wrecks and blots on society.

Another abominable perversion of this beautiful psychological power, is that which sometimes separates a loving husband and wife who have perhaps lived half a lifetime in harmony together and reared a family of children. Some man possessing graces of manner and a strong magnetism, throws a spell over the wife and she, ignorant of these principles of fascination, becomes another being and is ready to elope with him, or, on the other hand, some woman with fascinating ways hypnotizes a man so that he is ready to leave a loving wife and children and make a fool of himself generally, to the everlasting scandal of his family. It is common for a certain class of impulsive people to counsel a husband to kill the man who has thus robbed him of his wife, and thus to right one wrong by a still worse wrong. But there are two sides to this question. The culpable man himself may have become fascinated by the lady and his passional nature may have driven him on as before a tornado.

You say it is wrong thus to yield to passion. Yes, an infernal wrong. But the man has a large back brain and perhaps has never received that moral training that will make him detest a wrong deed. Do you not see that the low standard of society is in part responsible for the man's disgraceful action? We must, of course, hold people up to high moral law, but we must not advocate any wild or brutal system of vengeance against our imperfect fellows, as that will not reform them.

A terrible example of *the power of hypnosis and self-psychology* was seen in the case of Joseph Williams, of Bismarck, North Dakota. Many years before his tragic end he was running a railway engine. A little girl in front of the engine became dazed and stood transfixed to the place. In spite of all that Williams could do, his engine ran over her legs, cutting off both of them above the knees. Being a sympathetic man he naturally grieved over it, but when the enraged mother screamed at him hysterically in the following words: "May the God above that loves my girl, end your days in the fire-box of your engine!" the curse sank so deeply into his sensorium, that although the little girl got well otherwise, he became melancholy for years afterwards and finally went to a horrible death by plunging headlong into his own fire-box. Such a phase of insanity could have been fully cured only by hypnosis itself.

People with large acquisitiveness can often psychologize persons with less acquisitiveness and cause them to pass an undue amount of money or property to them. Lie'geois of France once caused a wealthy lady, when in a state of hypnosis, to agree to sign a note of one hundred thousand francs after awaking, to liquidate a debt due him from her husband. This she would not assent, to at first, but he soon made her remember, seemingly, that her husband did owe him (Lie'geois) the amount, and that she ought to pay it, so she formally made out the bond in her waking state. Of course, this was done as a mere experiment. Those who have this great hypnotic power will rarely take advantage of another. A psychologist of Washington, to show what he could do, once went to a number of business places, including a bank, and by his will power so mixed up the minds of those with whom he dealt that when he handed out a bill to settle, they gave him back considerably more than was his due, sometimes, in fact, more than the original bill. The bank teller could scarcely believe that he had been so muddled as to hand out so much more than he had received.

People are hypnotized from childhood to run in certain *medical ruts* and feel perfectly sure that every one that adopts some other system is a quack.

In *political matters*, many people hearing one side only and training with a single party, become quite sure that those belonging to the opposite party are villains, who are in danger of bringing the country to ruin if they get fully into power.

The *Religious Nature* covering as it does the highest and most powerful part of man, becomes the most fearful of all things, if perverted and misapplied. It is beaten into the mind from infancy up, and, in the past, priests who have mistaken fear and brutality for love and spiritual

aspiration, as the essence of religion, have tortured and murdered millions of people who were nobler than themselves. To show how the Scottish clergy of the seventeenth century debased and almost ruined their people, I will quote a few sentences from Buckle's *History of Civilisation*, p. 288 of Vol. II. :—

> It was generally believed that the world was overrun by evil spirits, who not only went up and down the earth, but also lived in the air, and whose business it was to tempt and hurt mankind. Their number was infinite, and they were to be found at all places and all seasons. At their head was Satan himself ..... The clergy were constantly preaching about him and preparing their audience for an interview with their great enemy. The consequence was that the people became almost craze with fear. Whenever the preacher mentioned Satan, the consternation was so great that the church resounded with sighs and groans. The aspect of a Scotch congregation in those days, is indeed hard for us to conceive. Not unfrequently, the people, benumbed and stupefied with awe, were rooted to their seats by the horrible fascination exercised over them, which compelled them to listen, though they are described as gasping for breath, and with their hair standing on end.

This Satanic hypnosis is far worse than the state of horror which Dr. Luys inflicts upon the hypnotized lady who sees him murdering an infant, for this generally ceases when she is awakened, but the Scotchmen of that day carried the horror with them to their homes and nursed it night and day until insanity and suicide often resulted. But even yet some people are under a constant fear of devils.

25. **The Remedy for the Dangers of Hypnosis.** Possibly I may have given the impression to my readers, that the dangers of hypnosis, are greater than they are, as persons of a good moral character and sense of propriety can very rarely be influenced to do wrong. Ladies will sometimes repel undue familiarity on the part of a male hypnotizer, more decidedly than when in the ordinary state. To say that we should abandon hypnosis because damage is sometimes caused, is like saying we should abandon the pursuit of knowledge because some persons become insane by over-study.

I wish now to advise a method of procedure by which the dangers of hypnosis can be obviated and some advantages of immense value secured. First, if you are sensitive and can fasten your mind on some other place so intensely as to almost lose yourself, then *will* decidedly to be so firm and self-controlled that no mortal power shall be able to rule your ideas unless you choose to allow it. Do this a number of times, meantime search out your own weaknesses and imperfections, both physical and moral, and determine that they shall be remedied. If you cannot get as far into the psychic state as you would like, and can find some one who is more or less psychically developed, it might be well to have him sit with you a few times, as his power combined with yours may enable to succeed far sooner. He should, of course, agree

to assist you in your self-control and self-development. After that you can resort to auto-hypnosis again. Bertolacci insists that every one can come into the condition and be able to ward off or cure all disease, just as his family did. No one should get the impression that, by getting into the psychic state, he can safely neglect physical laws, proper food, exercise, rest, etc. But the wonderful power to be gained through the psychic forces, the power to quicken the intellect, relieve pain and disease, and control the mighty nerve forces, is worth working for, during weeks or even months. Dr. Fahnestock thought that by having some one present to keep the mind fastened intensely on some outside place, every one could be got into the statuvolic condition. A lady following his method had twenty sittings with a gentleman before she could succeed. She had become almost discouraged, but at the twentieth sitting she got finely into the condition and became an excellent clairvoyant. There are hypnotists who can psychologize many persons by a mere touch and a pass outward and downward, or even without contact at all. Such a helper would be admirable with insane persons or with those who are not able to concentrate their thoughts.

Children who are perverse, whose memory, or perception, or application is deficient, who are headstrong or thoughtless or rash, can receive immense advantages by aid of a hypnotist, or often from the parents themselves who may induce them to look at some bright object for five or ten minutes at a time, ending off with passes over the eyes and down the face, remarking perhaps as follows: "Now you are getting sleepy, sleepy, your eyes are fast." Then, if even the sleep is not fully brought about, let them place their hands over their reasoning powers, their perceptives, their moral and spiritual powers. If they are deficient in perseverance, in self-confidence, in force of character, place the hands for a while over firmness and self-esteem, or hold the hands on each side of the head over the *Vital energies*, meantime saying something like the following: Be strong! Be full of life and force! Be somebody and accomplish some great things in the world! Then placing the hands over the whole frontal top-head covering benevolence, the spiritual realm, firmness and conscientiousness, teach the grandeur of justice, firmness, kindness toward brothers, sisters, playmates, everybody, and thus induce them to rise above the hog part of human nature, until that high-toned character is reached which is above kings, nobles and the great of earth who may be deficient in these qualities.

Then the young should be made to see that they will have mounted to a celestial height when they have gained a supreme love of truth, and that they should psychologize themselves to hate all error, and yet feel kindly toward those who commit the error. While loving and respecting

parents and heeding the superior wisdom that they have gained by a vastly greater experience, still parents themselves are subject to teachings and impressions which they have received from early childhood, some of which may be quite erroneous. There are but a few royal souls in the whole world who are able to keep out of ruts and ascend to that mountain of privilege, whose summit is bathed in the higher light. Even the influence of teachers, clergymen and college professors, though looked upon with respect and sometimes with great admiration, must not be considered as having attained to divine truth in its fullness. They are apt to teach much as they have been taught, the colleges as we have seen, being permeated extensively by the influences of the past, their students, for instance, being trained according to some definite methods or principles, which tend to make them feel that they have already acquired all necessary knowledge and so they do not keep their minds open to conviction when new things are brought before them. Take for instance the subjects which I am now discussing, and which have proved to be heaven high in importance. Tell the ordinary college graduate, or the medical man, that within us all dwells the psychic man, which, when it can be brought into action, will work with lightning rapidity and revolutionize human conditions, and unless restrained by politeness he will hint of imagination or hallucination. In the pursuit of truth, it will not do to be over-awed by learned men or high authorities, as a majority of them have been educated under a wrong system, a system in which parents and teachers pour their ideas into young brains and then cork them up as far as possible for fear some other kind of ideas may get there. The Mohommedan, the Roman Catholic or the Presbyterian will fill the mind of his child with plausible arguments to prove that he has the very truth of heaven on his side, and no doubt he has to a certain extent, but there are other sides of truth also that should be engrafted on the young mind. The greater the age of a medical or religious system, the greater the danger that some imperfect elements have been engrafted upon it, as the human mind is progressive and evolution is, on the average, an upward movement. The systems that have originated far back in the old ignorant ages, are less likely to be correct than later systems, other things being equal.

On the other hand, there are minds not well ballasted by reason and science that will rush in hot haste into any new fad. Take for instance Astrology, an old theory of things which many persons at the present day are trying to revitalize and clothe with the dignity of a science. That the sun and moon are able to influence minds and bodies is evident, but it is claimed that distant planets, perhaps thousands of

millions of miles away, can rule human destiny, especially if it should happen to be in a certain position at a child's birth. Let us take Neptune, for instance, and compare its influence with, that of a bureau which we will say is ten feet away and weighs 120 pounds. Neptune in round numbers is 2,800,000,000 miles distant from the sun and sometimes is much farther than that from us. Reduced to feet it will make 14,784,000,000,000, which is 1,478,400,000,000 times as far from the child as the bereau is. But the influence of gravitation on all things is inversely as the square of the distance. Squaring this number, we find that the bureau, so far as distance is concerned, is 2,185,666,560,000,000,000,000,000,000 as potent as the planet. But the weight of Neptune, though 105 times the size of our planet, is only 21 times as great or about 254,898,000,000,000,000,000,000,000 pounds. This divided by 120 gives it a gravity 2,124,150,000,000,000,000,000,000 times as great as that of the bureau. In other words, Neptune has more than two septillions of times as great power as the bureau so far as its mass is concerned, but the bureau has more than two septillions of times greater power than Neptune, so far as nearness is concerned, the advantage being with bureau. Now it has never been discovered that a bureau or a still larger object has any influence on human destiny, and hence we may conclude that planets have not. But is it to be presumed that some other influence from a planet is greater than that of its gravity? Is it magnetism? But magnetism acts mainly at the poles and at no great distance, at that. I have probably studied the subtile forces of nature more than other people, and I must say that I know of no other force that will at all compare with gravitation for its power on distant objects. Are all astrologers frauds, then? Not at all. So far as they think the planets rule human destiny they are mistaken. But do they not foretell events in a marvelous way? Sometimes they do and sometimes they are wide of the mark. It is very evident that those who are so successful are psychics.

26—A SUMMING UP OF ITEMS

The Phenomena of hypnosis and other refined phases of psychic force are a proof of the **law of power** already demonstrated in Part First, and, in harmony with that principle, are more searching, more upbuilding to the mental and spiritual forces, more enduring, and if used with any kind of skill, more safe than the use of ruder forces for human upbuilding.

In the ordinary processes of life the coarser brain and body are used, mental action is slow and the bodily organs are liable to be impeded or clogged when conditions are not right. When the animal

forces can be drawn aside or sufficiently overcome by the psychic forces, the psychic brain and body take charge and are able to project these finer ethers to every part of the body, kindling the dormant elements into new life, curing diseased conditions, holding sensory nerves captive so as to prevent all pain when desired, and firing up the intellectual and spiritual forces so that thoughts and perceptions move with lightning speed.

An operator may get so much of his own thought images and psychic force into a subject's brain, as to rule there for the time being, and by aid of suggestion, to impart all kinds of wise or foolish ideas.

If the operator will cease his process of clouding the subject's ideas with his own and *let the higher forces have their freedom,* the latter will usually explain his own ailments, tell what should be done to cure them, and give a correct prognosis of the whole matter.

Self-hypnosis is a very important thing to attain to, and if it cannot be reached unaided, some true-souled person who is already psychically developed can assist very much for awhile. As soon as possible, however, one's own grand possibilities should be evoluted, so that one may come nearer to the high and the Deific.

There are persons who have psychologized themselves to believe in some distressing absurdity, that is, have impressed certain forms on their sensoriums which persist and destroy the peace of their lives. In such cases it is more useful to have an outside person to induce the hypnosis, and he must be sure to impress it upon the person that these unpleasant thoughts and conditions are never to come back.

When the psychic body throws off its fleshly garment and stands in the freedom of another life, its powers, of course, are much enhanced though for a time the earthly selfishness and imperfection will remain. Such ones, when not restrained by the higher influences, may return and hypnotize some earthly sensitive, leading him or her on to wrong thoughts or actions. But such obsession rarely occurs, and sensitives, as I have already shown, can psychologize themselves in a way to become firm against all lower influences either on the mortal or the immortal side of life.

Magnetic massage can do great good even when hypnosis is not induced. Deleuze speaks of some statistics which announce that fifty cures of paralysis in his days had been made in France magnetically, and thinks ten times as many had probably been cured. Of these fifty, only three were thrown into the "somnambulic state." By aid of hypnosis, however, the cures can be made much more rapidly and thoroughly. Dr. J. R. Newton cured multitudes of cases of paralysis and that very

quickly, but he threw a psychological influence over them from the start, simultaneously with his manipulation.

There are *writers on hypnotism*, who, though admitting that many remarkable things may be done by its means, yet judging from their own experience in hypnotizing have come to the conclusion that hypnotic cures are not very enduring, nor as potent as some people suppose them to be. I have discovered that such critics are not highly developed in the psychic scale, and are not able to give their subjects that refined grade of force that is most effective and enduring, and hence judge of all hypnotism by their own success.

When the modern psychic wave first came upon the world there were some psychics who became insane, especially as any form from the invisible realms which might appear, was straightway supposed to be a *devil*. This was the result of the old superstitious teaching, not of the newer ideas, which are full of joy and often prevent insanity.

Prof. Safford now of the Chicago University may be called a psychic. His upper head is exceedingly high in the spiritual realm where the psychic forces are most abundant, and in his boyhood he was perhaps the most wonderful *lightning calculator* of whom we have any record. When given a long row of figures to be multiplied by itself, he would turn around under excitement and immediately give the answer, and he would calculate eclipses in his head, by methods a third shorter than those ordinarily used. His education was committed to Harvard University, as the professors in this famous institution would presumably understand the direction of so marvelously a precocious intellect, and on the whole they must have done very well, as they brought him through safely without allowing these intellectual fires to burn out the processes of life. Their method, however, was to prohibit the use of this wonderful faculty except on rare occasions. A greater knowledge of the psychic forces would have shown them that he could have used that gift with a good deal of freedom, had he occasionally practiced auto-hypnosis and given himself abundant exercise. He calculated eclipses when nine years old.

Messrs. Binet and Fe're' remark that "*simulation* which is already a stumbling-block in the study of hysterical cases, becomes far more formidable in such studies as we are now occupied with. It is only when he has to deal with physical phenomena, that the operator feels himself on firm ground." It is a sad thing that even our writers on hypnotism are so filled with materialistic conceptions that all manifestations of thought-reading or spiritual facts are explained away by the most trivial reasoning, and only physical phenomena seem to have a reality to them.

Other things being equal, hypnosis will be more easily induced and more beneficial, when there is a *sufficient diversity of temperament between operator and subject to constitute a chemical affinity*, as the latter will the more readily attract the forces from the former.

A person who is well charged with magnetism will often attract and sometimes unconsciously hypnotize those who are sensitive. At my office in New York, for instance, a lady kept lingering for some time after her errand was done. Finally she told me she was unable to get out of the room. It seems that the walls of the room were so magnetically charged as to throw their eddies around her and hold her, especially as she had never psychologized herself in a way to make her firm against surrounding influences. I had to go with her into the open air before she could get full control of herself. One time while in Chicago, I went with the late Dr. Wilbur, who was still more magnetic than myself, to visit one of his patients. A lady present went immediately into a magnetic sleep and another had to brace herself against the influence to keep from being overcome. At another house, the lady had to walk back and forth through the room to keep control of herself. I adduce these facts to show that people can sometimes be hypnotized without the least intention on the part of the person through whom it is done.

Dr. Foveau de Courmelles, in his work on "Hypnotism," p. 201, says: "In our opinion, hypnotic suggestion is an order given for a few seconds at most a few minutes, to an individual in a state of induced sleep. The suggestion may be repeated; but it *is absolutely powerless to transform a criminal into an honest man or vice versa*. . . . It is only necessary to quote the facts given by magnetizers, to refute the alleged negation of free will. Donato, for instance, asserted before the International Magnetic Congress of 1889, that he had induced sleep in 30,000 individuals, but that none of them could be so influenced against their own will, and Alfred Reybaud gave similar influence." These sensational remarks of Courmelles would tend, contrary to a thousand facts, to show that hypnotism is but a momentary impression, which, if true, must be of but little importance in a mental, moral, or physical way. I have already adduced a number of facts to show what a lasting good, physically and morally and especially intellectually, comes from a high toned hypnosis, especially as shown in the family of Bertolacci, and others, in the permanent cure of bad habits of eating, of the use of liquor, tobacco, opium,—of even conditions of insanity. We have seen that hypnosis, in its higher phases, unfolds the psychic nature and opens up the mind to diviner influences. P. B. Randolph tells of a sweet little Miss only six years old, that after repeated attempts, mesmerized a burly uncle " who was one of the roughest sea tyrants that ever trod a quarter-

deck," and who afterwards became one of the kindest and most gentle of men. Plutarch gives an account of a trance into which Thespesios of Soli, one of the most licentious and reckless of men, had fallen, and who was made to see the results of a vicious life to such an extent that he became entirely reformed. It is a common thing for those whose psychic nature has been fully opened up, to reach out with new and higher aspirations and to work for human upbuilding. Of course, if a person has an imperfectly formed brain, the work of reform is more arduous and slow, but by aid of a determined will, and especially by aid of the psychic powers, the brain itself can be gradually changed. Socrates is a good example in point. In his early life he was addicted to sensuality and vice, and his features showed it. He would sometimes become entranced during a whole day and night and come in contact with the diviner influences. The following remarks concerning him are from George Henry Lewes :—" Unless we conceive Socrates, as a profoundly religious man, we shall misconceive the whole spirit of his life and teaching. In many respects he was a man like Carlyle, intolerant, vehement, 'possessed' by his ideas, but, like Carlyle, preserved from all the worst consequences of such intolerance and possession by an immense humor and a tender heart. His Saturnine melancholy was relieved by laughter which softened and humanized a spirit otherwise not less vehement than that of a Dominic or Calvin. Thus strengthened and thus softened, Socrates stands out as the grandest figure in the world's Pantheon: the bravest, truest, simplest and wisest of mankind." There are many examples all through history in which persons engaged in some heinous offence or corrupt life, have, like St. Paul, suddenly had their psychic natures opened, and aided by the light from a higher world, have become revolutionized in their natures. The chruch world, the medical world, the philanthropic world have been trying for centuries to elevate mankind too generally by the superficial external methods, and yet we have scarcely emerged from barbarism. How much still remains of selfishness, grasping character, cruelty to both man and beast, worship of Mammon, by means of which the few, strong and greedy, are able to sit on thrones of power and privilege, while the millions, away from whom this power is drawn, are descending gradually and surely toward poverty and hence toward degradation. A great wave of social science is spreading over the nations and opening up a pathway which shall lead to greater light and liberty and culture and the use of the means which they earn, but let us also reach the diviner interior nature where dwells the more god-like power that shall yet exalt and redeem the whole world.

Mrs. Anna Cora Mowatt, the well-known actress, received great benefit from getting into the superior state. Her health was naturally

delicate, but when in the psychic state she would describe her condition and prescribe for herself far better than her physician was able to do, and increased her weight from 100 to 150 pounds. Epes Sargent, an American litterateur, speaks as follows of her while mesmerized: "In Mrs. Mowatt's case, the state was in every respect a superior one, intellectually, morally, and, I may add, physically, for her powers of enduring fatigue were greatly increased. Frequently with her husband we would cross the river to Hoboken, and pass hours in strolling through the beautiful grounds. She would be in the somnambulic state all the time, wearing a veil to conceal the peculiar expression of her eyes from passers-by. Her spirits were always exalted in this state, and she was 'ull of vivacity and glee. Awake, she would scream if a caterpillar got on her dress. Somnambulic, she would manifest the greatest tenderness for every living thing, taking up even a wounded snake from the road, and placing it where it would be safe from passing wheels." (*Scientific Basis of Spiritualism.*)

VII—CLAIRVOYANCE

1. **Clairvoyance** is the power of seeing through substances that are opaque to the ordinary vision.

2. **Its Explanation.** When we see through glass or crystal, we are able to do it because, 1st, the ordinary grade of light is able to polarize the atoms of that substance and go all the way through it, and 2ndly, because our eyes are in rapport with this light, and thus are able to perceive what it reveals to us. Advanced minds have affirmed that there must be more refined grades of light which could penetrate even opaque substances. The so-called science of the day declared that there was only one grade of light, just as many declared there was only one grade of electricity. Now it has been demonstrated to them by Roentgen, Edison and others that there is an X ray, and the fluoroscope enables them to see through human bodies or other substances. This X ray must include mainly the odyllic or fluorescent light. Thorough clairvoyance requires the finer psychic light, though the odyllic grade, which is one octave lower, is as high as many clairvoyants have attained to. But all vision requires an eye to do the seeing, and the psychic eye must be necessary to perceive the psychic light, hence the more interior psychic brain must be well charged with the psychic forces so that the objects of the coarser vision may not impede its view. The Seeress of Prevorst sometimes thought that she could see with the pit of the stomach, but that must have come from the great nervous activity of the solar plexus in that section, that could receive and convey

the images of outward objects to the psychic eye, which is a little farther inward than the visible eye.*

3. **The Opinions of Materialistic Scientists** have often been almost childish in their dogmatic and unreasoning character. Dr. Hammond says: "No one has ever read unknown writing through a closed envelope."

"We must not believe our senses in such a case," says Dr. Wm. B. Carpenter.

"It is capable of *absolute proof*," said Dr. Beard, "that no phenomena of this kind have ever appeared in the world, in any human creature, in trance or out of trance." But what is this absolute proof? The following foolish notion of his, founded on *deduction*, as he terms it," that no member of the human species can have any quality different in kind from those that belong to the race." In other words one person cannot be more highly evoluted than another in music, in color-vision or anything else. After awhile, however, this same Dr. Beard was overthrown by a refined lady, Mrs. Julia Carpenter, now of Boston, who persisted in reading clairvoyantly whatever he placed before her blinded eyes. Induction combined with deduction brought him back to common sense. He then told his experience to such prominent physicians as Dana and Morton, who applied the same term to him that he had so often applied to others, namely *delusion*. He took them to Mrs. Carpenter, however, and they too became astonished as they found out the absolute truth of clairvoyance.

4. **Rev. Mr. Townshend** gives an account of a Doctor of Antwerp who was cornered upon every possible way by a lady who saw and described the colors and forms and numbers of concealed objects. He had declared that if she could do these things he would believe. The doctor admitted that she was right, yet he went away saying: "Very curious, yet still I cannot believe." William Howitt, in speaking of this, says: "Nor could the doctor have believed had he received an amount of evidence as large as the Cathedral of Antwerp. How can a stone move? How can a petrified man believe? And the scientific are petrified as a class by the unspiritual principles of the last generation.... This education has sealed up their spiritual eye and left them only their physical one. They are as utterly disqualified for psychological research, as a blind man for physical research.'

*The reader may wonder how it is that psychic images may be carried through ordinary nerves, which deal with coarser animal ethers, but I have already explained that even psychic forces move more naturally and easily through nerve channels, although they are able to pass beyond all bodily channels. A psychic will have the whole system more or less charged with psychic force, but only the psychic eye can see clairvoyantly and the psychic ear hear clairaudiently.

5. **Henry Hall Sherwood** of New York, who published some remarkable works on the *Motive Power of the Human System* in 1841 and 1848, had a lady who had been blind from infancy, look clairvoyantly through the human system. Anatomists who heard her revelations with reference to every part of the system were astonished and often taught accuracy by her knowledge. This did not come from their knowledge impressed upon her sensorium, for she often differed from them and went beyond them. She saw great leading luminous points or poles of the brain and smaller poles for the minor organs: also five poles at the heart, centers of light at each ganglion and poles in all organs of the system. If a point of the body was touched or pinched she could see streams of light flashing up toward the brain. If she wished a greater luminosity of the interior organs, she would tell the doctor just where to place the ends of his fingers on her spine while she would place her fingers in front, thus proving the enkindling forces that flow from points.*

6 **Mrs. Anna Cora Mowatt.** Mr. Epes Sargent gives the following facts about this actress and estimable lady:

> I have letters written by her in utter darkness, and the chirography is a great improvement on that of her waking state. She would embroider and do all sorts of fancy-work in the dark. She would predict crises in her disease, and in one instance, I knew her to predict a severe hemorrhage of the lungs six months before it occurred, naming the very day and hour. *Scientific Basis of Spiritualism*, P. 224.

But a great number of somnambulists have been in the habit of getting up in profound darkness and writing, reading or composing without the least ray of ordinary light to help them. In fact ordinary light would usually disturb them. Sometimes a young mind would be worried at night as to how he would write a composition, but would wake up in the morning and find it completely done and lying on the table before him.

7. **Miss Molly J. Fancher** of Brooklyn, affords one of the most wonderful instances of constant clairvoyance, in the records of history. She was born in Attleborough, Mass. in 1848, and was educated at Brooklyn Heights Seminary, under the care of Mr. Chas. E. West. She fell from a horse and later, on leaving a horse-car, her dress caught and she was dragged for a block over the pavement. Her spine and head were badly injured and she went into convulsions. She was blind and at times devoid of most of her senses. When blind she would sometimes embroider with hands back of her neck and would distinguish colors with the greatest minuteness. For many years she did not eat a particle of food, as testified by the most reliable people, absorbing from the

*For fuller account of this remarkable woman, see "Principles of Light and Color," P. 498 onward. Another clairvoyant completely confirmed the account of the poles.

atmosphere all the elements her system required. Scientists and eminent persons have often investigated her case with astonishment. A brief description of her case is given by Mr. West as follows:

For many days together, she has been to all appearances dead. The slightest pulse could not be detected: there was no evidence of respiration. Her limbs were as cold as ice, and had there not been some warmth about her heart she would have been buried. When I first saw her she had but one sense – that of touch. By running her fingers over the printed page she could read with equal facility in light or darkness. The most delicate work is done by her in the night .....Her power of clairvoyance, or second sight is marvelously developed. Distance imposes no barriers. Without the slightest error she dictates the contents of sealed letters, which have never been in her hand. She discriminates in darkness the most delicate shades of color. She writes with extraordinary rapidity.

The following is from Henry M. Parkhurst, the astronomer, of Brooklyn, N. Y.:

From the west-basket of a New York gentleman acquaintance, he fished an unimportant business letter, without reading it, tore it into ribbons and tore the ribbons into squares. He shook the pieces well together, put them into an envelope, and sealed it. This he subsequently handed to Miss Fancher. The blind girl took the envelope in her hand, passed her hand over it several times, called for paper and pencil, and wrote the letter *verbatim*. The seal of the enevelope had not been broken. Mr. Parkhurst himself opened it, pasted the contents together, and compared the two. Miss Fancher's was a literal copy of the original.

8. The following was published by Thos. C. Hartshorn, in 1850, in his translation of the work of Deleuze. It shows that the clairvoyant was wholly uninfluenced by Dr. B., an eminent physician of Providence, Rhode Island, who hypnotized her and who gave the account. She first described the room and furniture and the patient who was a fourth of a mile away.

As I supposed him to be affected with a diseased liver, and with indigestion arising from a diseased state of the stomach, I asked her to look at the stomach to see if that was diseased. She answered, "No."

Is the liver diseased ? "No."

Well, examine the whole intestinal canal, and see if there is any disease there. "I do not see any," she said.

Examine the kidneys. "Nothing is the matter with them."

Not knowing what other part to call her attention to, I requested her to look at every part of him.

After some little time she said, "His spleen is swelled; it is enlarged."

His spleen, said I ; what do you mean ?

Said she, "The part *called* the spleen is enlarged."

How do you know it is enlarged ?

"It is a great deal larger than yours."

Do you see mine? "Yes."

How large is his spleen ?

"It is a great deal longer and thicker than your hand."

I then requested her to recollect all about this, saying I wished to talk with her about it when she awoke.

After she awoke, she was asked whether she remembered having examined the sick person. She remembered it.

What part did you tell me was diseased ?

"I believe I told you the spleen is enlarged."

How came you to call it the spleen ?

"I do not know."

Did you ever hear any description of the internal organs, or see any plates of them?

"No."

Seven days after this, the patient was taken more seriously ill and died on Saturday, the third day following.

On Monday a *Post mortem* examination took place; previous to which I invited all the physi ians whom I could find in the city.

Eighteen persons were present, of whom sixteen were physicians.

I then stated all the particulars of the examination by the somnambulic patient, and requested the physicians to examine the body, to see if they could discover the diseased spleen from external examination. They, with one voice, declared they could not.

I then opened the body, and, to the utter astonishment of the physicians present, found the spleen so enlarged as to weigh *fifty-seven ounces*. Its usual weight is from four to six ounces.

No other disease was perceptible, except a general inflammation, which, no doubt, came on about three days before his death.

9. **Dr. Pomeroy of New York,** examines clairvoyantly 15,000, patients a year. In all of these cases that I have learned about, he has had a triumphant success. Right in the midst of his usefulness, however, the despotic medical law of New York State interfered and a judge declared that he would fine and imprison him, if he should prescribe for a single other patient, without holding a diploma from a medical college. Thus a man who could see clearly had to spend some time under the tuition of those who could see but dimly. In the better future our medical colleges will be far more helpful than they are at present.

10. **Dr. R. C. Flower,** of Boston, whose power to diagnose past and present conditions of disease and to prognose its future, was so great as to bring him a thousand dollars a day for some time. His clairvoyant perception would, in many cases, enable him to heal in a few days, those who had suffered for years and spent a fortune in trying to get well.

11. But there are hundreds of others, who, by their psychometric or clairvoyant perception, are able to heal disease with great skill, and

should not be interfered with in their good work, by medical laws which, in all such cases, injure the people rather than protect them.

12. **Major Buckley**, according to Prof. Wm. B. Gregory. M. D., F.R.S.E., developed the power to read mottoes hidden away in nuts or boxes, in 89 persons without inducing the magnetic sleep, or in 148 persons including those who were mesmerized. In boxes, 36,000 words were read. In many cases the power to read clairvoyantly disappeared in about a month, where practice was not kept up, and needed a few passes to reinduce it.

HUMAN CULTURE AND CURE

PART FOURTH

THE NERVOUS SYSTEM

AND

INSANITY

PART FOURTH

The Nervous System and Insanity

1. THE PLAN OF THIS WORK

1. This will be to give a **General View of the Nervous System** including its most important points without considering many details given in larger works.

2. While giving, where it is necessary, the **Established Technicalities of the Science**, so far as its main features are concerned, I shall endeavor to simplify the matter, so that thoughtful minds shall not be discouraged in pursuing the subject. There are authors who are constantly using words that are not to be found in dictionaries which contained four thousand or more pages, and, of course, only a few professional people can understand them.*

3. **In Treating of Nervous Diseases**, I shall aim to give their general features and then to apply those refined agencies which will be more effective in their cure than the use of those ruder elements that are so commonly advocated. The knowledge of basic principles will assist our physiomental students in achieving great things in the relief of these terrible nervous maladies.‡

4. The Action of the Nervous and Mental System has received a considerable attention already in Part Third of this work and to some extent in Part First. For the greatest advantage these should be studied first.

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*The excellent work on anatomy of my friend, Dr. Geo Dutton of Chicago, gives the etymology of these technical terms as they occur in the text, and thus renders the matter more interesting as well as more intelligible.

‡**Physiomentalism** is a term which I have adopted for expressing the system of duality that embraces body and mind, matter and spirit. The word comes from the Greek *Phusis, nature,* and the Latin *mentis, of the mind.* On the one side is a system of **Nature**, including all natural forces of earth, water, food, exercise, air and light ; on the other, it includes the mental, the psychological and the spiritual. The term *metaphysical*, as meaning *beyond nature*, is evidently unphilosophical, as it is impossible to go beyond nature. *Divine Healing* is that which is found on the truth of things, not on spirit alone as some would have it. The Physiomentalist, building on the law of power which demands refined rather than crude forces, and considering that man himself is the most refined part of the universe, puts especial stress upon all fine elements, such as sunlight, magnetic massage, electricity, and the mental and psychic forces, at the same time that he attends to all physical conditions and the safe material appliances. He advocates food-medicines rather than any crude drugs, as it is important to use those elements that can readily be assimilated by the system as foods.

II. THE NERVOUS SYSTEM IN ITS GENERAL CHARACTER.

1. **Its Nature.** The Mental and Nervous apparatus, is the master principle of the human system. The muscles and the blood vessels are but servants, and lifeless at that, without the quickening forces that are sent through the nerves. The blood is a liquid, slow-moving and comparatively coarse, entirely necessary to animal life but belonging more to physical than to spiritual being. Psychic forces are exquisite ethers that move with lightning speed and approach more nearly to spirit. Ordinary nerve force is also an ether of coarser nature and slower movement, but most important to the muscles and blood vessels.

2. **Is Nerve Force a Fluid?** In calling it an ether, I have already called it a fluid. It should not be necessary for me to show what I have repeatedly shown already, namely, that all forces in the known or visible world are fluids, hence all invisible forces must be fluids as unity of law rules throughout the universe. Our medical scientists seem to be as slow in understanding *nervous circulation* as the contemporaries of Harvey were in understanding *vascular circulation*. By building on this law of nature, we shall see that we can explain various things that are inexplicable otherwise.

3. **Importance of the Master Principle.** So important is this grand power of the Nerves for regulating human systems that it has laid millions of telegraphic lines to muscles, blood vessels, and all functions of the body, in order that they may behave properly. Without their action, the body would simply be a worthless corpse.

4. **But Even Servants can Send a Reactionary Force against their Masters,** and the inferior parts of the system such as blood, muscles and

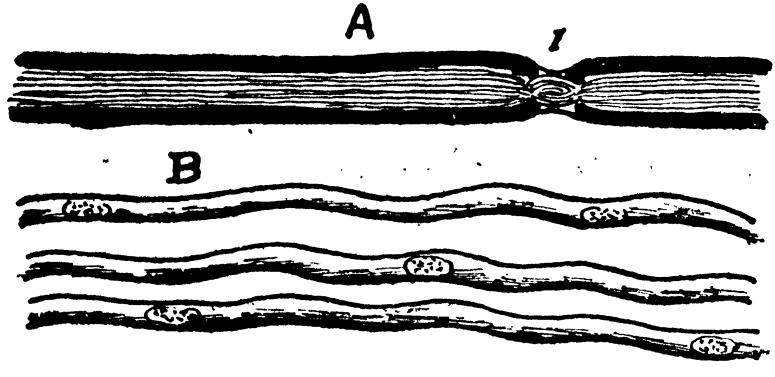

Fig. 112. A medullated nerve A, with one of its nodes of Ranvier at 1. This is one of the bundles of nerves, which forms a part of the great sciatic, magnified 400 diameters. The heavy border represents the medullary sheath. (Van Gehuchten.)

B consists of non-medullated nerve fibers from the sympathetic nerve system, the contents of which are composed exclusively of the axis cylinder. × 450 (Max Schultze.)

the other functions, may be so perverted as greatly to impede and almost destroy the harmony of the nervous forces themselves. Even mental action requires that a due amount of blood shall be sent to the cortex and other phrenal portions, so that the nerve growths and cells shall be properly watered. A clairvoyant discovered, on looking into the brain of an idiot, that the blood-vessels were almost entirely shut off. It is vastly important that we should have good blood if we are to have good nervous and mental action and that the lungs, heart, stomach, liver, kidneys and other organs should be in good working order, to that end. Not only does clairvoyance but medical science itself establish this fact.

5. **The Composition of the Nerves,** includes white or fibrous matter and gray or vesicular matter. They contain phosphorized fat, albumen and water. The white consists of a number of tubes each containing a central axis cylinder surrounded by the white substance of Schwann, which is also called the neurilemma or perineurium (around the nerve). The axis cylinder itself consists of a large number of primitive fibrillae and is the most important conducting pathway, while the neurilemma is the insulating sheath that prevents the escape of the nerve ethers, just as the sheath of an ocean cable prevents the escape of electricity. A bundle of these nerve fibers or tubes constitutes a nerve.

6. **Each Nerve Trunk,** has a variety of bundles of nerve fibers, each of which bundles has its special sheath or neurilemma. Some different forms of nerves are given in Fig. 112.

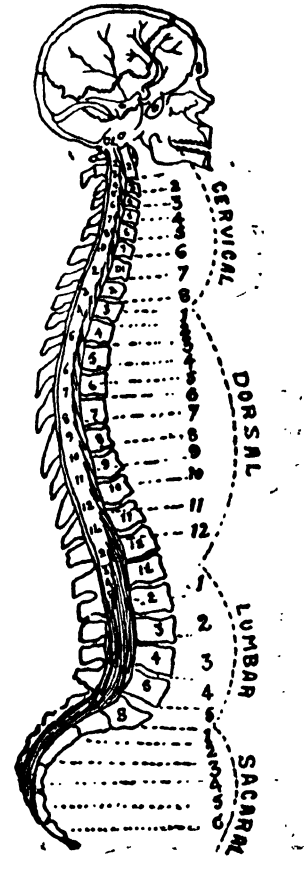

Fig. 113. The Spinal Cord with its 8 cervical pairs of nerves, its 12 dorsal, 5 lumbar, 5 sacral and 1 coccygeal (C). (After Gowers with some words added.)

III. THE CEREBRO-SPINAL SYSTEM.

1. There are **Two Great Systems of Nerves, the Cerebro-Spinal and the Sympathetic,** each of which is distinct from the other and yet so connected and correlated as to constitute positive and negative poles, as it were, of the same great unified system.

2. The **Spinal Cord** terminates at the lower part of the first lumbar vertebra, below which is a narrower cellular or gray extension, passing through what has been called the *cauda equina* (horse tail).

3. There are 31 **Pairs of Spinal Nerves, but** 33 **Vertebrae** which enclose and protect them; there being 7 cervical, 12 dorsal, 5 lumbar 5 sacral and 4 coccygeal. In mature life, the sacrum is joined into one bone and the coccyx into one. The spine thus forms the firm but yielding pillar, which sustains the human trunk.

4. The Cerebro-Spinal System includes the Spinal Cord and its Nerves, the Brain, including the cerebrum, crura cerebri (abbreviated in the singular into crus), and the ganglia in connection with them, pons varolii, cerebellum and medulla oblongata, sometimes called the medulla or the bulb, which last surmounts the spine.

5. A considerable has already been said in former parts of this work about the **Brain**, but something more must be given here.

6. **Three Membranes Surround the Brain, as well as the Spinal cord**, the dura matter (hard mother), a dense fibrous affair, lining the interior of the skull; the arachnoid (resembling a spider's web), a very thin, serious sac between the other two, and the pia mater (soft mother), a vascular membrane containing lymphatics, nerves, etc.

7. **The Realm of Reddish Gray Matter** in which are the *cells,* is wonderfully active and potent, forming a thin layer or cortex over the outside of the cerebrum and cerebellum, constitutes the center of all ganglia, the center of the spinal cord and medulla, preponderates in the two optic thalami, the corpora quadrigemina, corpora geniculata, etc. When kindled by the incoming tide of nerve forces, these cells flash up and radiate their ethers through all the surrounding motor nerves and thus conduce to the activity of the

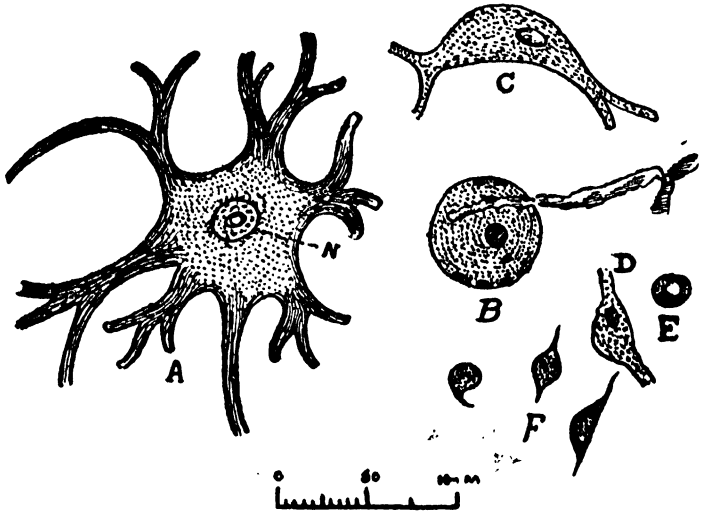

Fig 114. Human Nerve cells of different forms.

A, cell from ventral (anterior) horn of spinal cord; N, its nucleus and at the very center its nucleolus; B, cell from the spinal ganglion of dorsal root, with its nerve process; C, cell from the column of Clarke; D, solitary cell from the dorsal horn of the spinal cord; E, cross section of a large nerve fiber; F, granule cells from the cortex of the cerebellum. (Modified from Waller by Donaldson.)

whole system.* In fact, so active is every part of this gray matter in the cortex, spinal cord, ganglia or elsewhere, that it seems to have radiated its streams outward in a way to open up the nerve channels themselves. Fig. 114 will give some human nerve cells drawn to scale, × 200 diameters, and will show some of the minute nerves that are projected from it. The more electrical portion of the cell would naturally project the motor nerves. Electricity collects at points and the more oblong cells C, D, F would naturally radiate their forms most from their extremities.

8. **A Magnified Section of the Spinal Cord**, fig. 115, will show more of these nerve emanations, also the roots of the spinal nerves, (13) and

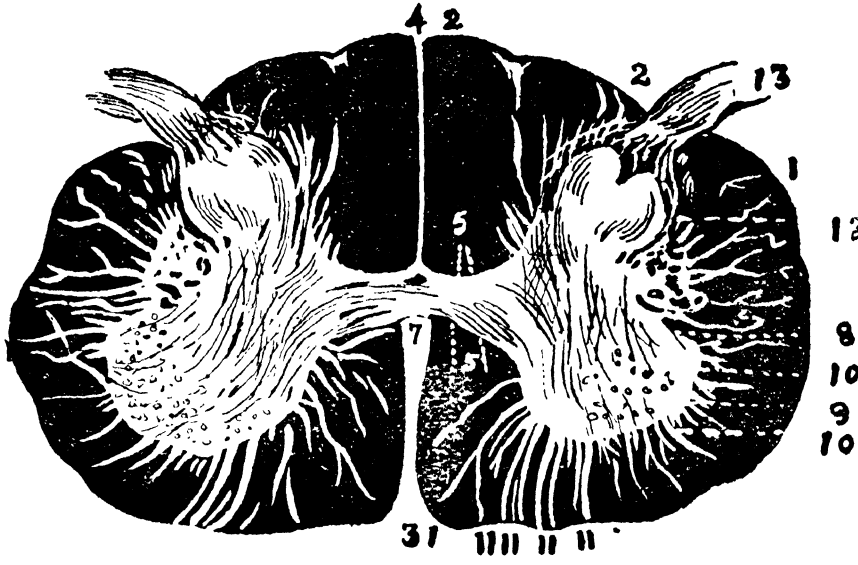

Fig. 115. A transverse section of the spinal cord at the level of the 5th cervical pair.

1, 1, Antero-lateral cord ; 2, 2, posterior cord ; 3, anterior median fissure ; 4, posterior median fissure, deep but narrow ; 5, white anterior commissure ; 6, gray posterior commissure ; 7, section of central canal ; 8, external part of the central gray column ; 9, anterior border of this column which, from its enlargement, has received the name of the anterior horn ; 10, 10, group of larger multipolar cells disseminated in this horn ; 11, 11, 11, 11, anterior roots of the spinal nerves, drawing their origin from these cells ; 12, posterior horn of the gray column, the enlargement of which forms the head, and the narrower part of the neck ; 13, posterior roots of the spinal nerves arising from the enlarged or gelatinous part of the posterior horn. (After Stilling).

* The following words of Sappey give some good ideas of the white and gray matter of the brain : "La substance grise joue le role actif ; la substance blanche remplit un role purement passif.....La substance grise preside aux sensations, a l'intelligence et a la volunte ; elle preside aussi a nos mouvements ; elle tient sous sa dependance les

the general form of the cervical section of the cord. The outer white portion of the cord which is more devoted to nerve fiber is put in black to show more distinctly the central gray portion, with its two horns, also its two commissures (connecting parts), the anterior one (5) being white and the posterior (6) being gray.

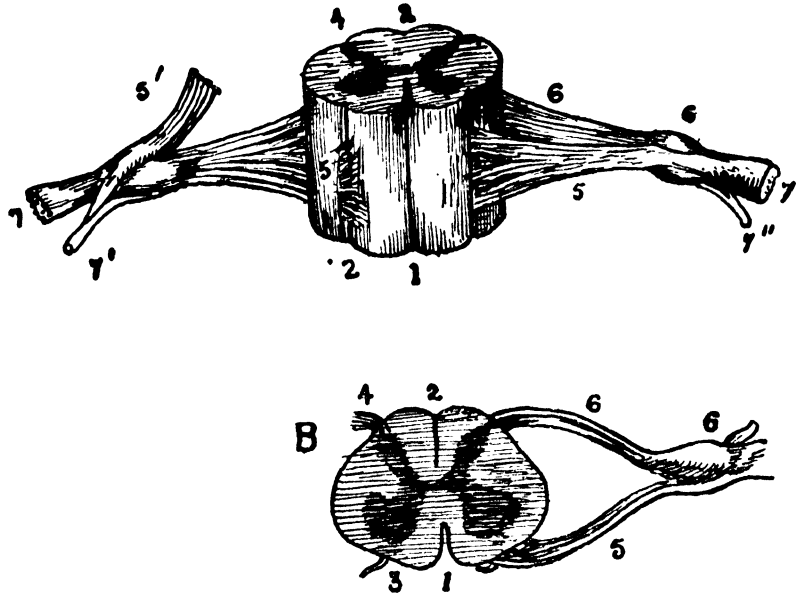

Fig. 116. Portions of the Spinal Cord, cervical region.

1, The anterior median fissure; 2, posterior median fissure; 3, anterior lateral depression over which the anterior nerve roots spread; 4, posterior lateral groove into which posterion roots sink; 5, anterior or motor nerve; 6, the posterior or sensory nerve with its ganglion 6; 7, the united or compound nerve; 7, the posterior primary branch, seen in A to be derived from both roots. (Allen Thompson.)

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principaux phenomenes de la circulation, de la calorification et de la nutrition. Toute atteinte portee a sa structure se traduit au dehors par quelque trouble de la pensee, du sentiment ou du mouvement, ou bien par quelque desordre dans l'une des grandes fonctions de la vie vegetative." *Traite d' Anatomie Descriptive.*

In fig. 116, both the motor and sensor branch of the spinal nerves are seen proceeding from the horns of the interior gray matter. Nature does things right in placing the sensor branch posteriorly, near the outside of the body, so that it may the sooner give the alarm in case harm is done there.

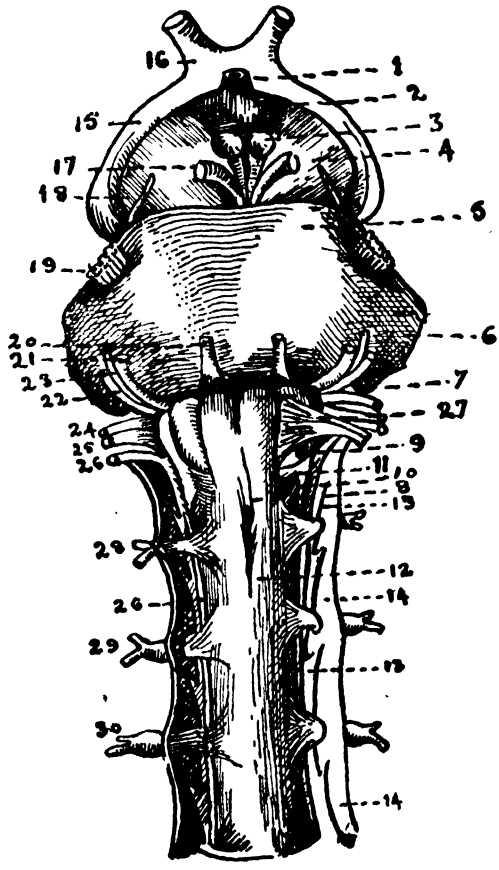


Fig. 117. Portion of the Spinal Column and its Phrenal connections

1, Pituary gland; 2, Cineritious body; 3, Mammillary tubercles; 4, Cerebral peduncle 5, pons Varolii; 6, Origin of the middle cerebellar peduncle; 7, superior extremity of the medulla and anterior pyramid; 8, Decussation of the pyramids; 9, The olivary bodies; 10, Tubercle of Rolando; 11, Arched fibers; 12, Superior extremity of spinal cord; 13, Dental ligament; 14, Spinal dura mater; 15, Facia of optic nerve; 16, Optic chiasm; 17, The common ocular motor nerve; 18, Pathetic nerve; 19, Trigeminal nerve; 20, External ocular motor nerve; 21, Facial or 7th nerve; 22, Auditory nerve; 23, Nerve of Wrisberg; 24, Glossopharyngeal nerve(9th cranial); 25, Pneumogastric nerve; 26,26, Spinal nerve; 27, Hypoglossal or 12th nerve; 28, 1st Cervical pair; 29, 2nd Cervical pair; 30, 3rd Cervical pair.

9. Fig. 117 will give some further perception of the medulla with its cranial nerves and contiguous portions above and below, including several spinal nerves as they pass through foramina (openings).

10. The **Medulla Oblongata** abounds in gray matter and is a great center of nerves, being wholly or in part the center of 8 cranial nerves from the 5th to the 12th inclusive. It is considered the center of respiration, phonation (voice forming), deglutition, mastication, and muscular expression. It is also a center for reaching the heart (cardiac), and by Carpenter and others is considered the leading center for influencing the muscles of the blood vessels (vaso-motor nerves), although they appear largely at the roots of the dorsal nerves. The importance then of kindling the medulla into brisk action for animating the blood vessels, by placing magnetic fingers on and slightly above the cervix, is quite evident. The *Anterior* and *Posterior Pyramids*, the *Olivary Body*, the *Lateral Tract* and the *Restiform Body*, all belong to the Medulla.

11. The Brachial Plexus which arises from the 5th, 6th, 7th and 8th cervical nerves and the 1st dorsal nerve, is well represented by fig. 118. It will be seen how the median and ulnar nerves flex the thumb and fingures. The musculo-spiral sends out branches which come to the back of the hand and act as extensors (extensor carpi, carpus, the wrist). The brachial plexus reaches fully the shoulder, axilla (arm-pit), arms, hands, and the anterior and posterior parts of the thorax, and when the nerves of these parts are inactive or paralyzed, the masseur should treat the cervix especially in its lower portion thoroughly; also make downward passes over the arms for motor paralysis, and for paralysis of the sensory nerves, which of course destroys sensation, make upward passes. The electrician, in affection of arms, should place the anode on lower cervix near shoulders for paralysis of the motor nerves and the cathode at the hands, but the poles should be reversed for paralysis of sensation.

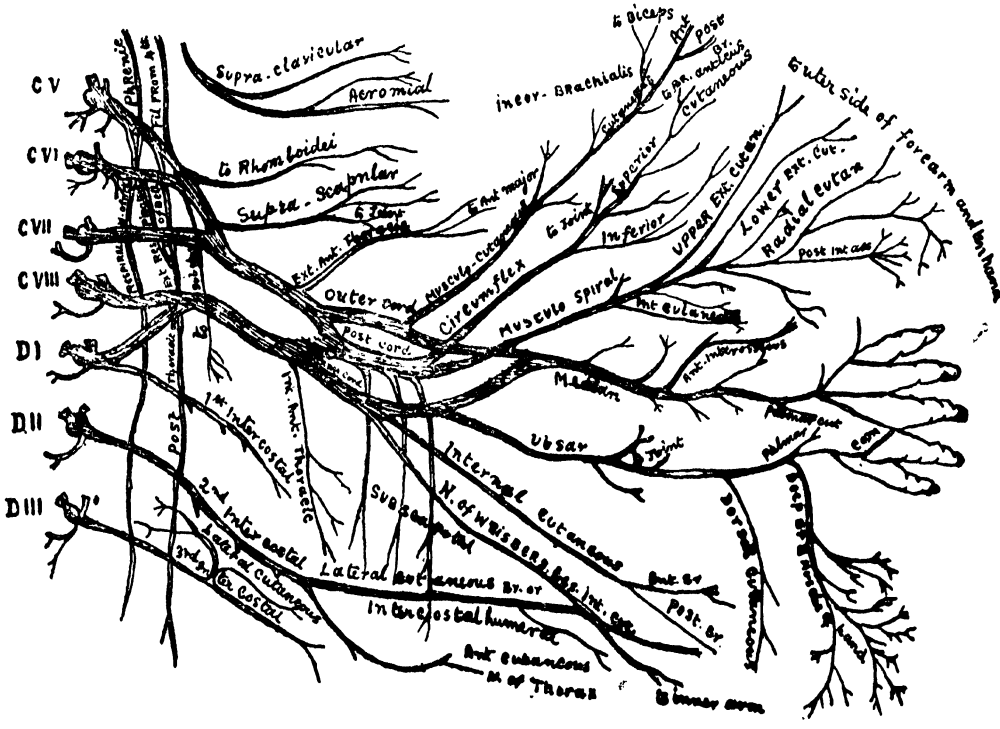


Fig. 118. The Brachial Plexus, which includes the last four Cervical nerves and the first Dorsal.

12. The **Lumbar Plexus**, located mainly in the small of the back, sends nerves not only more or less over the back, but down the legs and to the hypogastric and genital system (fig. 119).

13. The **Sacral Plexus** (fig. 119), sends its nerves to hips, legs sexual and pelvic system, etc. Its central power is in the great sciatic nerve, the largest nerve in the body, which may be called the *great hip nerve*. The great sciatic does not extend as far as the knees, branching off into the external and internal popliteal nerves which go on to the feet.

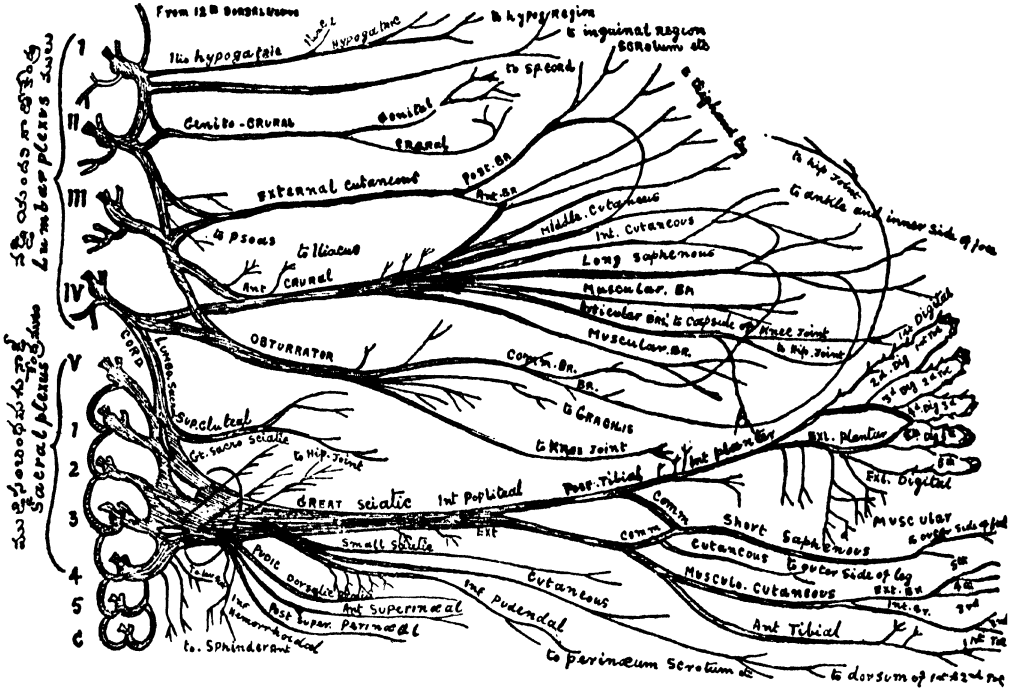


Fig. 119. The Lumbar and Sacral Plexes.

14. **Reflex Action.** This term so constantly used by medical scientists, seems to be incorrect, its use resulting from an imperfect knowledge of the chemistry of nervous action. A *reflex* or *reflected* action, is a turning back of the same force, whether going to or from a nervous center. * I have already shown that a nerve current moving to a nervous center is sensory and *thermal*, while one moving from a nervous center is a motor or *electrical* or contracting influence. What then is the rationale of the so-called *reflex* action? I will quote a passage from Dr. Herter, of the Presbyterian Hospital Dispensary, New

* By a ***nervous center*** is meant the gray matter of the cerebral cortex, or of the spine, or of that which forms the interior of a ganglion.

York, which is surprisingly near the truth for one who has not gone through the minor process of chemical action:

A reflex movement of the simplest kind may be imperfectly defined as one that results from the conversion or "reflection" of a sensory stimulus into a motor excitation. A sensory or afferent impulse is conveyed centrally by a sensory nerve to motor ganglion cells whence it is reflected outward along a motor nerve to a muscle or group of muscles. . . . The motor cell or group of cells whence the reflex is discharged, is known as "the reflex center." These are the same cells that act as transmitters of the voluntary impulses descending from the cortex. The motor fibers connecting the cortical ganglion-cells with the ganglion cells of the anterior horns, do more than conduct voluntary impulses, in that they exercise a restraining or inhibitory influence upon their reflex function. (*Diagnosis of Diseases of the Nervous system, p. 35*).

In this passage Dr. Herter puts the word *reflection* in quotation marks, as much as to say that it was not according to his idea to consider it a reflection. He is showing that this so-called reflex action may come back from the spine, or from the cortex of the brain, which is no doubt correct. Instead of calling it a *reflex* or *reflected* action, I would call it an **inverse** action.

Right here it may be well to consider just how a sensation is produced. We will say a very keen sensation is felt at the knee. How is this done? The cutaneous sensory nerves carry their thermal fluid to the ganglion of the posterior spinal nerve which immediately flashes up under the chemical stimulus of some motor nerve cell. This force connecting with the spine is radiated by means of the motor nerves in all directions, but those nerves which connect immediately with the point of excitement at the knee, would be especially active, as nature is ever aiming to establish circuits. But why is pain felt at that particular point? Because it is the end of the circuit, the point where something violent has taken place to upset the smooth flow of forces. But will the current to and from the spine alone cause this pain? Yes, to some extent, but that conscious sensation which discriminates as to the cause or nature of the pain must come from the frontal cortex of the brain as it receives the ethers which are radiated upon it from below, or as it perceives by means of the sight or hearing still more of the cause.

15. **Spinal Localization.** The following table shows the muscles reached by different spinal nerves, also inverse effects and location of sensations.

LOCALIZATION OF THE FUNCTIONS OF THE SEGMENTS OF THE SPINAL CORD. (Starr).

SEGMENT.	MUSCLES.	REFLEX. (INVERSE.)	SENSATION.
2nd and 3rd cervical	Sterno-mastoid, trapezius, scaleni and neck, diaphragm.	Hypochondrium (?); sudden inspiration produced by sudden pressure beneath the lower border of ribs.	Back of head to vertex ; neck.
4th cervical	Diaphragm, deltoid, biceps, coraco-brachialis, supinator longus, rhomboid, supra- and infra- spinatus.	Pupil, 4th to 7th cervical ; dilatation of the pupil produced by irritation of the neck.	Neck, upper shoulder, outer arm.
5th cervical	Deltoid, biceps, coraco-brachialis, brachialis anticus, supinator longus, supinator brevis, rhomboid, teres minor, pectoralis, serratus magnus.	Scapular, 5th cervical to 1st dorsal ; irritation of the skin over scapula produces contraction of the scapula muscles, supinator longus ; tapping its tendon in wrist produces flexion of forearm.	Back of shoulder and arm ; outer side of arm and forearm, front and back.
6th cervical	Biceps, brachialis anticus, pectoralis (clavicular part) serratus magnus, triceps, extensors of wrist and fingers, pronators.	Triceps, 5th to 6th cervical ; tapping elbow tendon produces extension of forearm; posterior wrist, 6th to 8th cervical; tapping tendon causes extension of hand.	Outer side of forearm, front and back ; outer half of hand.
7th cervical	Triceps (long head) extensors of wrist and fingers, pronators of wrist, flexors of wrist, subscapular, pectoralis (costal part). latissimus dorsi, teres major.	Anterior wrist, 7th to 8th cervical; tapping anterior tendons causes flexion of wrist ; palmar, 7th cervical to first dorsal ; striking palm causes closure of fingers.	Inner side of back of arm and forearm ; radial half of hand.
8th cervical	Flexors of wrist and fingers, intrinsic muscles of hand.	—— ——	Forearm and hand inner half.
1st dorsal	Extensors of thumb, intrinsic hand muscles, thenar and hypothenar eminences.	—— ——	Forearm inner half; ulnar distribution to hand.

SEGMENT.	MUSCLES.	REFLEX (INVERSE.)	SENSATION.
2nd to 12th dorsal	Muscles of back and abdomen, erectores spinae.	Epigastric 4th to 7th dorsal; tickling mammary region causes retraction of the epigastrium; abdominal, 7th to 11th dorsal; striking side of abdomen causes retraction of belly.	Skin of chest and abdomen in bands running around and downwards corresponding to spinal nerves; upper gluteal region.
1st lumbar	Ilia-psoas, sartorius muscles of abdomen.	Cremasteric, 1st to 3d lumbar; striking inner thigh causes retraction of scrotum.	Skin over groin and front of scrotum.
2d lumbar	Ilio-psoas, sartorius, flexors of knee (Remak), quadriceps, femoris.	Patella tendon; striking tendon causes extension of leg.	Outer side of thigh.
3d lumbar	Quadriceps, femoris, inner rotators of thigh, abductors of thigh.	—— ——	Front and inner side of thigh.
4th lumbar	Abductors of thigh, adductors of thigh, flexors of knee (Ferrier), tibialis anticus.	Gluteal, 4th and 5th lumbar; striking buttock causes dimpling in fold of buttock.	Inner side of thigh and leg to ankle; inner side of foot.
5th lumbar	Outward rotators of thigh, flexors of knee, (Ferrier), flexors of ankle, extensors of toes.	—— ——	Back of thigh, back of leg, and outer part of foot.
1st and 2d sacral	Flexors of ankle, long flexors of toes, peronei, intrinsic muscles of foot.	Plantar; tickling sole of foot causes flexion of toes and retraction of leg.	Back of thigh, leg, and foot, outer side.
3d to 5th sacral	Perineal muscles.	Foot Reflex, Achilles tendon; over extension of foot causes rapid flexion, ankle clonus, bladder and rectal centers.	Skin over scrotum, anus, perineum, genitals.

IV.-CEREBRO SPINAL SYSTEM CONTINUED-CRANIAL NERVES

1. There are **Twelve Pairs of Cranial Nerves**, (according to some, only nine), seven of which from the sixth to the twelfth inclusive, have their deep origin, wholly or in part from the floor of the forth ventricle.

2. The first is the **Olfactory or Nerve of Smell**, has roots from the anterior cerebral lobe, middle lobe, optic thalamus, corpus striatum, etc.

3. The second is the **Optic or Nerve of Sight**, arises from the optic commissure or chiasm (a cross like X), deeply from the optic thalamus corpora geniculata (jointed bodies), and corpora quadrigemina (four-twin bodies)—passes through the optic foramen to the retina. The nerves of each eye decussate at the chiasm.

4. The 3d is the **Motor Oculi or Motor Nerve of the Eye** rises from the crus cerebri (leg of the cerebrum), etc., moves the muscles that rotate the orbit (eye-ball) downward.

5. The 4th is **Patheticus**, another motor of the eye, reaches the superior oblique muscle.

6. The 5th is the **Trigeminus** (three twins), or **Tri-Facial**, a nerve of motion, sensation and taste, rises from various points, reaches all the teeth and is a prime factor in the pains of tic-douloureux or facial neuralgia. The sensory part of this nerve may be reached in front of the ear, at which place is located the gasserian ganglion where the three divisions originate. The three divisions are the ophthalmic, superior maxillary and inferior maxillary (maxilla, a jaw).

7. The 6th is the **Abducens** (leading from, or leading obliquely in this case), is another motor nerve of the eye-ball.

8. The 7th, or **Portio Dura** (hard portion), or **Facial Nerve**, is the most important nerve of *expression*, influences face, ears, temples, tongue and palate.

9. The 8th, or **Auditory or Portio Mollis** (soft portion), has branches to the vestibule and cochlea (snail shell).

10. The 9th, the **Glosso-Pharyngeal** (tongue-pharynx), nerve of sensation and taste.

11. The 10th, or **Pneumogastric** or **Vagus** (wandering **Nerve**), has a wonderful reach of influence on the external auditory apparatus, pharynx, larynx, trachea, bronchi, heart, lungs, oesophagus, stomach and intestines. If both of the vagi were severed, digestion would cease and a person would soon be smothered, as the glottis would become closed, etc. To reach this, place the fingers under the ears where pulsation is felt, as this nerve is close by the side of the carotid artery. It is a nerve of sensation and motion.

12. The 11th, or **Spinal Accessory** (to the vagus), gives motive power to the vagus, connects with several cervical nerves.

13. The 12th, or **Hypo-Glossal** (under tongue) **Nerve,** communicates with the vagus, sympathetic, 1st and 2nd cervical and gustatory nerves. It is a motor nerve, traverses the underside of the tongue, etc.

Several of these cranial nerves are shown in fig. 120 and fig. 117.

IVA. THE SYMPATHETIC NERVE SYSTEM

1. **The Sympathetic Nerve System,** sometimes called the *ganglionic system,* consists of two ganglionic chains, one on each side of the whole vertebral column (figs. 120 and 121). There are also 4 ganglia connected with the head (cephalic). There are 4 cephalic ganglia, 3 cervical, 12 dorsal, 4 lumbar, 5 sacral and 1 coccygeal.

2. Following mainly Gaskell's division, there are **Four Divisions of the Sympathetic System**: 1, the *lateral* or *vertebral ganglia,* including the two great chains; 2d, the *frontal* or *prevertebral* ganglia, such as the semilunar and others; 3d, ganglia situated in the organs and tissues themselves, called terminal ganglia; 4th, the ganglia of the *posterior roots of the spinal nerves.* Of course there are many who do not rank these spinal ganglia among the sympathetic forces.

3. **Communicating Branches** (*Rami Communicantes*) occur between the sympathetic and the spinal nerves, as a bond of union, a sympathetic ganglion sending out a reddish-gray sensory nerve to a spinal nerve, and the spinal nerve in many cases sending a bluish white motor nerve to the ganglion. The spinal nerves, however, do not reciprocate in all cases, the white rami not being seen above the second thoracic nerve root or below the second lumbar nerve root excepting in the second and third sacral nerves.

4. **A Great Number of Nerves** belong to the sympathetic system, including such leading plexuses as the Solar, Hypogastric and Cardiac and such secondary plexuses as the Aortic, Spermatic and Renal.

5. **The Peristaltic Movements** of the oesophagus, stomach and intestines, do not come directly through nerve-fibers of the spinal roots, but through the *rami viscerales* (visceral branches) of the vagus and accessory nerves.

6. The **Vaso-Motor Nerves,** though coming through the medulla and spine, pass through the rami as fine medullated fibers to the main sympathetic chain, become non-medullated and are distributed to their muscles.

7. **A Ganglion** consists of white matter on the outside enclosing graym atter on the inside, and may be considered a kind of a relay station, the ordinary nerves taking the place of telegraph wires. Every

ganglion is an enkindling center of force, able to form nerves of its own or to vitalize the nerves which pass through it. Kirke's Physiology defines it well thus: "The sympathetic ganglia all contain: (1) Nerve fibers traversing them; (2) nerve-fibers originating in them; (3) nerve or ganglion corpuscles giving origin to these fibers; and (4) other corpuscles that appear free," in other words, corpuscles that are not active enough to develop fibers of their own.

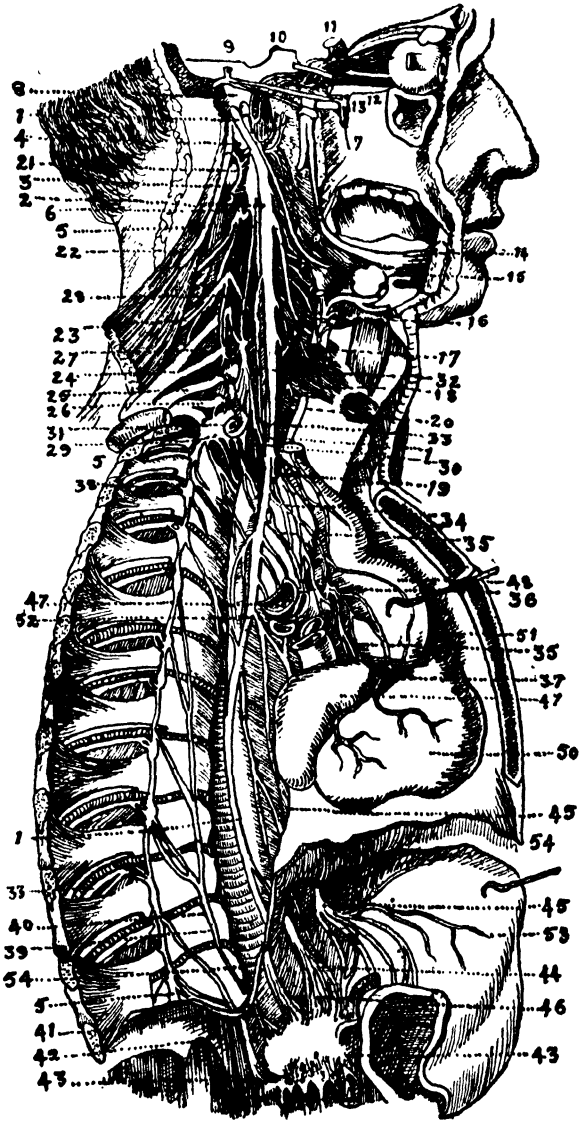


Fig. 120. Cervical and Thoracic Portions of the Sympathetic.

1, 1, 1, Right pneumogastric nerve (or vagus) with its connections, distribution and termination; 2, glosso-pharyngeal; 3, spinal nerve; 4, hypoglossal nerve, the trunk of which has been cut, so as to show the vagus and the superior cervical ganglion; 5, the

trunk or central part of the sympathetic; 6, superior cervical ganglion; 7, its carotid branch dividing into two secondary branches; 8, tympanic branch of the glosso-pharyngeal; 9, geniculated ganglion of the facial; 10 external motor ocular nerve; 11, ophthalmic ganglion; 12, the pheno-palatal ganglion, receiving in the rear the great superficial petrosal nerve; 13, the auricular ganglion; 14, lingual or gustatory nerve; 15, submaxillary ganglion; 16, plexus of the external carotid artery; 17, superior laryngeal nerve; 18, external laryngeal nerve; 19, origin of the inferior laryngeal nerve; 20, the same nerve passing under the inferior constrictor of the pharynx; 21, arcade formed by the anastomose of the first two cervical nerves; 22, anterior branch of the 3rd cervical nerve; 23, anterior branch of the 4th cervical nerve; 24, anterior branch of the 5th and 6th cervical nerves, communicating by a filament with the middle cervical ganglion; 25, anterior branch of the 7th cervical nerve; 26, anterior branch of the 8th cervical nerve and of the 1st dorsal; 27, middle cervical ganglion; 28, its superior branch; 29, inferior cervical ganglion; 30,31, branches which unite at the middle cervical ganglion; 32, superior cardiac (heart) nerve; 33, middle cardiac nerve; 34, inferior cardiac nerve; 35, 35, cardiac plexus; 36, ganglion of this plexus; 37, filaments which follow the tract of the right coronary artery; 38, 38, intercostal nerves each receiving two filaments of the thoracic ganglia of the sympathetic; 39, great splanchnic nerve; 40, ganglion sometimes observed on its tract; 41, its termination continuing from the semi-lunar ganglion, 42, little splanchnic; 43, 43, solar plexus; 44, termination of the left vagus; 45, termination of the right vagus; 46, terminal part of the left phrenic nerve; 47, section of the right bronchial tube to show the vagus; 48, the aorta drawn back to show the cardiac plexus, 49, the right auricle and vena cava superior; 50, right ventricle; 51, trunk of pulmonary artery; 52, right branch of same; 53, right half of stomach, cut and drawn back to show the solar plexus; 54, 54, section of diaphragm. (From Sappey after Hirschfeld.)

8. **The Cerebro-Spinal System** is greatly under the power of **Volition,** while the **Sympathetic System** is mainly under the power of the ordinary Chemical Affinities, although a strong will, especially in those who have reached a psychic development, may affect heart, lungs, stomach, intestines and pelvic region more or less aside from the cranial and spinal nerves. Psychaura is not entirely limited by nerve channels.

9. **The Ganglionic Circuit.** The chemistry of nature seems to delight in forming circuits. There is evidently a sweep of ethereal forces through both of the great vertebral lines of the sympathetic system, with connecting parts at their ends which bring about a circuit. To quote from Gray's anatomy: "These two gangliated cords lie parallel with one another as far as the sacrum, on which bone they converge, communicating together through a single ganglion (*ganglion impar*), placed in front of the coccyx. Some anatomists also state that the two cords are joined at their cephalic extremity, through a small ganglion (the ganglion of Ribes), situated upon the anterior communicating artery." Even if the two cords should not entirely connect, the law of induction acts best where the two poles are a little removed from each other. Thus we have a great animating current which passes through every ganglion and keeps it well kindled and full of life. In a horseshoe magnet, the armature will enable it to form those circuits which will

keep its forces active for years or even for ages. How important then to keep the channels of the system as pure as possible so that these life circuits shall not be impeded in their triumphant course.

10. **Spurzheim and a Nervous Fluid.** The great Spurzheim speaking of ganglia says: "The existence of a nervous fluid is not impossible, nay, as in all likelihood such a fluid does exist, the ganglions may probably aid in its secretion or evolution, and modify its circulation or distribution.

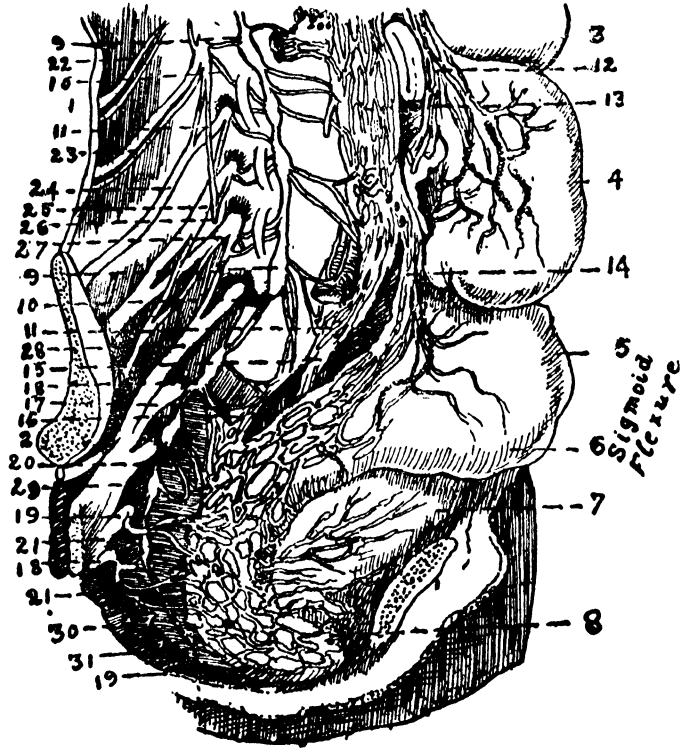


Fig. 121. the Principal Portion of the Abdominal Nerves.

1. The quadrate lumbar muscle; 2. vertical cut of the iliac bone and muscle: 3. lower part of stomach; 4, upper part of small intestine; 5, iliac of the colon—from 5 to 6 is the sigmoid flexure; 6, rectum; 7, bladder; 8, prostate, attached to bladder; 9, 9, lumbar portion of the sympathetic; 10, 10, branches by which it communicates with the lumbar nerves 11, 11, branches with which it combines in the formation of the lumbo-aortic plexus; 12 superior mesenteric plexus; 13, lumbo-aortic plexus; 14, inferior mesenteric plexus; 15, prolongation of the lumbo-aortic plexus, dividing into two parts; 16, 17, left and right parts of the prolongation; 18, 18, sacral portion of the sympathetic; 19, 19, hypogastric plexus; 20, branches by which the sympathetic contributes to the formation of this plexus; 21, 21, divisions which extend from the 3rd and 4th sacral nerves to the same plexus; 22, 12th dorsal nerve; 23, 1st lumbar nerve; 24th, 2nd lumbar

nerve; 25, 3rd lumbar nerve; 26, genito-cervical branch cut below its origin; 27, 4th lumbar nerve; 28, lumbo-sacral trunk; 29, sacral plexus; 30, 5th sacral nerve; 31, coccygeal nerve. (From Sappey.) In translating this from the French I see he has 31, 6th sacral nerve, but I presume he means what we call the coccygeal nerve, as we English speaking people have no 6th sacral nerve.

11. There are **Two Semilunar Ganglia**, one on each side of the spine. These are the largest ganglia of the body and constitute the fountain heads of the **Solar Plexus** out of which grow the plexuses of the epigastric and umbilical regions. A prominent feature of this plexus is to help the stomach and other organs of nutrition, aided by the pneumogastric, some branches of which are distributed to the stomach It lies mainly behind the stomach and pit of the stomach.

12. The **Hypogastric Plexus** supplies the pelvic viscera. It has no ganglia but gets its power from the aortic plexus above, as well as from the lumbar and two sacral nerves.

IV B. MISCELLANEOUS ITEMS.

1. The **Medulla Oblongata** is a wonderful little brain, a nerve-brain, so to speak, from which most of the cranial nerves issue, in part or in whole. It is a common unitizing bond of the whole nervous system. Its removal in animals prevents all correct respiration and proves fatal sooner than the removal of the cerebrum or cerebellum. Its greatest influence on the breathing apparatus must come through the vagus. A severe blow on that portion, just above the cervix, will sometimes destroy life in a moment, just as a severe below over the pit of the stomach, from influencing the solar plexus, will destroy life. Such facts and many others show that the nerve centers must not be trifled with.

2. **The Two Kinds of Nerves**, so far as the quality of the force is concerned, are the **Electrical** and the **Thermal**. Those which are electrical (contracting) are variously called motor, or efferent, or centrifugal; those which are thermal, are called sensor or sensory, afferent, or centripetal. Some physiologists consider the word *efferent* (bearing from) better than motor, because they say that some of the efferent nerves are motor, some nutritive or inhibitory, dilating in their nature, etc. This idea evidently comes from unacquaintance with the processes of force. Every efferent nerve performs iis function by developing motor and contracting motion at that. Thus nutrition is greatly enhanced and promoted by the nerves which contract and agitate the walls of the stomach. Inhibitory nerves may *inhibit* by contracting certain muscles which prevent a very free flow of fluids, and even dilation may be caused by a motor nerve, as for instance, the pupil of the eye may be

dilated by a contraction of the radial fibers of the iris. The word *motor*, then, seems very expressive as being that which produces motion as its leading function, while *sensory* is also expressive, from its power to produce sensation.

3. **Motor Nerves** deal with contracting forces and act upon muscles; we know that they are electrical and have the blue or sometimes the violet ethers as their proper elements. The chemical affinity of blue elements being those which are red, we can see why it is that the redness of muscles has a natural attraction for them, and why it is that volition in projecting these electrical forces, is greatly aided thereby. The knowledge of these principles of force makes the much-mooted question of *muscular contraction* one of the simplest of all things.

4. **A Nerve-Centre**, like a ganglion, for instance, radiates its streams of force in all directions, just as a flame radiates its streams of light outward. It is quite obvious how these outgoing streams in fetal life can polarize those lines of atoms and develop those channels which we call *nerves*. Electrical forces which are the polarizing principles, would naturally outline these channels, but the electrical cells of the nerve centre itself would tend to attract chemically those thermal elements which in some cases may gain a predominance and gradually form into sensory nerves, while those in which the efflux forces continue to rule are established as motor nerves.

V. DISEASES OF THE NERVOUS SYSTEM

1. I have already brought in some subtle methods of treating nervous diseases under the caption of Hypnotism, Statuvolism, etc., but I desire to give a brief general view of the subject. As our Physio-mental system deals so largely in the all-penetrating finer forces, it will not be necessary to give that world of detail with regard to each disease that is needed in the older system of cure. A whole series of nervous diseases, is reached by the same method, by these more searching processes, while by the use of drugs the nerves usually cannot be reached at all except in a roundabout and crude way.

2. I will quote the following table from the "Medical Diagnoses" of J. M. Da Costa, M. D., LL. D., adding at times a word of definition.

Cerebral.	Organic.	Hyperaemia (congestion.)
		Anaemia (paleness, white blood corpuscles).
		Meningitis (inflamed membranes of brain or spine)
		Hydrocephalus (dropsy of brain).
		Abscess (a sore with pus).
		Softening.
		Sclerosis (hardened portion).
		Hemorrhage (bleeding, Apoplexy).
		Thrombosis (clot formed on the spot).
		Embolism (clot formed from a distance.)
		Tumors, etc,
		Syphilitic affections.
	Functional.	Delirium.
		Insanity?
		Hypochondriasis (depression).
		Headache.
		Trance.

Cerebro Spinal.	Organic.	Cerebro-spinal meningitis.
		Cerebro-spinal sclerosis.
		Hydrophobia.
	Functional.	Epilepsy (a seizing upon).
		Catalepsy (loss of motion and consciousness).
		Ecstasy.
		Chorea (St. Vitus' dance).
		Hysteria ?
Spinal.	Organic.	Hyperaemia.
		Anaemia.
		Spinal meningitis (of spinal membranes).
		Myelitis (inflammation of spinal marrow).
		Softening.
		Atrophy (inaction, wasting).
		Sclerosis.
		Locomotor ataxia (irregular motion).
		Spinal apoplexy (spinal hemorrhage).
		Tumors, etc.,
		Syphilitic affections.
		Wasting palsy ?
	Functional.	Spinal irritation.
		Spinal exhaustion.
		Tremor.
		Paralysis agitans (shaking palsy).
		Tetanus (rigid spasm).
		Reflex spasms due to irritation of the cord.

3. The foregoing table is not considered by Dr. Da Costa as being perfect or complete. He has omitted paralysis and other diseases, but paralysis, though caused largely in the motor region of the cerebrum, is also caused by conditions of the spine or of the nerves themselves.

4. **Paralysis.** A pressure of the blood upon the motor region of the right brain will usually cause a left hemiplegia, that is paralysis of the left side of the body; while a clot on the left brain, will cause a right hemiplegia. Paraplegia, or paralysis of both sides, more commonly affects both legs and hips, and commonly comes from a lesion of both sides of the spinal column. Monoplegia is paralysis of a single extremity. Fig. 122 will give a clear idea of different kinds of paralysis, showing how most of the nerves from each hemisphere decussate at the medulla oblongata, etc.

Treatment. Electricity of the battery and static machine have cured some cases of paralysis, but the greater power to reach nerves must come from the more refined elements of sunlight, especially the yellow ray, or from vital magnetism or from hypnotic or other mental processes. The thermolume with yellow or amber glass over the occiput and cervix for hemiplegia, or over the lumbo sacral region for paraphelgia would be fine, and if followed by a truly magnetic massage with many down-strokes for motor paralysis and up-strokes for sensory paralysis, would be doubly good. Up-strokes on the spine near the brain are never allowable, and the hand should turn toward the shoulders as it progresses. For electricity, downward currents would be proper; e. g. the anode at the medulla and cathode at the feet for motor paralysis, and current in opposite direction for sensory paralysis.

It is exceedingly difficult to cure any well-established paralysis otherwise than by sunlight, magnetic massage, or some form of psychic force. Mrs. E. J. Smith of Washington, D. C., cured with her thermolume and magnetic massage, cases of rheumatic paralysis that were bent almost double. Dr. J. R. Newton by massage cured multitudes of cases, some of them in a few minutes. Mrs. James Sweeny of West Chester, Pa., who had not walked in nineteen years, was cured by him in thirty minutes. When her daughter saw her walking for the first time in her life, she fainted away. But there are perhaps hundreds of masseurs and masseuses who have cured paralysis. Sometimes, however, it may require weeks or months to do it. Hypnotic cures also have been made.

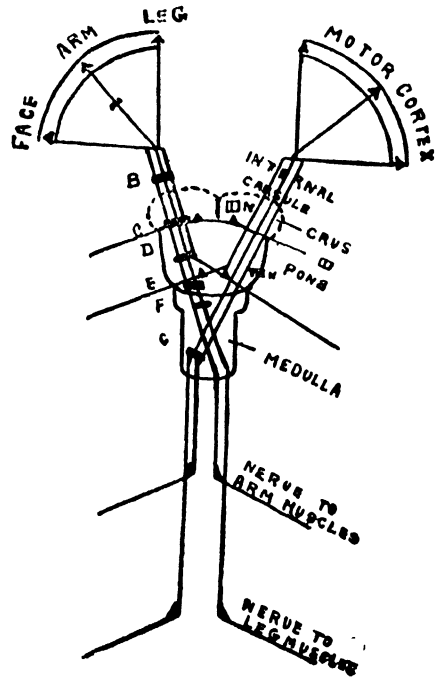


Fig. 122. Diagram showing the effect of lesion (injuries) at different levels of the motorpath. A small lesion at some point, A, between the cortex and the internal capsule, will cause a local paralysis - a lesion will cause a brachial monoplegia (paralysis of the arm); a lesion at B will produce hemiplegia on the side opposite the lesion; a lesion at C, would cause paralysis of the 3rd nerve on the same side and of the face, arm and leg on the opposite side; a lesion at D would cause hemiplegia on the opposite side, a lesion at E would cause paralysis of the face on the same side, of the arm and leg on the opposite side; a lesion at F, paralysis of arm and leg on the opposite side (and perhaps of the 12th nerve on the same side); a lesion at G, would cause paralysis of the same side. [From Christian A. Herter. M. D.]

5. **Cerebral Hyperaemia**, or better **Congestion of the Brain**, is often absurdly treated by our doctors by drugs. The flushed face, the pressure of blood upon the nerve fibers and cortex tends toward vertigo, delirium, and insanity, and should be drawn away as fast as possible by massaging lower occiput and cervix, by downward passes over the whole system, and especially over all extremities. Hot foot baths are very important and some mustard will make them still more effective. In a severe case, very hot water, say 105 to 115° F., should be poured over the occiput and cervix when the head is held forward over a bucket. This should be poured by dipperfuls until a whole pailful is exhausted, if necessary. This treatment often works like magic in **Sunstroke** and is the best for **Apoplexy**. A multitude of cases of sunstroke could be cured immediately thus,

and prevent a partial or complete insanity or even death. Several of these hot, pouring treatments are invaluable in paralysis caused by clots on the brain as they draw off the blood.

6. **Meningitis.** This is an inflammation usually, of the inner membrane of the brain (pia mater), especially near the basal region, and is a scrofulous symptom more common with children from two to ten years old, than with adults. It is attended with headache, darting pains, sometimes with vomiting, delirium, etc. The medical books say: "Treatment most unsatisfactory. No means of retarding the disease." With massage one need not be so helpless. Make passes along the lower brain down the arms or sides of the body, and massage all the extremities well. Give hot foot-baths and administer ambero for the bowels.

7. **Thrombosis of the Cerebrum** is the formation of a clot in the blood vessel itself and comes gradually, while **Embolism** is the more sudden closing of a vessel by particles from some other part of the system. Treated exactly as in other congestions of the brain, as also are **Abscesses** or other phrenal excitement, such as **Delirium**, etc.

8. **Chorea or St. Vitus's Dance,** affects chiefly children, especially girls when approaching puberty; may be caused by fright, worry, overstrain at school, heredity, etc. Like most other nervous diseases it comes from a low tone of the system, from too much indoor life, from a lack of pure air, sunlight and happy recreation. If the system was kept *cleared out* by an occasional solar sweat-bath, fed with easily digested nourishing foods and kept buoyant by these lovely forces of nature and mind, all of these abominable diseases could be avoided.

Magnetic massage of the whole system with plenty of transverse or downstrokes is admirable. The use of a sun garden—see p. 83 would prevent a whole brood of monstrous diseases, and letting children, habitually play naked together in a sunny room, would prevent the wasting disease called **Marasmus**, and many other stupid conditions of the system.

9. **Paralysis Agitans** is a disease of the elderly, and of men more than women. It frequently commences with tremors of one hand or leg, and gradually spreads over the whole body except the head. The regulars say that all remedies are useless, but a good magnetist will often master it, especially if a proper amount of time is taken. Both the nervous and muscular system should be built up.

10. The **Tremor** which elderly persons manifest, affects the head more than elsewhere and is due to a weakening of nerves and muscles. A magnetist should hold the hand over the medulla and cervix for some

time and treat the general system, sometimes with down strokes to help the motor system and sometimes with transverse, especially transverse converse strokes, to animate the muscles.

11. **Spasms** are generally caused by the upward movement of the motor ethers, or at times in a smaller way, by cold applications. This upward movement of the motor nerve force, may be attracted by some inflamed center of the brain or spine, as electrical forces are naturally attracted by heat. Of course, the great offsetting power would be downward passes, or downward currents of electricity, caused by placing the anode above and the cathode below at the feet, or by putting the patient in a bath as hot as can be borne. The thermolume with both sunlight and steam would be unequalled. By **Convulsions** we mean a more general attack of the system than by a mere spasm.

12. **Writer's Cramp** is caused in part or wholly by using metal penholders, as these conduct away the electricities of the median flexor nerves. Use gutta-percha penholders — have downward passes made over the hand.

13. **Epilepsy**,—brain becomes congested, subject becomes unconscious, falls and is convulsed. Caused sometimes by great fright or emotional excitement, heredity, syphilis, injury to brain, otitis, etc. 'Epilepsy," says Dr. Da Costa, is either central or peripheral: that is, the exciting cause is seated in the nervous centers, especially in the brain or medulla; or affects the centripetal nerves and is by them reflected to the nervous centers." This goes to prove what I have before said, that spasms or convulsions are caused by an inversion of the direction of the motor nerve forces, which inversion is caused by some center of inflammation or heat above them, especially in the brain. Treat as for spasms. When it is approaching it sometimes gives warning, in which case the bowels should be shaken, the limbs briskly slapped or if convenient a hot bath should be taken over the whole body up to the neck. The one case of thermolume treatment combined with massage, which is now at hand, was so successful that it may yet prove to be a great boon to the sufferers with this terrible disease. It was reported by Dr. S. Rohwer, who says: "A lady who had epileptic fits, often four or five at a time, took but two baths in the thermolume and it has now been over twenty-five days since she had the last fit." I have received no further report of her case and so cannot tell whether there was ever any recurrence of the fits.

14. **Facial Neuralgia.** Neuralgia very generally results from a negative, anaemic condition of the body and from nerves which are deficient in their ethereal flow. When the currents of the nerves are feeble they become clogged for the moment and then, bursting through

the obstruction, cause that darting, lancinating pain which is the most distressing feature of neuralgia. A full tide of nerve force, like a full tide of blood in the vascular system, will sweep away the obstructions and move along harmoniously. For this reason, when the system is charged with such fine elements as the sunlight or vital magnetism, they enter in part into the nerves themselves and give great relief. The *trifacial* (5th) *nerve* develops into three branches, the *Ophthalmic*, which goes to the forehead, eyes and nose, the *Superior Maxillary* which goes to the temple, cheek, lower eyelid, nose, lip, upper teeth, etc., and the *Inferior Maxillary* which goes to the lower teeth, ear, cheek, tongue, etc. The two upper divisions are more concerned in the excruciating class of pains, and diseased gums and contiguous bones add to the trouble. These branches concentrate at the Gasserian ganglion in front of the ear, and if the masseur will dip his fingers into cold water and especially into ceruleo, and hold the right hand on the right side there, and the left on the left side, it will, in many cases, give entire relief. Then movements down the neck, cheeks, and arms, and over the medulla, will often work like magic. But to effect a thorough cure, the whole body should be treated and when possible should have a short series of solar sweat baths in the thermolume. Psycho-volition, or the will-power, used while in a psychic condition, will have a wonderful control of all nervous conditions.

15. **Sciatica** or *neuralgia of the sciatic nerve* extends from spine over the hips and sometimes down the popliteal nerve to the feet. The greatest pain is on the lateral surfaces of the thigh. Malaria, gout, rheumatism, sexual exhaustion, syphilis are the most common causes. Make transverse-converse movements over the sacral plexus, that is place the hands side by side and move one hand in one direction, the contiguous hand in the other direction, for awhile; then make passes over the hips and down to the feet, varying them sometimes with transverse-converse passes all the way down. This distressing disease can generally be rapidly and delightfully cured in this way, and thus escape the whole list of poisons such as strychnine, atropine, arsenic, morphia, chloroform injections, etc. In the case of syphilitic or scrofulous taint, the thermolume will be remarkably helpful. If nothing better can be had, a hot hip bath would give relief.

16. **Myelitis** is inflammation of the spinal cord, while **Spinal Meningitis** is inflammation of the membranes of the spinal cord. Both are distressing and have a tendency to induce paralysis of legs and other organs below the inflamed part. The most effective means of cure would be the thermolume with green glass over lumbo-sacral region and blue glass above, and of course with the back to the light. When

the massage is given it would hardly be safe to move the hands that are very warm directly over the spine, but rather outward over the spinal nerves and especially from the hips down to the feet, many times, or from the shoulders down the arms, if the irritation reaches the head.

17. **Trance** is set down by Dr. Da Costa as one of the cerebral diseases. The ignorance of medical men on this subject is almost criminal and has caused them to administer gross poisons, or even to send rational and noble-souled people to lunatic asylums. Trance is hypnosis induced by invisible human beings, just as ordinary hypnosis is induced by visible. The damage caused by it, if any, usually comes from the ignorance and false alarm of friends. At any rate the advantages that accrue from it immensely outweigh the drawbacks. Some of the most fearful nervous conditions and other diseases have been cured by means of trance, and many marvelous revelations have been made. A clergyman gives an account of Mr. Edison struggling in vain to solve the problem of a great invention, when all at once he was thrown into a trance which cleared up the whole matter. A well-known New York editor when with me in my office declared that he did not think any mortal man was able to explain the earth's magnetic poles and other mysteries of the kind. Said I, if you will allow yourself to be put into a trance, the whole matter will be explained within five minutes. Almost immediately he became entranced and went on fluently to explain it. The hints then given enabled me to give a still fuller explanation of these magnetic phenomena, in the "Principles of Light and Color." Trance is so deep and death-like in some cases that the ordinary physician is unable to detect any signs of life. In doubtful cases a psychic should be employed. Physicians in Erie, Pennsylvania, pronounced a person dead, whom the psychic Mrs. Twing declared was only in a trance. They laughed her to scorn, to think that she, an unlearned woman, as they thought, should presume to dispute their word, but she triumphed, as the person soon revived under her influence. John Cronham, of 23 Catherine St., New York, was pronounced dead by five regular physicians. Solomon Jewett, an inspirational man, treated his whole system magnetically, blew into his mouth three times, and in forty minutes the subject, with his wife, was riding from the hotel to his home. This occurred on march 16, 1869.

18. **Neurasthenia, or Nervous Exhaustion,** is a condition in which the nervous ethers have been exhausted or perverted by overwork or worry, or in many cases by the use of tobacco or alcohol or by dissipation, sexual excesses, etc. In women it often comes from too much indoor life, or from cares, petty annoyances, inability to retain their

nervaura, as it escapes too easily from all extremities. Such ones should not sleep with others or be too near them when they find their forces are being depleted thereby. Transverse manipulations over the whole body are excellent for preventing the escape of the forces that move longitudinally and flow off at feet or hands.

This condition is the most marked in what are called the neurotic, or rather the mental temperament. It often leads to depression, inability to think connectedly and sometimes to hyperaesthesia (over-susceptibility). Rest, diversion, letting up on business, nutriticus but not rich diet, all the sleep possible, massage and solar sweat baths, are all highly useful and will effect a rapid improvement. The sufferer should remember the mighty power of mind, the deific elements that dwell within him, and straightening himself up, should determine to triumph over fleshly ills. Auto-hypnosis should be aimed at.

19. **Insomnia** and **General Nervousness.** Sleeplessness is from much the same cause as neurasthenia and leads to a fearful nervousness or insanity if long continued. A gentleman went all the way to Europe to consult an eminent medical authority as to his insomnia. "Do you read much nights before retiring?" was the principal inquiry. "Yes" was the reply. "Well, omit all reading and you will soon be able to sleep" He did so and was cured It is not a shame that our doctors were not practical enough to give this simple direction? To read and especially to write and do hard thinking, is to draw the blood to the front brain and thus to render sleep the more difficult to all persons whose mental temperament is largely predominant. This might be allowable, if a brisk walk or run were to be practised before retiring. Two or three swallows of cerulean would conduce to sleep. When the blood and mental ethers are drawn away from the front brain, sleep ensues and does its beautiful work of stocking up the brain cells of the frontal cortex. The laborer uses his muscles so much as to draw the blood to all parts of the body and so is a good sleeper. In fact most laborers use their brains too little. If they would think more and study more, it would kindle up their finer forces, render them more happy and skillful, and lengthen their lives. A marvelous case of the cure of insomnia, which I have given in the "Principles of Light and Color," p. 351, is that of a lady whose nervous system had been fearfully shocked by the terrible death of her brother. Night and day she could get no sleep, had a most distressing neuralgic headache, and had to be kept in a dark room. When almost on the point of insanity, her husband bandaged her eyes, took her into the sunlight and focused a blue lens over her forehead. *In five to ten seconds,*" he says, *she actually fell asleep under it while sitting up!*

The agonizing headache was gone, and under the heavenly relief of the reaction, her brain and nerves sank to sweet repose. The headache was cured. After walking she described her sensation as having been that of a cool stream that entered her burning head and passed through, sweeping away all the pain." The lens transmitted a certain amount of the violet as well as the blue rays.

In all very bright and sunny countries, the luminous yellow and orange rays are predominant, and must tend not only to kindle mental activity, but in weak systems, a certain amount of nervous excitability. But this is easily remedied by a knowledge of Chromopathy. In bedrooms or living rooms which nervous children or adults occupy, a sheet of mazarine blue glass at least a quarter of the size of the window should be hung. To determine which is mazarine, place a lighted match or lamp behind it and it will have a violet appearance. This mazarine glass will transmit a large amount of violet, which is the nervine color, as well as blue rays, and a sufficient amount of the red to prevent too great coolness. This glass will send a soothing influence all through a room. It will be remembered how Dr. Ponza at the lunatic asylum at Alessandro, Italy, sometimes cured patients who were wildly excitable by placing them for a few hours, or a day and night, in a blue or violet colored room, with glass of the same kind. See "Principles of Light and Color," p. 305. When convenient, a carpet or wall paper with a bluish or lilac ground, or wearing a bluish undervest would add to the curative effect.

Mental Forces are a great factor in controlling the nervous system and many persons are able to hold their thoughts under control so that sleep may take place. The examples I have already given show the wonderful power of the psychic forces, as in hypnosis and autohypnosis, to revolutionize the nervous system. Narcotics should be avoided as the very gateway to Hades. All hateful qualities such as hatred, jealousy, fear, gloomy forebodings and all manifestations of selfishness will poison the system and should be battled against every day. Happy recreation, like dancing with congenial friends, is one of the most sacred of all things, as the interchange of magnetisms between the sexes and the merry exercise will kindle the system into new life and cheer. But all excesses and late hours should be avoided. Asceticism is profane, as it freezes up and perverts the vital forces and lessens one's usefulness.

20. **Aphasia** *is a loss of the faculty of putting thoughts into words* or a deficiency of the organ of language. Old age is apt to increase this trouble and cause an amnesia (forgetfulness) of names. Aphasia is not loss of voice as some suppose. To kindle up the organ of language,

magnetic hands should be placed on the left temporal region, not too far from the eyes, and a person of fluent speech is better, other things being equal, than a person of imperfect speech. Treat also the medulla.

21. **Aphonia, or loss of Voice,** may come from laryngitis, or from obstruction of nerves of the vocal organs. Hold hands over the throat and medulla and animate the general system.

22. **Trismus or Lock-Jaw,** is the leading and most difficult phase of **Tetanus.** Under the ordinary treatment it is apt to be fatal, but under a proper treatment it can generally be cured. The lower jaw becomes set, swallowing is difficult, the muscles of the neck and abdomen, etc., become stiff, spasms of the diaphragm cause great pain in the pit of the stomach and sometimes the back is drawn up into a hollow (opisthotonus). Common sense should show at once that all cramping or spasmodic movements are caused by the cold or electrical principle and that heat is the true off-setting power. Put the whole body in a bath up to the mouth as nearly as possible, with cervix and part of the occiput in the water. Have the water at 100° F. to begin with and add gradually more heat. If any tendency to faint is noticed, a cold wet cloth should cover forehead and temples. The bath may be continued half an hour. After coming out and being wiped dry, and placed between warm blankets, downward passes should be made over the jaws and shoulders and arms, and of course over medulla, cervix, back and legs. Instead of this bath, a powerful solar sweat bath in the thermolume, with plenty of steam heat as well as the solar rays, would be admirable when convenient, followed by massage. The sweating would tend to loosen the tense cords. Wonderful cures of lock-jaw have been made by above methods. A wound in the central part of the foot, especially where the pole is, may send a current to the brain in a way to influence the lower jaw and cause lock-jaw.

23. **Hydrophobia.** This fearful disease can, without doubt, be cured in a much better way than that which involves such terrible cruelty to animals as the method adopted by Pasteur. Pasteur, it is said, takes some of the hydrophobic poison that inheres in the flesh of a mad dog, gives it to a rabbit. After this rabbit dies with hydrophobia, he passes some of its flesh to another rabbit and so on until a whole series of rabbits have thus experienced this dreadful agony. Some elements of the last rabbit are hypodermically injected into a hydrophobic human subject as a cure. Pasteur did not understand the philosophy of this process, but by a curious inspiration did that which

answers to the system of trituration in homeopathy. I have shown elsewhere that trituration is a process of chemical affinity which attracts the contrasting elements more and more, the farther it proceeds. Every animal through which the poison works, answers to a special trituration, as the processes of life are carried on through chemical action, until the last one gives a style of contrasting power which is presumed to balance and cure hydrophobia itself. That a large number of cases have been cured in this way is evident from the facts. But what the Homeopaths call *Hydrophobin* has some special advantages over Pasteur's method; first, it avoids the abominable cruelty to animals, and secondly, the trituration being so much simpler than destroying a series of rabbits, may be carried to a much higher attenuation and thus be more thoroughly contrasting and curative.

But to make the cure of this terrible disease doubly sure, I would adopt still another process. The French physician Buisson, gave an account, before the Academy of Arts and Sciences of Paris, of the cure of more than eighty cases of persons who had been bitten by rabid dogs. He washed the wound in liquid ammonia at first, gave a fresh poultice of linseed meal every three hours and gave them seven steam baths in seven days. Several cases have been cured by steam baths in this country, one case in New Jersey having been cured after the spasms had commenced by giving two or three baths a day at first.

My idea would be to use a mad stone, if one could be found immediately, as it has a great affinity for the poison; otherwise to bind fresh mud or wet gravel over the wound every two or three hours, and give two powerful sweat-baths a day. The solar sweat-bath would be doubly good, as the sun would tend to destroy the virus itself, and to keep up the strength.

24. **Hysteria** is an excitable, nervous condition, sometimes rigidly spasmodic, or attended with spells of depression and tears or sometimes with sudden laughing, etc. The Greek *hustera* from which the word comes, means *womb*, but it is by no means always a female disease, as Charcot and others have shown. It often occurs at menstruation or at the menopause, or may be induced by a fright, or over-weariness, etc. Soothing massage with plenty of down strokes over legs, feet and arms circular movements over the lumbar region and warming passes over the hips are important. Hold the hands for sometime over the medulla and below. If a battery should be used, place the anode over the lumbar plexus and cathode at the feet. If a thermolume should be used, place blue or green glass over the lumbar plexus.

VI.—INSANITY.

1. **General Divisions.** There are various kinds of Insanity or mental perversion, such as Hallucinations, Delusions, Melancholia, Mania, Hypochondria, Senile Dementia, Insanity from Hysteria, Epilepsy, Alcohol, Sexual Abuse, Obsession, Softening of the Brain, etc. It has been said that every one has some little phases of insanity, to prevent which, every part of the brain and physical system should be developed, as insanity generally comes from disease and one-si dedness of development. I have already spoken of the cure of insanity by hypnotism and would simply say here that most cases of insanity require very fine forces such as those of vital magnetism, sunlight, or some phase of psychic force. The struggle against poverty which becomes more agonizing and destructive of intellectual and moral harmony as money and property get more and more into the hands of the few and of course, away from the many, is a fruitful cause of insanity and suicide. Those who feel some mental imperfection or gloom stealing over them, should not only attend to all external conditions but should will mightily against it, take some diversion, cultivate cheer, realize what a God-power they possess within themselves, and feel that around and above them is a diviner influence, that sooner or later shall bring harmony and triumph out of all discords.

2. **Melancholia.** In this depressed condition which is apt to come from deficient nerve force, or anaemia, it would have a marvelous effect to let the patient have red and yellow glass over the whole window of his room, as has already been tested. Of course, all local conditions must be attended to. See the above hints.

3. **Hypochondria**, comes from dormant condition of liver and other hypochondriacal organs, imperfect digestion, constipation, sluggish blood, depressed nerves, etc. The hypochondriac imagines all kinds of fearful conditions, while imaginations, of course, make the case far worse. One man in Baltimore declared that he was already dead, having diseased at one o'clock in the morning. When the doctor, however, began to sharpen his knife and said he must cut down into the liver and see what had been the matter, he would not agree to it, thus showing that he was not sincere. Remedies, the solar sweat-bath, massage, ambero, exercise, yellow and red panes for the window, etc. See "Principles of Light and Color." p. 306.

4. **Mania** is the opposite of melancholia and needs blue and green glass in the windows. See "Principles," p. 306, in which are shown the wonderful effects of blue and violet glass in the windows, with blue carpet, etc.

5. **Hallucinations** may come now from an inflamed condition of the brain or from the psychological influence of some strong-willed person, or from auto-hypnosis. In some cases, these impressions will be so strongly marked on the sensorium that only a hypnotist, or at least a strongly magnetic person, can remove them It is probable that the snakes and other horrible forms seen in *delirium tremens* (*mania a potu*), are magnified forms of the microbes which are developed by the impure condition of the blood. Forms may be reproduced from the sensorium, or forms from the invisible world may appear and alarm those who are superstitious. Most physicians will pronounce these forms hallucinations, but the physician himself is the one who is hallucinated. If the fluids of the brain are not in a healthy condition, these forms may change and become perverted like images seen through knotted glass.

6. **Delusions** are apt to be more permanent perversions than hallucinations. Superstition is generally the result of ignorance, but some tolerably intelligent persons will not sit down to a table where thirteen persons are, others will not begin a journey or new enterprize on Friday, and various other kinds of nonsense are believed in, including the horseshoe folly, etc. One of the most baneful delusions is the shadow of old theology, which though vanishing, is even yet a clouding influence that brings more or less insanity to certain minds. This superstition regards God as not a being of love, not a father, but as a gigantic despot who has filled the world with devils and temptations, and then if by any chance, these poor human children have slipped, or come short of some arbitrary standard, they will be sent into everlasting punishment. Such a nightmare of fear is thus established, that the blood, the bilious system, the nervous system, and perhaps the digestive organs, become poisoned and the sweetness of life destroyed. Some years ago the statistics of lunatic asylums showed that next to masturbation, religious excitement, so called, was responsible for the greatest number of their subjects. True religion, however, saves one in both this world and the next, enkindling the spiritual and the psychic nature, giving the loftiest of all earthly joys, and under the rule of science, harmonizing physical conditions.

7. **Obsession.** Our medical scientists, who may be highly sensible and clear-headed in other respects, are usually entirely ignorant on this subject, although they feel sure that they are right and that others are wrong. As I have already shown, people may by self-psychology bring themselves to believe that they are haunted by all kinds of influences, earthly and spiritual, when their condition is entirely, or at least mostly

subjective. But when a pure-minded, refined girl, suddenly indulges in the most obscene motions and expressions, combined perhaps with oaths, it is reasonable to conclude that an undeveloped influence from the invisible life is present. In such cases, which are very rare, a psychic, or at least a good magnetist will be needed. In Michigan a lovely girl was brought almost to the grave, when a psychic in the vicinity discovered the whole cause, formed a circle around the girl and saved her life by dislodging her tormentor. Dr. Wilbur, of Chicago, once had a case in Ann Arbor, Mich., which was given up as hopeless. He being a clairvoyant saw a degraded influence, that, strange to say, had come with her own imperfect parents who were visiting her from a distance at the time. He told the parents that they would have to leave immediately, or their daughter would die. They left and the patient was immediately relieved and commenced getting well. Such cases, of course, are rare. Sensitives, by means of auto-hypnosis and high aspirations should become impervious to such influences.

VII.—SOME CURES OF NERVOUS DISEASES, ETC., MADE BY STUDENTS OF THE COLLEGE OF FINE FORCES AND OTHERS.

The following are but a few cases out of a multitude.

1. Insomnia, Nervine Effect of Blue and Violet.

"*Dr. Babbit, Dear Sir*: The blue lens I got from you last spring (1879) has done me incalculable good in quieting my over-excited nervous system, producing sleep when every other sedative either failed or left results more to be deplored than insomnia itself."—**(Rev.) Joseph Waite**, *Malton, Ontario, Can.*

2. Insanity

Dr. Grosvenor Swan, formerly of Chicago, later of New York and Hartford, made a marvelous cure of an insane person who was so fierce and powerful that it required four men to hold him. In one treatment he became quiet and in four treatments was cured. The doctor was well charged with psychic magnetism and communicated it through massage.

3. Summer Complaint and Paralysis

From **Prof. H. N. Schnetzler, M. D.**, of the Northwestern Ohio Medical College, Toledo:

"*My dear Doctor*: I have used ceruleo in infantile diarrhoea with good results; also, the yellow lens in a case of hemiplegia, caused by

cerebral hemorrhage, with splendid result, and that after I had gone through with a fair treatment with the usual medicine."

The cure of a **Fearful Insomnia** and **Neuralgia**, in a few seconds by focussing the blue lens over the forehead, has already been spoken of.

4. Facial Neuralgia

"I could report a host of cases of this class. Very few require a second operation. My plan is simply to move the pained part gently with the fingers, for some minutes, afterward passing off down the jaw, wetting the finger in ceruleo in some cases. I occasionally make passes down the spine, but I find this is seldom required. I use the battery in about one case out of a dozen. A case lately was curious. Having passed over the face and trifacial nerve, I was somewhat surprised that the pain had not ceased. Resting awhile, I placed my hands with some pressure on the cervix, and in a few moments he exclaimed, 'It is gone!'"—Wm. A. Jones, D. M., 64 *Brynhyfoyd penydarren, Merthyr Tydvil, South Wales, Great Britain.*

In the above treatment of the cervix, Dr, Jones probably covered the medulla oblongata more or less, at which place he would reach the most nerves.

5. Neurasthenia

"Mr. Morris, carpenter, had been suffering from Nervous Exhaustion all through the summer of 1893. He applied to doctors but he continued to grow worse. At the time he applied to me he could scarcely walk, he was extremely irritable, and his hands were so paralyzed that he could not hold any weight in them whatever. Cured in five or six treatments, gave him a little ceruleac high. He continues all right."—**Wm. A. Jones**, M. D.

6. Paralysis, Left Hemiplegia

The same Wm. A. Jones, M. D., reports the following cure:

"John Jones, Tredegar, South Wales, became paralyzed last Christmas, (1892). The medical man who had attended, explained to them that he had ruptured a blood vessel and so clots of blood had formed in the brain; consequently, there was no hope of recovery. The left side was very badly affected, in fact, the left hand, arm and leg were useless. He was continually trying to utter words but no one could understand them: After five weeks of drugging and finding he was

daily sinking, the family sent for me. Very reluctantly I took the case, knowing he had been rather intemperate, and was now over sixty years of age.

"I started with massaging the whole body, using very hot water to infuse warmth into the spine, afterward manipulating every muscle and fiber, finishing by passing the stagnant forces away from the brain. The following evening he could explain that he had intense pains in the lumbar region and down the legs. I told him that this returning sensitiveness was one of the best signs of recovery. In a few days this pain ceased altogether and in a few weeks he was restored. One evening he explained that he was better than he had been in a long time, having a delightfully agreeable feeling of well-being. He also assured me that his sight was better than it had been for over eighteen years, which statement his wife confirmed.

"One day his old doctor called to see what had become of him, and found him just returned from a walk. He confessed astonishment at the change, asked no further questions, but walked away."

The above fine achievement of Dr. Jones would have become still more rapid if he had given him two or three very hot daily pouring baths over the medulla and cervix, and a plenty of ambero to drink. Their failing to tell the doctor how the cure was made, reminds me of how many cures have been made in this country by these improved methods, without letting the doctor know anything about it. Take one example. A doctor after treating a case for some time without any good effect, a masseur was called and a cure was soon made. The doctor, seeing the great improvement, congratulated himself upon his own medical skill, especially as the family was so cowardly as not to inform him how the cure was really made. In another case in which the doctor said the child could not live until morning, he called in the morning to learn when it died, but found it sitting at the break-fast table with the rest. A masseuse had come and healed it, but not a word was breathed of it to the doctor, and he no doubt continued to enlarge upon the ignorance of these magnetists and other *quacks*.

Right Hemiplegia, *Cured by Wm. G. Dobie, M. D., Santa Monica, Cal.*

"Major E., Los Angeles, Paralysis of right side, arm useless as if tied on at the shoulders, memory defective, articulation imperfect. Three magnetic treatments restored the use of the arm, was cured by several months of magnetic treatment; promoted to rank of Colonel in U. S. Army."

Lesion of Dorsal Vertebrae, *Cured by Dr. Dobie.*

" Master K. of Santa Monica was supposed by his physicians to have consumption and a change of climate advised as the only hope. I found that a lesion of the 4th and 5th dorsal vertebrae impeded the nervous currents. Completely cured by seven magnetic treatments."

Dr. Dobie also cured in ten treatments Mr. K., a lawyer, who was almost at the point of mental aberration with nervous exhaustion. At Pittsburgh, Penn., he adopted a graceful method of curing a refined lady who was so excessively nervous and sensitive that she could not be touched. Each time when he came he gave her some flowers which he had handled and then sat on the other side of the room from her. In this way she received only his finer psychic radiations, a fact which no doubt hastened her cure.

Cure of Paralysis by Electricity

I do not generally consider electricity so effective as chromopathy or vital magnetism, but Mrs. Frances E. Williams, D. M., M. D., has succeeded more than once in curing paralysis with her powerful static machine. But others had tried the same cases with the same instrument and utterly failed. This proves to me that it was, at least in part, due to the powerful magnetism of Dr. Williams herself, which was passed to the patient at the same time she was giving the electrical treatment. Dr. Williams has given up her very fine and successful sanitarium in Boston, and for the sake of the beautiful California climate has established herself at 602 Alvarado St., on the delightful Westlake Park, Los Angeles.

I have space for one of her cases.

" Miss H. of Boston, came to me June 12th, suffering from Paralysis. Four years previous, she had a shock which rendered her perfectly helpless for a long time. She recovered in part the use of her limbs but was liable to fall at any moment. Her physician told her she could never fully recover. I commenced using static electricity on her and in three weeks she considered herself as well as ever. On July 2nd she started with a party of twenty-eight persons for a tour through Europe, and was perfectly well and strong, through the entire fatiguing trip."

VIII. CHROMOPATHY IN INDIA

1. In the words of Mr. Ramaswami Aiyar, of Madras, India, " Chromopathy has become an acknowledged method of treating disease in India. Brother Jwala Prasada, who is now Munsif of Mahaban, Muttra

District, has by means of his work, conferred a lasting benefit on suffering humanity, and his services cannot be over-estimated. Brother Tookarum Tatya, the well-known citizen of Bombay, did much to prevent the spread of that dire scourge, the plague, by resorting to this method of treatment which was attended with phenomenal success. . . . There are now many broad-minded gentlemen in different parts of India who have become great centers for this method of treatment, and who supply medical aid gratis to the afflicted."

2. Through the kindness of Dr. Peebles, the world traveler, I have received a remarkable pamphlet on Chromopathy, written by Mr. Prasada, mentioned above. This pamphlet within a few months has attained to the 3rd edition and been translated into seven vernaculars and languages. Col. Olcott, who is at the head of the Theosophical Society, had suggested that he could be a good mesmerist. I quote the following in his own words:

"Acting on that advice, I became a tolerably fair magnetizer. The practice developed in me a general love for humanity and for the treatment of diseases. But I found I could not well attend to all my patients, who kept on increasing. I then took aid from Homeopathy. But after all I found out that both of these systems of treatment are not such as to prevail, in the long run, over all other systems of treatment, and I was in search of some treatment that would be a real benefit to humanity. At last I came to have Babbitt's Health Manual and therein I found the principles of Chromopathy recorded. After practicing this science for eleven years I am now in a position to state, that this treatment is to supersede all other treatments. It is at once the cheapest, the mildest, and the most effective of all the treatments of diseases now in vogue."—**Jwala Prasada, F. T. S.,** Munsif of Benares.

3 Chromopathic Facts in India

The following facts are given in Jwala Prasada's pamphlet.

Insanity. The blue light gives relief in such a short time that sometimes it appears almost miraculous. In one case at Meerut in which a woman had become insane, the blue light thrown on her face, for less than a minute, cured her of her insanity.

Treatment of Dogs and Hydrophobia. "I have seen that this color (blue) also cures diseases of many animals. It is all-essential to the life of a dog, and I have found out that if blue-charged water be given to them during the hot season, there is not the least fear of their going

mad. . . In fact, the blue color is the best and the only medicine for Hydrophobia, and I have treated three cases which came to me, with success. . . . I treated them both externally and internally. Externally I applied blue light to the wound two or three hours every day, washed the wound with blue water and kept a blue water compress on the wound. Internally I gave them blue water, one ounce every three hours, for the first three days, and when the symptoms decreased I gave them three doses only every day for three days, and after that only one dose at bed-time."

Bubo. "In Bombay and its vicinity, thousands of lives have been saved by the administration of blue-charged water, from succumbing to that dire disease known as the Bubonic plague."

Prasada gives the method of treatment, which includes also, more or less of blue and green light.

Dysentery. "Blue water is the best remedy for this disease. I have cured hundreds of cases by this treatment. It cures the disease in two days' time. I have experience of this disease in the worst stages and I can say with certainty that no man can die of dysentery if blue water is administered to him."

It is possible that some of the cases here spoken of were ordinary diarrhoea instead of dysentery. Dysentery causes more or less of a discharge of blood and mucous and considerable nausea and pain. Ceruleo is immensely more effective in such cases than any drug, and avoids the fearful after effects of opium, acetate of lead, epicac, and even corrosive sublimate, that the doctors prescribe for it.

Leprosy is cured by Prasada with the yellow water, but says it requires six months. Paralysis he had cured by the red color, but he would find the orange or yellow still more effective, although some red would be useful at times.

Inflammation of the Brain, Headache, etc., he cures very quickly by blue light over the face or head.

Mr. Prasada gives an account of many more cures. He is working nobly, but will be still more scientific and effective when he has had an opportunity of studying our larger works. Some accomplished and scholarly Hindoos are now taking the course of the College of Fine Forces, and excellent results may be expected among the vast population of that country.

IX. GENERAL NERVOUS AND PSYCHOLOGICAL ITEMS.

1. **Thoughts About the Fine Forces.** In taking a review of these great subjects, we shall be more and more impressed with the vast importance of the knowledge and use of the fine forces. Thereby we shall become more and more like the gods, having the power to apprehend the past, the present and the future, to search into unknown and more glorious worlds and to lift human minds and bodies into a happier and more exalted life.

2. **The Gift of Prophecy.** Certain minds, becoming psychically illuminated, are able to look far into the future. The most amazing prophecy ever given in the history of the world was probably that of Cazotte, who foretold minutely the very time and character of many of the leading events of the French Reign of Terror, including his own death. This has often been given, however, and I will quote a little from Dr. J. R. Buchanan's work on Psychometry.

"Mr. Charles Dawbarn of New York (now of San Leandro, Cal.), has been especially successful in foreseeing future events and conditions.... About six years since, he was sitting with other guests in the parlor of a Health Institute in Owego, New York, when two ladies, who had just arrived, were introduced, being strangers to all but the hostess. Psychometry soon became the subject of conversation, when these ladies, mother and daughter, defied him to look into their surroundings. Mr. D. turned to the senior lady and said: 'Madam, in six months you and your daughter will be working for a living. About eighteen months later, you will again be in comfortable circumstances.' Of course this was deemed incredible, but in due time it was fulfilled. Their property had been in oil wells, which ceased to produce, and they had to open boarding-houses to earn their livelihood; but after eighteen months their property became more valuable than ever, placing them in independent circumstances."

Prophecy of the death of Emperor Nicholas, by a Seer. Mr. John F. Coles published in the New York *Daily Times* on Dec. 3, 1854, and more fully in the Sunday *Dispatch* of Dec. 10th, a prophecy of the death of the Emperor Nicholas, of Russia, declaring on Nov. 29th that in just three months from that time, this event should take place. The prophecy was fulfilled to a day, making allowance for the difference in time between St. Petersburg and New York.—Condensed from S. B. Brittan's *Man and his Relations*, p. 428.

3. **Psychometric Perception.** "Mr. Dawbarn is sometimes bold and emphatic in his opinions. When making New Year's calls, in 1880,

he was greeted, in a New York mansion, by a lady and her daughter, who at that moment had no other callers. The lady handed him a small note an inch or two square, and asked him the character of the writer. Mr. D. promptly pronounced him an unprincipled scoundrel, who was paving his way to the state's prison. The statement was coldly received, and Mr. D. quickly withdrew. The opinion he had given led to a detective inquiry into the life of the man, who was beginning to pay attentions to the young lady. It was discovered that he was leading the life of a gross sensualist, and that under the guise of a respectable medical practice he was violating the law in a manner which must result, sooner or later, in criminal prosecution. Of course his further attentions were declined."

4. **The Nerves** are a kind of connecting link between body and mind, and constitute a master principle of power to control the physical organs. Physiomentalism ascends two grades higher than the drug system, first, by showing how to control nerve forces, and secondly, by showing how to reach the very throne of power in the psychic system. Those mental healers who decry hypnotism and psycho-magnetism have not yet reached the acme of science, however much they may excel the grosser systems of cure. These high methods, including the color forces of sunlight and nature's pure remedies are yet to become the dominant system of the world.

Further Hypnotic Triumphs

The following matter has been given me at my request by W. A. Dunton, M. D., of 304, North Main St., Los Angeles, California. Dr. Dunton is Professor and Demonstrator of Hypnotism in the College of Fine Forces, and I am pleased to know that he is a conscientious worker in this cause. This matter is inserted here from having been handed in too late to go under its proper head.

Los Angeles, Cal., Mar. 22nd, 1898.

My Friend and **Brother in the Cause, Dr. Babbitt:**

I wish to tell you some of my experiences in the practice of Hypnotism.

Mrs. B. W, had been addicted to the use of morphine for thirty years constantly. She also occasionally drank excessively of intoxicating liquors. In these cases she would take pure alcohol if there were no other intoxicant at hand. I placed her in a deep hypnosis in a few moments by stroking the face and by suggestion, during which she became cataleptic, any part of the body becoming fixed in any position

I wished. I suggested, forcibly and repeatedly, that she abstains entirely from the use of morphine and from all intoxicating liquors, causing her to feel that she had been placed under the rule of higher forces and would be nauseated by these grosser elements. From the moment of the first hypnosis she was cured. Even the smell of beer or light wine nauseated her, and she has never taken a grain of morphine since that time, about two years ago. At the time of the first hypnosis she was suffering acute pain of the stomach, caused by alcohol. The pain was quickly relieved by suggestion alone, without the use of a drop of medicine. She occasionally suffered severe pains of other kinds, but after a few treatments she was freed from all of them, regained her appetite, increased fifteen pounds in weight, looked like another being, her mind having been made clear and bright and her whole moral nature improved. She is a woman of very strong will, dark complexion and a very high temper. Many more important details of this case could be given, but space is lacking.

I have lately cured another unfortunate by the same means, Mr. C.. who had taken morphine continuously for seventeen years. This was only three months ago, but the cure seems to be complete. He has gained twenty pounds in weight and his appearance is entirely changed in every way. In his case I did not take the drug away at the first, but gave a little less each day, until at the end of the eighth, when it was removed entirely. Since that time he has not taken a particle of the drug. I removed his terrible pains and cravings by suggestion alone.

Mrs. P., a lady about 40 years of age, had such an excessive hemorrhage at her menstrual periods, that she almost bled to death, at times. When I took her case the flow had been almost continuous for three months. She was so weak that I was obliged to use stimulants for several days to keep her alive. I used all the best drugs known to medical science without avail. As a last resort, I used hypnotism. The cure was immediate and complete. The bleeding entirely ceased and she soon returned to health. This lady is well educated, with plenty of good common sense, and has artistic talents of a high order.

Mr. J. I., had an excruciating and continuous neuralgia of the right side of the head, which resisted all narcotics. Sleep was quite impossible. On the afternoon of the third day I succeeded in having him in deep sleep for three-fourths of an hour. When I aroused him, the pain was entirely relieved, and a perfect cure performed. He is a shrewd business man.

I have used this art for the cure of many diseases and can confidently say that the forces brought to bear thereby are a thousand times more potent than any drugs. When we use this grand power, we can do it with the perfect assurance that no harm will come to the patient, no matter what the disease may be.

One word of caution, however. Practitioners by this method should be qualified by nature and education, so that they may wield this grand power wisely and conscientiously.

Yours fraternally,

Wallace A. Dunton. M. D.

Dr. Dunton's facts as given above, and many others which he has given me personally, entirely disprove the superficial theory of certain persons, that hypnotic cures are of brief duration. The far-reaching influences, that are imparted by a pure-minded and highly-developed hypnotist is about the most fundamental and permanent of the forces known to man and are doubly valuable when they lead to auto-hypnosis.

HUMAN CULTURE AND CURE

PART FIFTH

THE BODILY ORGANS

Their Diseases

AND THE

Great Natural Methods for their Cure

PART FIFTH

The Bodily Organs and their Diseases

1. THE MEDICAL WORLD & EDUCATIONAL METHODS.

1. **Great achievements.** Medical men, as well as men in other departments of science, have written immense volumes and given vast study and experimental research in connection with Nature and Mind. The result is a mighty thesaurus of human knowledge, which has added greatly to the world's upbuilding.

2. **The Desideratum.** But the world could have been immensely more advanced if all colleges and schools had been guided by one great principle of action, namely a supreme, love of truth which shall demand that all students, after acquiring the wisdom of the past, shall keep their minds open to conviction and press forward to new and higher truths. Instead of that a crystallized course of study has generally been pursued and the student has been led to feel that he has acquired an ultimatum of knowledge or principle, so that when new or higher methods are proposed, he will meet them with contempt, branding their authors as quacks, cranks, empirics, etc. And yet in spite of the fact that thoughtful physicians admit that "Medicine is not a science" and that "we know nothing of disease," they have persuaded the legislatures of most of our American states to enact despotic laws against outsiders who have not passed through the set course of just such medical colleges, fining and imprisoning them, especially those who are able to outdo themselves in the treatment of human suffering. We have religious freedom and freedom to vote for any person we prefer, but medical freedom is a hundred years behind the age, for we are not allowed to choose the kind of physician or healer which we desire. Shall we allow such a monopoly to trample upon our constitutional rights? Many an unlearned person or nurse has that intuition which will enable him to cure a disease where a learned one may fail. "All the learning in the world," says Paracelsus, "cannot make a man a physician, unless he has the nesessary talent and is destined by nature to be a physician..... It is necessary that a man should know the processes of nature, the invisible as well as the visible man." In other words it is necessary that the physician should become conversant with the fine forces, as well as the coarser elements, and be enkindled by them.

The following case which I quote is similar to hundreds of others that could be produced:

"Some time ago in an eastern city a little child was taken sick with diphtheria. A physician was sent for. The little girl grew worse and worse, and finally the doctor said to the mother, 'Madam, your little child cannot live over thirty minutes, and I am afraid will be dead in five.' 'My God!' said the mother, 'I cannot stand it. Can't you save my little girl?' He replied 'No, Madam. You must resign yourself to the mysterious rulings of Providence.'

"Just then the nurse suggested a remedy that she had seen used, and the mother said: 'prepare it at once.' She bounded out as she was bid. 'Madam', said the doctor, 'is it possible you would allow a quack nurse to prescribe for your child—doctor your child?' 'Certainly! you cannot cure my baby, and I will do anything to save her." 'You shall not give it to her' was the reply. 'She will be arrested tomorrow morning for violating our law, if you do.' Turning her large brown eyes upon him, and looking the coward through and through, and pointing to the door, she said: 'Get out of this house, you brute,' and he got. The remedy was given. In ten minutes the child was out of danger, and amid smiles, kissed the lips of the mother, as she washed the baby's cheeks with the tears of her joy."

3. There is a **Nobler Science of Cure** now rising like a new sun upon the world. But how is this science to be demonstrated if this medical trust which is so anxious to preserve old methods, shall pounce down upon the progressive healers who are proving these new and higher methods?

The following words are from the late Dr. J. R. Buchanan who was for some time medical professor in the Boston University; also in Electric medical colleges in New York and Cincinnati:

"We are on the verge of grand changes in the philosophy and practice of the healing art. What was recognised as the best practice forty years ago would be considered barbarous quackery today. Much of what is tolerated and taught to-day I know to be barbarous to the core. I have witnessed a grand revolution in practice, in my own time, since my old professor was giving teaspoonful doses of calomel, and I foresee a far greater revolution coming now, and coming with greater rapidity than ever.

"The consolidated colleges are its chief hindrance; the liberal colleges do not fear to hinder it; but neither college conspiracies nor medical laws can check the progress of discovery and reform, though they may persecute the pioneers in benevolence.

"The infant sciences, the budding discoveries, the enlarging thought, and the generous enthusiasm of noble souls, will give us a science in time which will abolish the terrors of the wretched chamber of death, banish all pestilence and fever, and make life bright and buoyant with an energy and enthusiasm born of rich physical health and the uplifting power of a noble life. With free competition all this is near at hand, but with restrictive legislation for medical corporations, history will be repeated, and it will require a whole century to introduce any fundamental improvement - for great improvements come up in that outside margin of individual action which is beyond the colleges, and not yet tolerated by them. That was where Copernicus, Galileo and Kepler stood, ignored by the Universities. That was where Newton stood when the ridiculous Cartesian system ruled the universities and excluded him. That was where Harvey stood when all the learned bodies scouted his simple discovery. That was the outside position, too, of Galvani of Watt, of Fitch and of Fulton (in steam navigation), as it was once the outside position of Wickliffe and Luther, and to-day it is the outside position of thousands who resist collegiate tyranny in the power of science, truth and honesty, as pioneers leading to a grander philosophy and a nobler life."

4. **Physicians.** There are many physicians who are among the noble of the earth—men and women of beautiful sympathies, skilful and practical, who will almost give their lives for their patients. But there are many others who are tempted and led into foibles and even crimes. Surgery is a paying thing and physicians do not often stop to inquire into better methods, but slash away, de-womanizing multitudes of women by ovariotomy where there is no earthly necessity for it, amputating limbs, cutting brains and bowels open and many more things that by aid of these great natural methods become unnecessary. A young man was informed by the physicians where he was residing in southern California, that his leg would have to be amputated. He went to Los Angeles and a council of physicians there declared in favour of amputation and still another council of important physicians in San Francisco signified there was no help for him except by amputation. He then went to a sanitarium where natural methods were used and was made well in ten days, without any amputation. They have great colleges with great laboratories, dissecting rooms, libraries, and clinics; and, of course, bring before their students much that is of importance to the world. But in spite of their herculean efforts they are laboring under a disadvantage from not having reached the true principles of force or the real law of chemical affinity which underlies all phenomena of the universe.

5. **An Arraignment of Physicians** by the eminent Alexander M. Ross, M. D. F. R. S., member of many societies of physicians in the United States, Canada and Europe is as follows:

"I arraign the leaders of the profession on the following grave charges—the rank and file are but sheep led astray:—

"I charge that, whereas the first duty of a physician is to instruct the people in the laws of health, and thus prevent disease, the tendency has ever been toward a conspiracy of mystery, humbug, and silence.

"I charge that the general tendency of the profession is to depreciate the importance of personal and municipal cleanliness, and to inculcate a reliance on drug medicines, vaccination, and other unscientific expedients.

"I charge that they have encouraged superstition and humbug by the germ theory of disease. I do not question the existence of infinitesimal micro organisms; but they are the result, not the cause, of disease. They are scavengers, their legitimate work is to clean out the sewers of our bodies. Whenever there is a decay, pus, or decomposing matter, there these little life savers are doing their work of neutralization, sanitation, and purification; they feast upon effete and decaying matter—they are beneficial helpers to an important end.

"I charge that the prevalent custom of advising a speculum examination for every trifling backache, ear-ache, headache, ingrowing toe-nail, or bunion, is an unnecessary outrage on the modesty of a woman, and disgrace to the profession.

"I charge that the present abominable and dangerous custom of spaying woman for the most trivial uterine derangements is nothing less than criminal, and in contravention of scientific practice.

"I charge that the prevalent custom of ascribing all ills (imaginary or real) that afflict woman, to uterine troubles, weakness, ulceration, or displacement is false in theory and fact, and is nothing but a cloak to cover ignorance, immorality or cupidity.

"I charge that they prescribe to their patients—even child-bearing and nursing women the use of beer, ale and other alcoholic beverages which not only encourages drunkenness, but poisons the life-blood of unborn children, and stamps a permanent appetite for liquor on the rising generation.

"I charge that they have bitterly opposed every real and scientific reform in the healing art; they have filled the world with incurable invalids, and given respectability to quackery by the outrageous quackery of the profession itself; disgusting all sensible and thoughtful men by their fallacies, tyrannical delusions, fetichism, and humbug.

" I charge that they have, under the treacherous guise of protecting the people from quackery, secured the enactment of most unjust, monopolistic laws, which deprive the people of one of their dearest and most important rights—the right in the hour of sickness and in the presence of death to choose their own medicine.

" I charge that they have, by doctorcraft, hoodwinked the legislatures into enacting compulsory vaccination laws, which compel parents to submit the bodies of their children to the beastly, useless, and dangerous rite of vaccination, and to deprive unvaccinated children of the right of education in our public schools and colleges. I hold that every individual should be protected and sustained in his medical opinions, as he is in his religious or political opinions, and any man or set of men who would withhold from his brother man this right would light the fires of the Inquisition if he dared."

Such are the burning words of a great man who speaks from a vast knowledge of his own profession and who is too large to be whipped into condoning a vicious system. He himself is the man who holds the whip and it falls upon some of the medical boards that lash the small doctors and keep them in the traces. Dr. Ross would undoubtedly admit that some germs, such as those of small-pox, the bubonic plague, phthisis, etc., are pathogenic.

6. **A Debate.** William J. Robinson, M. D. Ph. G., of the Universities of New York and Berlin, was in the habit of pronouncing the more liberal physicians and healers "*murderers, robbers, and frauds,* in the Twentieth Century Magazine. The author answered him by showing that the masseurs, and masseuses, the electricians, the chromopaths, the mental curists, etc,. instead of being murderers and frauds, were greatly more safe and more effective for good than our Old School men and that they rarely, if ever, left any bad effect afterward. Dr. Robinson then wrote a series of articles, glorifying his school of medicine, overstating their good points and sometimes advocating very incorrect principles. The following is only a small part of the author's reply:

"There are very many drugs that I have not hinted at that are destroying multitudes of lives. Opium and the other narcotics are stupefying brains and working widespread ruin. The preparations sold under this name (e. g. Mrs. Winslow's Soothing Syrup), usually contain opium, said to be the cause of the death of 150,000 children a year," in Murrel's Poisons, page 208. We progressives have a better way of soothing pain than the use of narcotics.

" The old school physicians are especially dangerous to have around while children are to be treated. In New York, during the month of July, 1887, 1,418 infants died of Summer Complaint. Blue charged

water, given for the same complaint, has never been known to fail in a single case. How many sorrowing mothers have been bereaved by the use of drugs that even strong, grown people can scarcely bear?

"Doctor Robinson, speaking of antitoxin for the cure of diphtheria, says: "It has shown its inestimable value practically by reducing the former average mortality of 50 or 60 per cent, to a mortality of 15 per cent." Is it not possible that the doctor has overstated this matter? On my table is lying an account of a Christian scientist, of Traverse city, Michigan, who lost a daughter by diphtheria. The physicians, indignant because they were not employed, invaded her home, took forcible possession of the corpse, had a coroner's jury and made a post-mortem examination, finally declaring that she "died of diphtheria because she did not have a regular physician."

"The mother, indignant at this treatment, instituted a general inquiry as to the success of the doctors themselves in that community. During the year, twenty cases of diphtheria had occurred, all of which were treated by antitoxin, and two-thirds of the whole had died, making thus about 67 per cent. of the cases lost, or considerably more than Doctor Robinson's estimate of the percentage that usually dies without any antitoxin! *

"Doctor Robinson, in his fourth paper makes the amazing statement that 'for every case diagnosed wrongly (by physicians), ten thousand or a hundred thousand cases are diagnosed right.' Now our old school friends, although they diagnose some diseases with minuteness and give technical terms with great accuracy in their pathological descriptions, yet, on the whole they do not seem to be intuitional or inspirational and in various occult conditions have become somewhat notorious for their mistakes. Take cases like that of Nellie Bly. She went to six prominent physicians of New York, every one of whom diagnosed her case differently. An eminent physician of New York who had served under the United States government, treated a case during a year and a half, mean time charging his big fees, and finally confessing that he could not tell what was the trouble with his patient. The same patient having occasion to go to San Francisco, thought he would visit the late J. R. Newton, one of Dr. Robinson's magnetic quacks who was then treating there. As soon as he entered the room, the Doctor, as in a lightning's flash, knew his whole condition and going toward him said: "You have gall stones; Let me cure you." He then manipulated him briefly, told him to take sweet oil, and in two or three weeks had him entirely well.

* In another place farther on, I give an account of a natural method of treating diphtheria, discovered by J. J. Fox, M. D., in which no cases are lost.

I must adduce one more case which I have from the highest authority (the late Mrs. Dr. Lozier), one of the poineer lady physicians, and connected with the late world renowned Dr. Brown Sequard. This physician had a lovely and accomplished American wife whose condition he diagnosed as a tumor. He then called a council of eminent physicians all of whom agreed with him that his wife was suffering from a tumor. Treating her accordingly she soon died and a post-mortem revealed the startling fact that this tumor was a fetus!

"The dear doctors, including some homeopaths and eclectics whom the allopaths have induced to join them, are getting the legislatures to proscribe everybody except themselves. Their medical colleges do not, and generally cannot, teach the scientific use of electricity, or massage, or movement cures, or chromopathy, or mind cure. These forces that come soft as a snowflake, soft as a sunbeam, soft as a flow of sweet thoughts, that go all through weary and diseased systems, giving new life and peace where the old methods fail, are supposed to have some murderous and dangerous character about them that must be rigidly sat down upon, and the perpetrators punished by fine and imprisonment unless they can show that they have spent several years at some medical college studying the use of poisons, or surgery, or other things that they have no earthly need of. Such laws are among the greatest outrages ever perpetrated upon a free people."

7. **Vivisection.** Doctors, in their efforts to do some great and sensational thing, have taken rabbits and a great number of other animals including dogs, the best friends of man, and, binding them down, have cut their living, quivering flesh into pieces in spite of their cries, until they were dead. The more humane will give an anaesthetic but others seem to gloat on their agonies. Having gone so far, the next step has been to exert their hellish arts on human beings. One doctor in South America tested the germs of yellow fever on five innocent but humble women, all of whom died in agony. Multitudes of other persons have been tortured or killed by the experimentation of physicians. When they have become able to rise beyond the slough of materialism into the knowledge of psychic and clairvoyant forces, they will learn that there is a better way to ascertain the processes of life than that of vivisection.

II. THE HEART

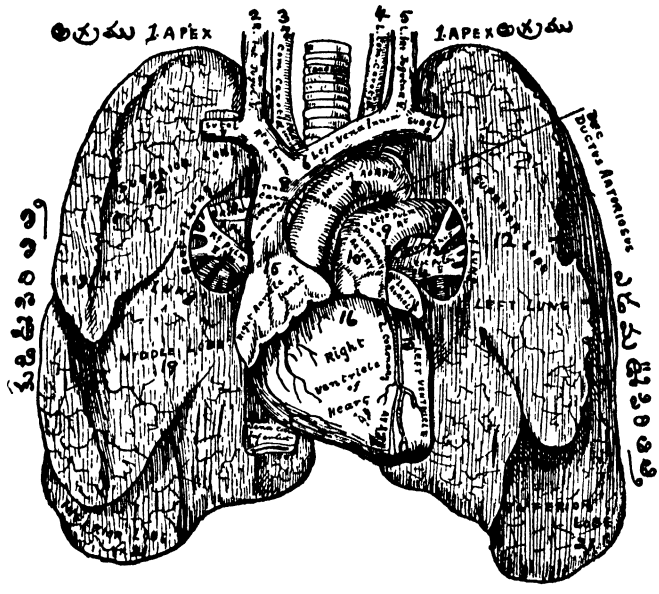


Fig. 123 Lungs, Heart and adjacent parts (Gray)

1. **Our Plan.** In describing the organs of the body there will not be room in this work for multitudinous details. Those wishing these will have to get special works on Anatomy and Physiology and Pathology. What I shall aim at here will be to give a general view of the organs, and, aided by this higher science, to unravel some physiological mysteries which have heretofore not been explained, after which some diseased conditions and the simple, safe methods of treating them will be presented.

2. **The Thorax.** The human trunk consists of two great divisions, the thorax which includes posteriorly the 12 dorsal vertebrae, anteriorly and laterally the sternum ribs, resting at its base upon the diaphragm, and the abdomen, which reaches from the diaphragm to the beginning of the pelvis. The leading organs of the thorax are the lungs and heart. Fig. 123 shows the right lung with its three lobes, the superior, middle and inferior, the left lung, which is smaller but longer with its two lobes, the superior and inferior; the heart with its apex sloping to the left; the right and left pulmonary veins and arteries; the right and left internal jugular (throat) veins; the right and left common carotid arteries; the right and left vena innominata (innominata or nameless veins); the right and left auricle (little ears of the heart); the right and left ventricles (bellies); the aorta, the trachea, the bronchial tubes; the sub-clavian veins (under the clavicle or the collar bone); the vena cava superior (hollow upper vein); which pours the venous blood from the head, arms, neck

and thorax into upper part of the right auricle; the vena cava inferior (hollow lower vein), which pours the venous blood from the whole abdomen and lower limbs into the right auricle and clinches its work by putting a valve at the entrance to prevent the blood from falling back. These venae cavae are the largest veins of the whole system, although the superior vein is only two or three inches long. The aorta is the largest artery. The heart is enveloped in part by the lungs, especially

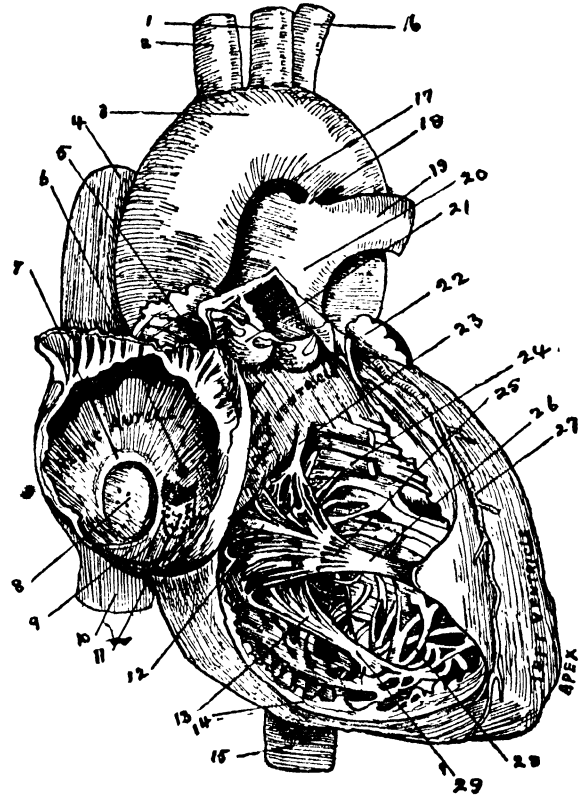


Fig. 124 Front view of the Right chambers of the Heart (after Eckley).* It will be seen that the right and left sides of the heart are not both in front, but that the left side is partly behind the right.

1. Left carotid, 2. Innominate, 3. Arch of Aorta, 4. Vena cava superior, 5. RIGHT AURICULAR APPENDIX, 6. Orifice of vein of Galen, 7. ANNULUS OVALIS, 9. Fossa ovalis, 10. Vena Cava inferior, 11. VALVE OF THEBESIUS, 12. ANTERIOR SEGMENT OF TRICUSPID VALVE, 13. RIGHT SEGMENT OF TRICUSPID VALVE, 14. SECTION OF VENRTICULAR WALL, 15. Vena cava inferior, 16. Left Subclavian, 17. Right pulmonary artery, 18. Ductus arteriosus, 19. Left pulmonary artery, 20. Pulmonary artery, 21 Pulmonary semilunar valves, 22. LEFT AURICULAR APPENDIX, 23. Small Papillary Muscle Connected With Septum, 24. Columna carnea (1), 25. CHORDAE TENDINEAE 26. Anterior papillary muscle, 27. Left Coronary artery, 28. Columma carnea (2), 29. Posterior papillary muscle (3).

* Eckley's work on Anatomy is published by P. Blackston's Son & Co., 1012 Walnut St., Philadelphia.

by the left lobe, hence when the lungs are diseased and its vesicles are blockaded by impure blood, it is sometimes presumed that the heart itself is ailing.

3. **The Pericardium** is the bag that forms the outer membrane of the heart while the **Endocardium** is the inner membrane. The meaning of the words *Pericarditis* and *Endocarditis* then is at once evident.

4. **The Chambers of the Heart.** There are two main divisions of the heart separated by an insulating longitudinal partition called the septum. One of these divisions is separated into the right auricle (little ear) and right ventricle and is supplied with the impure, bluish, venous blood which deals directly with the pulmonic system. The other division consists of the left auricle and left ventricle, the office of which is to receive and project the purified red, arterial blood to all parts of the system, a systemic process. The ventricles are formed by a much stronger web work of fibres than the auricles but the left ventricle is twice as strong as the right one, as it has to project the blood over the whole system.

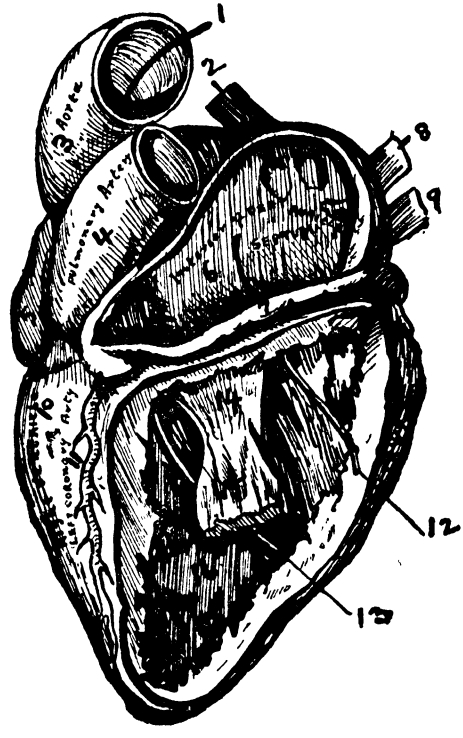


Fig. 125. Left Chambers of the Heart.

No. 7. Left Auricle, No. 12. Bristles passed through left Auriculo-Ventricular opening. No. 13, passed the Aortic opening.

5. **The Vital Electricities.** It is quite time now to undertake the explanation of pulsation, fever and other vital processes which have been the mystery of so many centuries. One great cause of this backwardness of science in reaching the underlying principles of things is the ignoring of nature's processes of force, which are so simple when old notions can be laid aside. I have explained this matter too often elsewhere to need further words here.

Many scientists still think that electricity is a hot force although it is a great contracting power, and the old notion that there is only one grade of electricity has hardly as yet got out of their heads. Let them once remember that every possible contracting force is electrical, whether it be the coldness of the north wind, the blue and violet colors of sunlight, the bluish elements of the blood, the motor nerve force which causes muscular contraction, the forces of the static machine or the galvanic battery, are all but different grades of electricity. The velocity of the current has nothing to do with its nature as being electrical or not electrical. If vital electricity were as swift as the more external current, it would cut human tissues to pieces in short order. According to Professor Gould's investigations, telegraph wires suspended near the earth have a current of about 12,000 miles a second, but those suspended higher give a velocity of from 16,000 to 24,000 miles per second. Wheatstone's estimate for electricity of 288,000 miles a second, has never been confirmed. Vital electricities, as well as heat forces, move incomparably more slowly. A vital magnetist by placing his hands near a sensitive person can draw him almost double without touching him. This is vital electricity thrown into curves and we call it vital magnetism. Those who wish to know more fully the nature of electricity, should study the form and working of the atom in the Principles of Light & Colour, especially on pages 111 to 113; also, pages 4, 5, and 289, 290, of this work.

6. **The Philosophy of Pulsation.** I have demonstrated repeatedly the fact that red and blue forces have a great chemical affinity for each other, and as electricity is a great factor in chemical affinity, we may see how powerful must be the electrical currents between the right side of the heart, which is charged with the bluish venous blood, and the left side, which is charged with the red arterial blood. But why does it shoot forth in spurts instead of a steady stream? Because the partially insulating septum holds it back until the electricity collects with sufficient power to burst over the whole heart with its mighty contractive force, dashing the blue blood of the right ventricle into the lungs and the red blood of the left ventricle into the whole system. Here, then, we have the periodicity of the heart's action explained

and the wisdom of these sudden bursts of power in order that a sufficient force may be given to drive the blood through arteries, capillaries and veins until it reaches the heart again. An electrical clock is an example of the same kind of well-timed periodicity. The study of atoms shows us that when the electrical force moves in one direction, the thermal currents move in the opposite direction, thus widening out the chambers of the heart for the reception of new blood.

7. **Medical Opinions.** Medical men have put forth many theories to account for the heart's action but have generally settled down upon the influence of the blood as, in some way, the main factor. Dr. Brown Sequard and some others made a happy guess by attributing it to carbon dioxide, which is correct as far as it goes, as all acids are more or less electrical and carbon dioxide constitutes 15 to 20 per cent. of venous blood. One physician thinks he has the cause of pulsation in the lungs themselves, but the lungs give only red blood to the heart, and this has no contractive principle. The nervous system has some influence on the heart. The vagus or pneumogastric nerve, starting from the fourth ventricle and medulla oblongata, sends many nerve fibres to the heart, among which are some that are called inhibitory (Brunton after Gaskell). These under stimuli slow or stop the beating of the heart altogether at times, which, when it commences again, will frequently act with greater fulness. One thing is certain, all currents of electricity going to the left side of the heart will inhibit its action, hence the motor currents of the vagus being electrical, must act in that way while reaching the left red forces, but when acting with the blue right side will increase its power. A powerful blow on the pit of the stomach will sometimes prove fatal by sending a current through the sympathetic nerve to the medulla and there creating such an excitement as to send an inverse current through the motor fibres of the vagus to the heart.

8. **Why are Electrical Inhalations Poison?** Because all electricities are blue, indigo or violet, and when a blue element is inspired it is necessarily carried to the left auricle where everything should be red. Why so? Because the right auricle having b l u e blood, all chemical action will be destroyed if the left auricle is made blue also. For example all acids are electrical, that is, they are more or less blue. Take an acid like carbon dioxide, as in the fumes of charcoal or coal gas, and it becomes a deadly poison if inhaled. The same element in soda water does not poison us at all. Inhale chloroform, the spectrum of which is so strong in its blue and blue-green forces, and it blockades the machinery of life immediately. The medical works say "it paralyzes the heart." In other words "similars repel," and asphyxiation takes place, as the blood is crowded upon the heart or thrown back upon the lungs,

and there is no force to carry it forward as a beneficent river of life to, nourish the whole system. The veins all about the heart must also become engorged.

9. **Ventilation.** In the light of the above principles does it not seem doubly clear that a poorly ventilated room where many persons are inhaling the bluish carbonic acid elements of each other's breaths, without having oxygen enough to give redness to the blood that goes to the left auricle, must prove disastrous to the health and buoyancy of those within it. It is easy to see why some persons, in crowded rooms, with windows tightly closed, faint away; and why a speaker may lose his usual eloquency and power. Every auditorium should admit the open air freely without having its currents directly on the audience itself.

10. **The Philosophy of Fever and of the Liver Sugar.** There is a power behind the throne in the action of the heart that may as well be brought in here. The purpose of glycogen in the liver, which is a basis from which glucose or grape sugar is readily formed, has long been a mystery to medical men. The following seems to be the explanation of this matter: whenever very much sugar, or starch or fatty substances are eaten, too much carbon is thrown into the blood, and this is liable to combine with the oxygen and form a surplus of carbon dioxide which, entering the right auricle, will give such an amount of electricity as to overwork the heart and send the hot arterial blood with too frequent pulsations over the whole system. The formation of glycogen by the aid of the portal blood which comes fresh from the stomach and intestines, secretes a portion of this carbon and being insoluble in the living body prevents too much of a formation of carbon dioxide and too great rapidity of pulsation. When too much greasy and incorrect foods are taken, the liver is apt to become too inactive and overburdened, too little glycogen is formed and the heart, becoming overworked, overheats the system with hot, arterial blood. This is the explanation of fevers, about which so many theories have been formed.

Kirke's Physiology used the following language which confirms our leading point with reference to glycogen and shows how beautifully nature provides against excesses. "The conversion into sugar occurs only after death, and during life no sugar exists in healthy livers; glycogen not undergoing this transformation."

If glycogen were converted into sugar in the living body, it would be dissolved and the carbon would be thrown into the blood to develop new electricities.

Pavy makes the following statement about glycogen in the river of dogs under various diets:

Percent of glycogen under animal food 7·19

Percent of animal food with 1 lb sugar daily 14.5

Percent under vegetable diet, potatoes with bread of barley meal 17.23

The chemical formula of glycogen is $C_6 H_{10} O_5$: of sugar, $C_{12} H_{22} O$.

11. **Size of the heart.** This wonderful organ, the center of the vascular system, the throne from which go forth the mandates of life or death, is only the size of the human fist, or about five inches long. The right auricle is said to hold two ounces of blood and the left slightly less. The ventricles are considerably larger and stronger, but why should the late distinguished Dr. Pepper and other authorities declare that six ounces of blood are thrown out into the system at every beat? The ventricles which project the blood, receive only what the auricles give them. Can the auricles that hold only two to four ounces give them six ounces at every beat?

12. **Diseases of the Heart.** *Acute Pericarditis,* or inflammation of the pericardium, is attended with, acute shooting pains, sometimes nausea and vomiting, oppressive breathing, a suppressed cough, and occasionally violent palpitation. May be caused by taking cold, or by rheumatism, pleurisy, pneumonia, etc.

Acute Endocarditis, or inflammation of the serous membrane lining the cavities and valves of the heart, usually limited to the left side of the heart, which may be accounted for from its being the region of the warm arterial blood. Symptoms much the same as in pericarditis with noises in the ear, etc. As in pericarditis the patient should rest quietly in bed.

Cardiac Hypertrophy, or overgrowth in the muscular tissue of the heart, causing increased arterial circulation and diminished venous circulationr—esults from obstruction of the aorta, swelled condition of the muscles, overaction etc. It is generally limited to the left side of the heart where the red blood rules. Symptoms :— pulsation of the aorta and carotid arteries, headache, often nose-bleed, congested eyes and face, vertigo, difficult breathing, bounding pulse, etc.

Dilatation of one or more *chambers of the heart,* the right side more generally overactive, venous blood flow too abundant, arterial circulation weak, cough, dyspnoea (difficult breathing), difficulties of stomach, intestines, liver, kidneys, etc., — on the whole a weak action of the heart in contrast with hypertrophy which is over-action. A very serious condition.

Valvular diseases. As the blood is dashed from the right auricle to the right ventricle, it passes through a valve which is called the

tricuspid meaning *three points* from its shape. The auriculo-ventricular valve on the right side is called the mitral, being formed something like a bishop's mitre. These and other valves allow the blood to move in one way but prevent its flowing back, or regurgitating. When the system is weak, tricuspid regurgitation or mitral regurgitation or aortic regurgitation or pulmonic regurgitation sometimes takes place. That which leads to the most sudden death is the aortic.

Palpitation of the Heart leads to a great variety of disturbed conditions and sometimes to a fear of impending evil or death. The cowardly feeling that a diseased heart imparts is a case in which matter controls mind. Palpitation is not often dangerous.

Angina Pectoris, or neuralgia of the heart, is paroxysmal. The patient often starts up with a horrible pain and fear of death, and sometimes death takes place.

13. **General treatment.** To prevent these fearful diseases of the heart is easier than to cure them. Among the most dangerous influences against the harmonious working of the heart, is secret vice and the exhaustion of the sexual system. Tobacco has a very pernicious effect on the heart, causing the fluttering and imperfect action called the "tobacco heart." "An alcoholic heart", says Dr. Alfred L. Loomis, "loses its contractile and resisting power, both through morbid changes in its nerve ganglia and its muscle fibers." Very strong tea or coffee is contra-indicated in most cardiac affections.

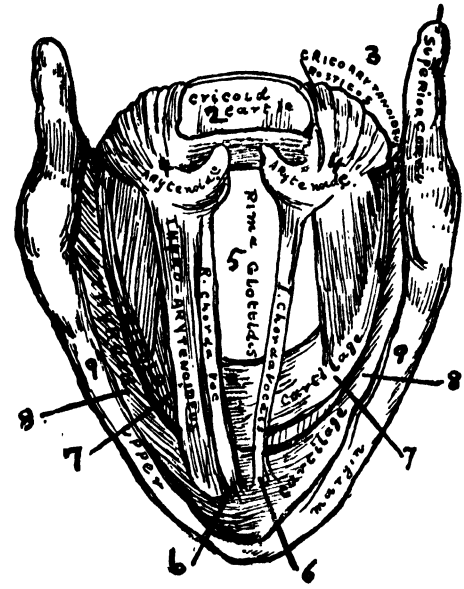
For **Hypertrophy** and other hot and excitable conditions a blue disk or a blue lens or still better, thermolume treatment with blue glass over the pericordium (front of heart) will be unequalled, as the blue will reduce the excitement while the animating light and perspiration in other parts will relieve the heart. The heat must not be too great at first before perspiration commences, a little cool air being admitted by opening the cover a little. The patient's feelings will be a guide in such a case.

Massage could be made very useful, but in case of excitement no hot hand should ever be placed directly over the heart, but should make outward passes a little distance away from it and should animate all the limbs and feet to draw the blood away. When the heart beats feebly and the system is weak, warming and animating foods and some massage and light as warm as red-purple and yellow-orange may be tolerated. Of course, to reduce extra excitement, very hot foot-baths with mustard and ending with a cold dash on the lower legs and feet, would be very useful, and the patient should lie quietly in bed, avoiding all extra movements.

III. THE LUNGS AND OTHER RESPIRATORY ORGANS.

1. **Names of organs.** After the mouth and nasal passages have been passed, we come to the pharynx or throat, then to the larynx or the more direct vocal center, then to the trachea or windpipe which branches off into the right and left bronchial tubes with their bronchioles and other ramifications. Around these ramifications are built the lungs with their countless millions of cells through which the oxygen of the air must percolate as a purifying agency for the blood.

2. **The Vocal Apparatus** consists of chords of different lengths and sizes like those of a harp, and of a tube like that of a horn or organ. By means of muscles these chords may be made more tense to express tones on a high pitch or more relaxed to express lower tones. The larynx, as a tube also, can give the bass notes by increasing its size and the tenor and soprano notes by contracting it, although the ligaments themselves are considered the main instruments of vocalization. In the human ear are thousands of rods of Corti of different lengths by which the pitch of tones that the voice makes is ascertained.


cricoid cartilage
arytenoid
arytenoid
Rima Glottidis
Crico-arytenoideus lateralis
Crico-arytenoideus posticus
Crico-thyroid
Thyro-arytenoideus
Thyro-arytenoideus
Thyro-arytenoideus

and nostrils is necessary and guttural, palatal, dental, labial, linguo-dental and nasal sounds are necessary. Consonants require more or less closure of the oral passages and vowels their opening. The greatest euphony in a language, other things being equal, requires the alternate use of vowels and consonants, the best example of which is seen in the Italian language. The falsetto tones that the male sex is able to make have not as yet been satisfactorily explained.

3. **Sore Throat**. This term may include the inflammation of the membranes of the tonsils and surrounding parts (Tonsillitis or Quinsy) or of the pharynx (pharyngitis) or sometimes of the larynx. The gargling of ceruleo several times a day and spitting it out, each time ending off with swallowing a mouthful without gargling, seems to be the most effective remedy that has thus far been discovered, even curing a malignant sore throat and a cankerous mouth after the most approved drugs have failed. Manipulation from the throat, over each shoulder and down each arm to the hand, would tend to draw the blood away from a congested throat.

4. **Croup (Croupous Laryngitis)**. An acute inflammation of the mucous membrane of the larynx, attended with an exudation of tough mucus often called a " false membrane, " although it is not so complete a membrane as that which attends diphtheria. This is often a very serious disease and is attended with spasms of the epiglottis, a clogging of the vocal cords and the mucous membrane of the epiglottis in a way to cause dyspnea, hoarse voice or sometimes no voice at all, while the rapid swelling extending to the pharynx above or the trachea below may fill up the passages, if not checked, in a way to cause asphyxiation and death. The great thing to be done first is to rub powerfully the bare skin of the upper chest, extending brisk passes over the shoulders and down the arms. A hot foot-bath, as hot as the child can endure, would be useful, and some mustard added would assist. A good sweat bath would relieve the patient wonderfully and generally prevent danger. In the day time, if the sun is shining, a purple chromo lens or a purple disk focussed over the upper chest, although the attack may not be on at the time, would so animate and purify the conditions as to make the return of the disease much less probable, and solar sweat baths would be still more effective.

5. **Diphtheria** is considered synonymous with a putrid sore throat or malignant quinsy: a contagious disease which exudes from the fauces and breath and floats to some distance. The poison incubates in from three to five days, and is received more readily and violently by children who have not lived hygenically. Diphtheria affects primarily the throat and may go down to the windpipe. Membraneous croup may

commence at the larynx or windpipe and go to the throat. Croup is not contagious like diphtheria. Diphtheria causes great prostration and, on the usual stupid plan of treatment, is very fatal. The general treatment, as in croup above, is very effective, but if solar sweat baths are given, the instrument would have to be disinfected before others use it. Ceruleo gargles would be excellent and a little flour of sulphur could be blown into the throat from a glass tube or straw. The following excellent success in its treatment in which only about one case in thirty was lost, is quoted from the New York Medical Times: "Dr. Hennig of Koeniesberg at a recent congress held at Wiesbaden, took a strong stand against the use of anti-toxin in diphtheria. The treatment which he himself employs, and which he had used in 1927 cases with a mortality of 3·06 per cent. consists in the use of lime water gargle and the continuous application of the ice cravat."

But now, to crown the whole, my friend J. J. Fox, M. D. of Flushing, New York City, lately for a time, of California, who may be termed a Chromo-homeopath, has a method in which he cures all cases of Diphtheria having lost only three cases in twenty years, and these before he had fully learned to apply his method. Over fifty of these cases were of the malignant type and a vast number were of the more common diphtheria sore throat. A condensed view of his plans is as follows:

Strip the patient entirely and wrap him in a blanket. Then wring a sponge or cloth out of cold water and pass it over the face, neck, and whole body until well wet. Then wrap other blankets around him so as to promote reaction and sweating to eliminate some of the poison elements of the disease. Repeat these baths every two hours night and day until the fever is much reduced, not ceasing in their use until the throat itself is much better and the fever is gone. After this the baths may be given less often, or the heat may be drawn off by cool sponging.

In case of great heat, delirium, foul breath, membrane dark and still spreading, give the baths every fifteen to thirty minutes especially if the reaction is good.

If patient is weak, vitality low, cold feet and reaction poor, give hot and stimulating drinks, put hot water bag to feet and give the baths of only moderately cool water.

Where profuse perspiration follows the bath, great progress is made at once. The treatment must often be continued for many days.

Dr. Fox also cured various cases of ulcerated or abraded lips by focussing a sun burning lens on the parts, which scattered the perverted blood and caused all pain to cease immediately. He cured several cases of Diphtheria by cauterizing the throat in the same way, through

the open mouth, though I believe a good work could be done by cauterizing the external throat.

The lack of philosophy among medical men makes them still cling to the system of inoculation in which the rottenness extracted from the sores of some animal or human being is transferred to the blood of some person of good health. The following fact, I quote from the Medical Brief of St. Louis:

An unbiased and searching investigation conclusively demonstrates that anti-toxin is a failure. In Germany, France, Switzerland, Austria, Russia, and Great Britain, as well as our own country, the therapeutic record of antitoxin has been *failure*. With all the advantages showered on this base-born child of science— the endorsement of health boards, the free advertising of newspapers, the pushing of manufacturers, the acceptance and enthusiasm of the professional pedant and modish medical man - etc., the mortality rate of diphtheria, under antitoxin treatment, speaks for itself. Statistics of cures may be distorted and prejudiced by warring interests, but the most arbitrary disposition cannot meddle with, or pervert, the death rate. In Basle, Switzerland, the death rate from diphtheria is higher, since the introduction of antitoxin, than in any previous year since 1881. In Berlin, the records of the Charity Hospital show a steady increase in the mortality from year to year, since 1894, as a result of the antitoxin treatment. This, too, despite the fact that a large percentage of the cases had the disease in mild form.

In Trieste, nearly every case of diphtheria, occurring during twelve months, was treated with antitoxin, and the number of deaths during this period was greater than ever recorded.

In London and St. Petersburg, the mortality from diphtheria has increased since antitoxin was brought into use. The total number of deaths from this disease in London, from 1886 to 1896, were 2047, while during the short period included between 1895-97, there were 2533 deaths. In St. Petersburg, from 1892-94 there were 579 deaths, increased under the use of antitoxin to 1276. These figures require no comments.

I will close this subject by quoting from the associated Press dispatch the following horrible fact: St. Louis, M. O. Nov. 6, 1901. The thirteenth case of lockjaw, resulting from the injection of the antitoxin for the treatment of diphtheria, was reported to-day. Chas Cytron, eleven years old, was the victim. His death occurred several days ago but was not reported at the same time to the coroner."

6. **The Trachea and Bronchial Tubes** (See Figure 127.) The trachea commences with the broad cartilage below the cricoid cartilage of the larynx and extends about four and a half inches below where it bifurcates into the right and left bronchial tubes. Its sixteen to twenty imperfect cartilaginous rings extend only about two-thirds of the way around, the other third consisting of a fibrinous membrane. This arrangement gives free play and elasticity to the organ. The trachea is from three-fourths of an inch to an inch in diameter. Trachitis is the inflammation of its inner or mucous membrane.

The Bronchial Tubes commence where bifurcation takes place. The right bronchus is broader but shorter than the left, as the liver

being large on the right side prevents it from descending so low. It will be seen from its form and position that any impurities which may drop from above will oftener fall into the right than the left bronchus. These bronchi divide and redivide into bronchioles, continuing to lessen in size until the end in the minute globules of the lungs.

7. **Acute Bronchitis.** * This is sometimes called "cold on the chest," and is really a bronchial catarrh or in other words a congestion of the mucous membranes of all the larger bronchial tubes. Its symptoms are pain under the breast bone, coughing, oppressed breathing expectoration often streaked with blood, in many cases either nasal or laryngeal catarrah, sensitiveness to moist air or to currents of air. Acute bronchitis generally terminates within two weeks, though in childhood and old age it is apt to be more lasting and severe. While it is not generally dangerous unless it shall spread to the lungs, it causes much distress and lassitude.

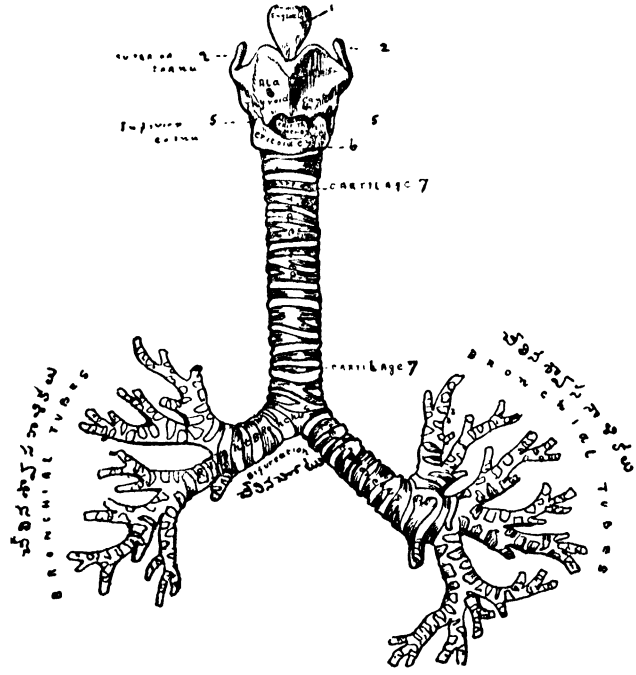


Fig. 127. Front view of the cartilages of larynx, trachea and Bronchi (after Gray)

The most effective treatment for acute bronchitis is the solar sweat bath in the thermolume with blue or sometimes purple glass over the thorax. A blue disk or a blue chromo lens is good, also massage

* This word in some leading dictionaries is pronounced bronchitis contrary to the sound of its Greek affix *it is*, inflammation, and contrary to the usage of nearly all civilized languages, in which it has the more pleasing sound of ee-tis. It seems absurd to make our scientific terms bend to the whims of the English language in opposition to

without working severely directly over the most excited part. Hot mustard foot baths are desirable. The best thing of all is the prevention of all of these diseases of the respiratory organs and many affections of the heart by a daily practice of deep and long breathing so that the blood may be well oxygenated and kindled into active life. The plan, adopted so effectively in India, of closing the right nostril and taking long inhalations through the left gives far better abdominal effects than breathing through the right nostril, which last is too much blockaded by the liver.

8. **Capillary Bronchitis** or "**Suffocative Catarrh.**" While Acute Bronchitis effects all the larger bronchial tubes, Capillary Bronchitis goes more deeply into the substance of the lungs and includes the very small terminal tubes or bronchioles. Measles and whooping cough in children especially, sudden changes of temperature lead to it. The prognosis is less encouraging than in acute bronchitis. Treatment much the same as in acute bronchitis. When it attacks the vesicles of the lungs it is sometimes called broncho-pneumonia.

9. **Chronic Bronchitis** or **Winter Cough.** Common to somewhat elderly persons does not usually cause much suffering though sometimes is attended with paroxysms of coughing in which yellow mucus is discharged. Solar sweat bath with purple light on the chest most effective. The beard in man is a great protector against colds and bronchial affections; in woman it is not needed, as I have shown on page 132 Part (2nd).

10. **Asthma, Nervous** or **Bronchial,** differs from the foregoing diseases in being a neurosis (nervous affection) of the respiratory organs. Caused by more or less bronchial irritation, cardiac or gastric disease, etc.,— the spasms and terrible feeling of suffocation are undoubtedly caused by the motor branches of the vagus nerve. Bright's disease, constipation as well as bronchial troubles, etc., increase the unpleasant feelings. Asthma of itself, although sometimes terrifying to the patient, is not fatal, except as it may lead to other complications. The whole system should be vitalized and purified by solar sweat baths with red and yellow glass for chronic asthma and with massage over the medulla and elsewhere. Blue and violet light coming through the blue glass of a disk focussed over the chest would be admirable during the spasms. Children and young men are more prone to this trouble than women, and the wealthy and idle suffer more from it than the active poor man.

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their original tongue as well as to nearly every language of Europe, and have taught my students to say bron-kee-tis, hepatee-tis, gestree-tis etc., Some of our best authorities now give the words without stating either long sound and this is some gain.

11. **Hay Fever or Hay Asthma,** or sometimes called *Autumnal Catarrh,* or *Rose Fever.* This is a catarrhal inflammation of the upper air passages, extending as low as the bronchial tubes and having spasmodic contractions at times similar to ordinary asthma. It is caused by dust or pollen of plants, cereals, flowers, etc., as well as by a weakened or susceptible condition of the nerves and nasal passages.

Treated as in asthma. The following case of Mr. W. J. Black. formerly of Cincinnati, Ohio, shows that there is a much simpler way of curing Hay Fever, than the spending of one or two months among the mountains.

September 23, 1884.

I want to say to you that for the last ten years I have had Hay Fever and very badly too. After taking it this time, which was on August 1st. I was entirely cured by just one bath in the thermolume, using the red glass well up on my throat. I have felt no symptoms of the disease since.

To this I will add that Mr. Black spent an hour in this one bath. Most persons I think would do better to spend a little less time and alternate the treatment with yellow upon the throat instead of the red, as nervous as well as vascular forces have much to do with hay asthma.

12. **La Grippe, influenza or Contagious Catarrh,** a depressing and distressing form of the diseases of the respiratory channels, resulting from some pathogenic vegetable germ conveyed by the atmosphere to weakened systems. It should be treated mainly as in the foregoing respiratory diseases. It is important that it be treated in a way to purify the system, especially as if otherwise treated, its poison is liable to spread and derange some most vital functions. Hence the usefulness of the solar sweat bath, as the sunlight being antiseptic destroys the germs while the sweating eliminates the impurities. In Brooklyn a lady who was confined to bed with this disease, took a long bath in the thermolume and was so improved that she immediately dressed and performed her household duties. Several baths are usually needed however.

13. **General Character of the lungs.** The lungs (see fig. 123.) are the great machinery for purifying and oxygenizing the blood. For this purpose billions of air cells are constituted with very thin partitions so that the countless streams from the capillaries may percolate through them and get in contact with the external oxygen. If the blood should become impure so that these tissues become clogged and broken down in just so far oxygenation will be prevented. If the vital aura should be deficient and the mental forces inactive, both the blood and the nerve force will be wanting in the fire of life and their movement will be sluggish. Such a condition is one of weakness and all disturbing elements are liable to make an unfavourable impression on the lungs

and elsewhere. To offset this it is important to solarize the body, to have daily times for long and deep inspirations and to cultivate the spiritual and mental forces.

14. **The Philosophy of Respiration.** Our medical scientists seem to be as much at sea in accounting for respiration as they are in explaining the systole and diastole of the heart. The late eminent Dr. Pepper says: "The act of respiration or breathing embraces two parts, inspiration and expiration, and there are two distinct methods of breathing, the abdominal and the thoracic. In abdominal breathing the muscles of the abdomen by contraction force the viscera upward against the diaphragm which becomes arched into the thoracic cavity and forces the air out of the lungs. Then the diaphragm contracting, forces the abdominal viscera downward and thereby makes room for the inspiratory air. In the thoracic type of breathing various external muscles elevate the ribs and sternum and thus materially increase the chest capacity causing inspiration." But this is mere theory. What causes this abdominal contraction? How do the external muscles elevate the ribs just at the right time to expand the lungs? Physiological movements must have a cause. The simple principles of electricity as manifested in the color forces, which I have already repeatedly explained, make the matter easily understood. As in the case of the heart, the bluish venous blood abounds in electricity, or the contractive principle. Every four or five beats of the heart will project a sufficient quantity of this blood into the lungs to cause a full contraction, which presses it into the countless capillaries and cells. The atoms of carbon being now brought into contact with the open air, are seized by the chemical affinity of the external oxygen and conveyed outside of the system in the form of carbon dioxide. The rush of the external atmosphere into the lungs is the process of *inspiration* (breathing into) and expands the thorax in two ways, 1st by the bulk of the fresh air and 2nd by the reddening of the blood itself which gives some extra heat and consequently expansion. The process of *Expiration* (breathing outward) receives its leading impulse from the contractive force of the bluish venous blood which includes both lungs, the diaphragm forming their floor, and the contiguous walls of the thorax.

In Kirke's Physiology the following passage is in line with the foregoing theory, showing that in the healthy system the number of respirations corresponds with the number of heart beats: "Variations in the number of respirations correspond ordinarily with similar variations in the pulsations of the heart. In health the proportion is about 1 to 4 or 1 to 5 and when the rapidity of the heart's action is increased, that of the chest movement is commonly increased also",

The number of respirations in a healthy adult is from 14 to 18 or 20 a minute; the number of heart beats is usually 70 to 75 in a an adult; at birth it is 140; in youth 90; in old age about 70. In standing, the heart beats a little oftener than in sitting but in reclining less often. In women it is a little more frequent than in man. When the system is heated or feverish, the pulsation is often very much more rapid.

There are nerves which can move the external intercostal muscles in inspiration and the internal intercostal muscles in expiration, and others that can contract the diaphragm itself and thus control respiration, but all of these are for use only for voluntary action which can work only for the moment. The chemism of the bluish venous blood working with the rubific influence of the oxygen, lies at the basis of all involuntary action of the lungs.

15. **The Pleura** (plural-pleurae). Nature is like the tenderest mother in her careful way of protecting all the organs of the body, placing a soft and strong cuticle or skin over the whole external body, an epithelium moistened with mucus over the internal system, a duplex envelope called the pericardium around the heart; another duplex envelope of the lungs called the pleura, etc. I say pleura, but there are really two pleurae, each one being entirely separate from the other, the mediastinum forming a kind of connecting link and general cover of the heart, etc., see fig. 128. The outer pleura or pleura costalis (pleura of the ribs) is composed of dense fibres; the inner pleura which forms the more direct covering of the lungs is the pleura pulmonalis or visceral membrane. Fig. 128 shows the cavities of the right and left pleurae, the cavity of the pericardium, etc.

16. **Pleurisy, or Pleurities**, sometimes called "Stitch in the side." This, of course, is inflammation of the pleura, either of the left or right side, sometimes of both sides simultaneously which is especially serious. Pleurisy is attended with shivering, headache, severe lancinating pains, short painful breathing and coughing — often caused by cold draughts after sweating, or wet feet, etc. Solar sweating with blue light over chest is especially good — also warm applications over the parts and hot mustard foot baths. If no thermolume is at hand, an alcohol sweat bath would give some relief.

Our medical men are supposed to have abandoned bleeding but in pleurisy and in many other cases, if they find a considerable arterial pressure, they at once resort to venesection and thus pass away the precious life fluid, or, to make a bad matter worse, give hypodermic injections of opium and doses of veratrum viride or aconite or the fearful hydrargyrum (mercury). It is generally thought that calomel,

corosive sublimate and other forms of mercury have been nearly dropped out of use, but a druggist informs me that mercury is still prescribed in as many as a hundred different forms. No wonder then that persons who have been accustomed to this treatment are so liable to have rheumatism, neuralgia, paralysis, etc., fastened upon their systems.

17. **Pneumonia or Pneumonitis, called also Pleuro-Pneumonia, Acute Pneumonia, Lung Fever, Croupous Pneumonia.** This severe disease, so often fatal under ordinary medical treatment, is all the more apt to come when the blood is impure, or the skin is inactive or when the vital force is depleted by overwork, especially if draughts of cold air strike one on the cervix. The air sacs and vesicles of the lungs become more or less suffused or blockaded with the blood so that the breathing becomes difficult and short and a severe chill, pain, fever, and sputum of a rusty looking color take place. The skin is very hot, the pulse very rapid and the temperature may reach 103-104° F., As is the case in all respiratory diseases, those accustomed to alcohol have a doubly hard time to pull through. "Pneumonia of drunkards," says Dr.Daniel E. Hughes, "almost invariably terminates fatally." The area of air cells that are not suffused with blood becomes so diminished that respirations are more than doubly rapid, and thus gain on the usual rate of pulsation. "The patient draws from 40 to 80 pulsations a minute," says Dr. Dacosta "but the pulse although rapid, does not quicken in proportion. Pneumonia, therefore, forms an exception to the rule that with greater frequency of breathing the pulse rises."

The treatment, if taken before the patient is too weak to sit up, should be in a thermolume with the heat put on gradually. If the patient should feel a little faint, tie a cloth wrung out of cold water around the head, the wet part covering forehead and temples only. The solar sweating baths will give a wonderful relief and prove to be much more scientific and effective than blood letting. At the author's residence in New York, during the winter when pneumonia was such an epidemic, having carried off Dr. Austin Flint Jr. and many other prominent persons, a lady of frail health was taken very severely with the disease. Cold air from a slightly opened window, though unperceived at the time, was the starting point of the whole trouble. At a time when the pressure of the blood was so great that it seemed as if asphyxiation and death must soon occur, a sheet wrung out of very hot water was wrapped around her body, and a number of blankets and comfortables placed above her. In from half to three quarters of an hour, a thorough perspiration broke forth and the crisis was past. From that time she was convalescent.

18. **Pulmonary Consumption, or Consumption, or Phthisis.** It is estimated that every seventh person dies from consumption. But the nations that go naked in the sunlight and fresh air scarcely ever have any such diseases as ordinary scrofula, or the kind of scrofula that is termed tubercular consumption. The kind of vegetable organisms that are turned tubercle bacilli taking effect in blood that is not very pure or active, develops scrofula when manifesting in the general system, but the same thing is called phthisis or tubercular phthisis when taking root in the lungs. These tubercles (bacillus tuberculosis), were discovered by Dr. Koch of Germany. They are grayish, semi-solid masses about the size of millet seeds, soon undergo a softening, cheesy transformation which tends to destroy the lung tissues themselves and thus blockade the vesicles.

Ordinarily phthisis is not contagious, but the sputa if left to dry and become pulverized, may float off in the air and being inhaled by those whose lungs are a little weak may inoculate them with the disease. These bacilli are found abundantly in the air of hospitals in which consumption is treated (Coronet). For this reason no spittle of consumptives should be allowed to dry on floors. The deposit of the tubercle is generally at one apex. Phthisis comes extensively from inheritance and physicians generally believe that it is really incurable, although the patient's life may be prolonged for years. I shall aim to disprove this point, farther on.

Symptoms. A dry hacking cough, a wasting of flesh and strength, and some sharp pains. The beginning of the softening causes increased coughs, yellow sputum, dyspepsia, severe night sweats especially as morning approaches, hectic fever, flushed cheeks, sometimes bloody expectorations, forming of cavities, pulse rapid and weak, oedema (dropsical swelling) of feet and ankles and soon decease. In the midst of the pains and depressing spells of consumption, the sufferer is often buoyed up by the hope of getting well, almost to the last stage of the disease. This may be explained by sarcognomy which connects the lungs and thorax with the intellectual and to some extent the spiritual part of the brain. Those whose inner vision is opened can see a refined red emanation from the lungs and a very refined blue emanation from the front brain, and these colours forming a chemical affinity with each other, impart some of the brightness of mental action awakened thereby.

19. **Treatment of Phthisis.** Chromopathy is to furnish a new era in the treatment of consumption. The solar sweat bath is par excellence the method of methods. The electrical part of sunlight which includes the blue-green, blue, indigo and violet rays, is thoroughly antiseptic,

in other words it destroys the germ itself and by aid of the sweating, throws it and other impurities out of the system. A sheet of blue glass which transmits the blue and violet rays should be placed over the lungs during many treatments, especially if there is any hemorrhage, as the blue is a great styptic. This blue should not come down as low as the stomach unless the stomach should be especially hot, as the digestive powers should be active instead of too quiescent. Some may say that a consumptive patient, having become thin and haggard with the disease, might be too much weakened by sweat baths, but such should remember that solar sweating is quite a different thing from sweating by means of heat that is not luminous, being more vitalizing and strengthening. To prevent too powerful sweating, the opening in the cover of the thermolume can be made a little wider to let in the outer air, as this cover is made of oil-cloth. If there should be no danger of hemorrhage the purple or even the red or orange glass instead of the blue glass should sometimes be placed over the lungs as animating forces. While the impure elements are thus being eliminated, the patient must not be alarmed if the stirring up process should give a little restlessness during some of the first treatments, but they will give decided relief also. The massage of a magnetic hand over the limbs and extremities would be very useful and holding a warm hand over the medulla for several minutes would carry through the vagus an animating influence to lungs, heart and stomach. If there is no revolving chair in the thermolume, an ordinary chair can be placed sidewise as a seat and the patient can turn around and let the light come on the back a portion of the time, as it will thus reach the lungs through the spinal nerves. For a first bath, twenty minutes will be long enough for most delicate persons, after which the time may gradually be increased.

I wish to call attention to another point. After the disease has started in for a while, the yellowish cheesy formation has become established. The law of force is that similars repel or intensify each other or drive each other apart as two similar streams rushing together will animate each other and scatter each other's forces. I deem it highly important then that the yellow light should be used a number of times to wake up and carry off in the sputum this more dormant yellow mucus and pus from the lungs.

20. **Different kinds of Consumption.** Medical men have mentioned four varities of Phthisis, the *tubercular phthisis* already spoken of; *acute phthisis* or *galloping consumption* which lasts only from four to twelve weeks before terminating fatally, and is caused by the rapid deposit of tubercles over the body and especially over the lungs;

Pneumonic phthisis or a kind of a cheesy pneumonia; and *fibroid phthisis* or cirrhosis of the lungs, that is, a tendrinous or fibrous disease of the lungs. Treatment mainly the same as the foregoing.

The mean duration of consumption, from the time the first tubercle is deposited, is twenty three months but many cases last only from four to nine months. Dr. Da Costa mentions a case of galloping consumption that proved fatal in thirteen days.

21. **Solar treatment of Consumption.** A little more concerning the Chromopathic treatment of phthisis would be advisable, from the fact that in difficult cases of this terrible disease this method seems to be almost the only hope, however much it may be proclaimed that "consumption cannot be cured."

On page 282 of the Principles of Light and Color, I have quoted from the work of Dr. S. Pancoast of Philadelphia, on "Blue and Red Light" a case of Consumption in the third degree, as he definitely proved. He usually used the red and white light of the sun together and declares that this case was completely restored to health in two and a half months in this way.

On page 344 of Principles of Light and Color, is given a case of consumption in a lady who had it at such an advanced stage that if she attempted to walk a hundred yards she was exhausted and had a severe spell of coughing. After four treatments in the thermolume combined with massage, she could walk two miles with ease and after seven treatments she could do all kinds of severe work.

A Mrs. C. of cincinnati, who had lost a sister by consumption, was taken in the same way and was on the downward road. Her husband, quite alarmed, told me he would give up his large business there and move to another climate if I thought it was necessary. I told him it would not be necessary. She then took a disk with its five colors of glass, focussed it over her lungs and let the sun come all over her bared body, sometimes one or two hours at a time. When I saw her nearly two months later she was so rosy and well rounded, and in such perfect health, that I scarcely knew her. Some would presume that a person would become sun-burned by these long exposures, but sunlight coming through the glass of a window, has the most of its burning qualities strained off.

Other cases could be given but these are sufficient.

The danger of red light or of a red undervest over the lungs when there is a tendency to hemorrhage must be emphasized. I informed a young man who sometimes had this bleeding, of the danger of red light for him. He did not believe me and concluded to try it. The result was a fearful hemorrhage that gave him a good fright.

22. **The Diaphragm** is the floor of the thorax and the roof of the abdomen. In front it connects with the ensiform cartilage which is attached to the sternum; at the sides, to the inner surface of the six lower ribs and posteriorily to two tendinous arches, the *ligamenta arcuata* (arched ligaments) and to the anterior surface of several lumbar vertebrae. There seems to be a misapprehension among physiologists of the nature and working of the diaphragm.

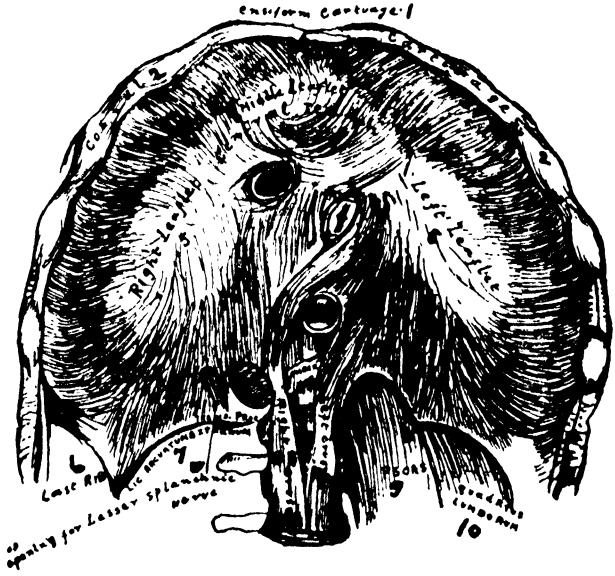

Fig. 128. The lower surface of the Diaphragm (Gray).

They speak of the diaphragm as contracting or expanding and thus influencing the lungs in their inspirations and expirations, or controlling the abdomen, crowding the feces onward, etc. But what causes this ceaseless movement of the diaphragm which in its ordinary action is involuntary? What chemical impulse sets it in motion? Can effects take place without a cause? Has it not once entered the heads of our scientists that the lungs are the great central power of the contiguous organs, drawing the arch of the diaphragm upward and the ribs downward by their contraction or lowering the diaphragm's curvature and pushing the ribs outward during their expansion? We have already seen how the lungs are contracted by the bluish venous blood which is thrown into them at every heart-beat, the respirations being swift or slow in proportion as the pulsations are swift or slow. There are cervical nerves which connect with the diaphragm, through whose channels the brain can send its electrical forces to make it move, aside from the influence of the lungs upon this organ, but this comes from a special

volition. The involuntary system is a mighty piece of machinery of a thousand wheels such as the heart, lungs, capillary forces, peristaltic actions of the bowels, cardiac, hepatic, renal and nervous phenomena which are illustrations of the never ending automatic processes of chemism. Even when the mind acts to modify the movement of the diaphragm through the phrenic nerve, or the movement of the lungs through the vagus, or the special control of other parts of the system, it is still working through the wonderful processes of chemism, as I have shown in Part Third of this work, but is no longer automatic. The action of the diaphragm is of immense importance in the process of respiration and at times in its action on the abdominal viscera. While it is powerfully influenced by the lungs it also forms a movable instrument by which, aided by the volition, it can influence them.

23. **Coughing, Hiccoughing and sneezing** are caused by the sudden closing of the glottis and more or less spasmodic contraction of the lungs and diaphragm. In *coughing* the blast of air opens the vocal cords and passes mainly through the mouth. In *sneezing* it is deflected mainly through the nostrils. Profound *hiccoughing* has, in several cases caused death. I believe that no such result need ever take place, if a little reasoning is done. Spasms are contractive forces and contractive forces are always electrical (cold). Cold is offset by heat. A very warm sweat bath in a thermolume or if a thermolume cannot be had, in a vapour bath, would generally accomplish the purpose. Spasms are caused also by inverted electricities, that is electricities that are turned toward the brain or nerve centres instead of from these centres, in their proper motor nerves. Downward passes of the hand then would help balance the perverted conditions. Ordinary hiccoughing is generally stopped by taking a long inspiration and "holding the breath" as long as possible and then immediately taking another.

24. **The Prevention of Pulmonary Difficulties** depends to a great extent upon the condition of the blood. A series of baths in the thermolume is the most important means for purifying the blood and destroying all virulent germs whether tuberculosis, cancerous, or syphilitic. But if one is not able to have a thermolume, a method of vast importance is *deep breathing*. To have the oxygen reach all the countless millions of air cells with its enkindling power, the inspirations should be very long and deep through the nostrils, if these are not closed by catarrh, and then the expirations should be made very slowly through the mouth and nostrils. A dozen of these respirations should be taken in the morning and half a dozen or more in the evening. Cerulegas described in Principles of L & C, page 324, also on the 68th page of this work, would be admirable for the middle of the day when the sun is shining, or some

times rubigas. Those who cannot afford solar instruments, can receive much benefit by letting the sun come upon the bare body, first upon one side and then upon the other, leaving the upper head in shadow.

IV. THE STOMACH AND THE ALIMENTARY CHANNEL.

1. **The Alimentary Canal** includes the Esophagus which commences at the back part of the mouth where the pharynx ends and extends,

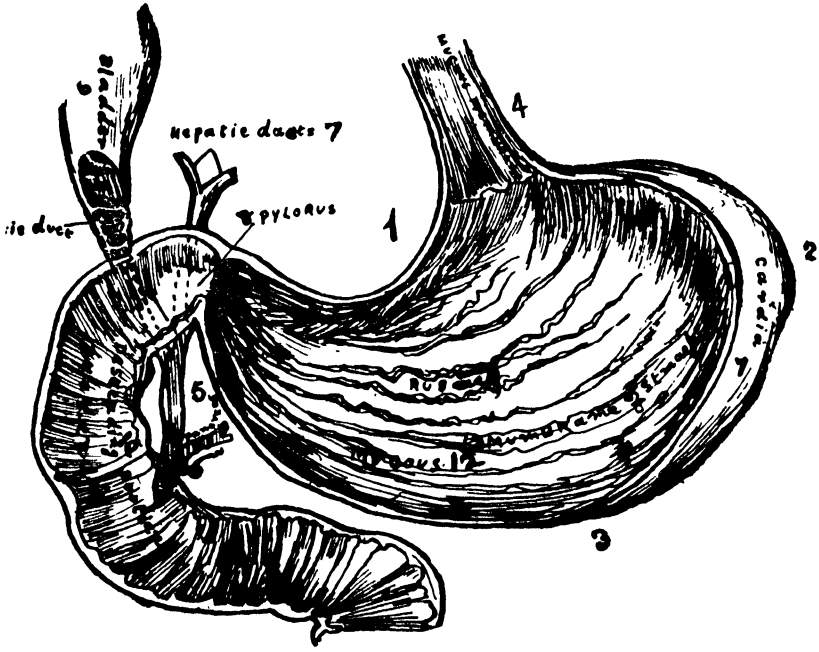

Fig. 129. The Stomach (Mucous membrane) with the duodenum or Second Stomach and Gall Bladder.

1. The Lesser curvature of stomach; 2, the larger end called also the fundus or cardiac end, being near the heart; 3, its greater curvature; 4, the esophagus or gullet, showing the diverging longitudinal fibers of the mucous membrane; 5, the common bile duct (ductus communis choledochus), formed from the cystic or gall bladder duct and the hepatic duct; 6, the union of the liquids from the gall bladder and pancreas before they are poured into the duodenum.

to the stomach, which is a widening out and a central point of digestion in the great food channel, extending next through the pyloric gateway to the three small intestines called the duodenum or second stomach, the jejunum and the ileum, which last merges into the large intestines, called the ascending, transverse and descending colons, the sigmoid flexure shaped like the letter S, and the rectum ending at the anus. The whole length of the alimentary canal is about thirty feet, of which the small intestines occupy twenty feet. The alimentary canal

in every part has a mucous membrane. When the blood is imperfect or the system becomes too negative and depleted of its vital ethers, sudden changes of weather or streams of cold air striking the person, after the pores have been opened by perspiration, cause the influx of contracting forces to be greater than those which are efflux, the consequence of which is, that these mucous membranes become congested or clogged in a way that is termed *catarrh*. At such times we say we have taken cold, especially if this catarrhal condition affects the nostrils, throat and larynx.

2. **The Location of the Stomach.** The stomach is immediately below the diaphragm and liver, above the transverse colon, next to the parietal layer of the peritoneum or front wall of the abdomen, extending across the epigastrium and occupying more of the left than of the right hypochondrium. Behind the stomach is the pancreas; behind the left end of it is the spleen, while the lower part of the solar plexus is behind the upper part of the stomach. When a large amount of food has been taken, the stomach sometimes crowds against the diaphragm and heart and lungs in a way to cause difficult breathing, palpitation, etc ; tight lacing or use of corsets is not only apt to crowd lungs and heart but to push the stomach downward upon the lower viscera.

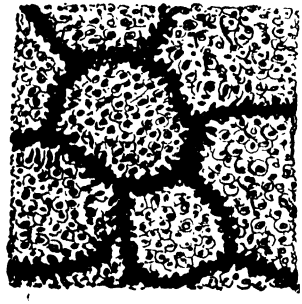

Fig. 130- Pits in the mucous membrane of the stomach, magnified 20 diameters.

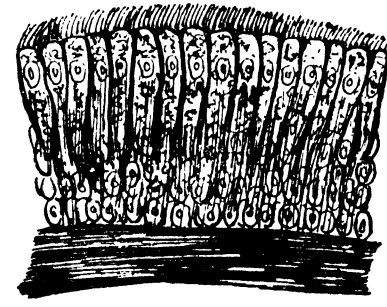

Fig. 131. Ciliated epithelium from the human trachea (magnified 350 times). a, innermost layers of the elastic longitudinal fibres. b, homogeneous innermost layer of mucous membrane. c, deepest round cells. d, intermediate elongated. e, Superficial, bearing cilia.

3. **The Esophagus or Gullet** is about nine inches in length, reaching from the pharynx to the stomach. Its outer membrane is muscular, the external part being longitudinal, its inner part being circular and transverse at its top and bottom and somewhat diagonal in the middle. As the food passes along, the electricities of each part become kindled

and the muscular rings become constrictors to crowd the elements to be digested toward the stomach. The middle cellular membrane, like all regions of cells, must naturally have a life giving principle to animate the other membranes. The interior membrane is mucous, which helps the food along by its lubricity.

4. **Character of the Stomach.** The stomach has four coats. Commencing with the outer and going interiorly, 1st, the serous, which consists mainly of peritoneum; 2nd, the muscular which consists of three sets of fibres, the longitudinal, the circular and the oblique; 3rd, the cellular sometimes called the submucous coat, connecting the muscular and the mucous coats; 4, the mucous membrane, which is thin at the cardiac extremity but thicker towards the pylorus. The mucous membrane with which the food comes in contact has a great variety of pits, projections, rugæ, tubes, etc., not only as glands for secreting pepsin and other elements connected with digestion, but as points and surfaces as the ingesta moves over them. See figs. 131 and 132.

5. **Digestive Processes.** When we take some food or some delicious fruit, preparatory to eating it, it sends forth pleasing odors which stream up into our nostrils, and thence into our salivary glands, the nerves of which connect directly with the organ of taste. The mind, too, anticipating the pleasure that the food will give, sends its enkindling forces to the salivary glands and the regions of taste. The salivary glands such as the parotid (meaning near the ear), the submaxillary (the lower jaw), the sublingual (under the tongue) and other glands are poured forth into the masticated food, making a pulpy and viscid mass nicely fitted to glide smoothly along the throat and esophagus to the stomach. The ptyalin of the saliva helps convert the starch of the food into sugar, and the alkaline nature of the saliva reaching the stomach calls forth the gastric acid from its hiding places in the pinnacled glands, and a chemical action is aroused

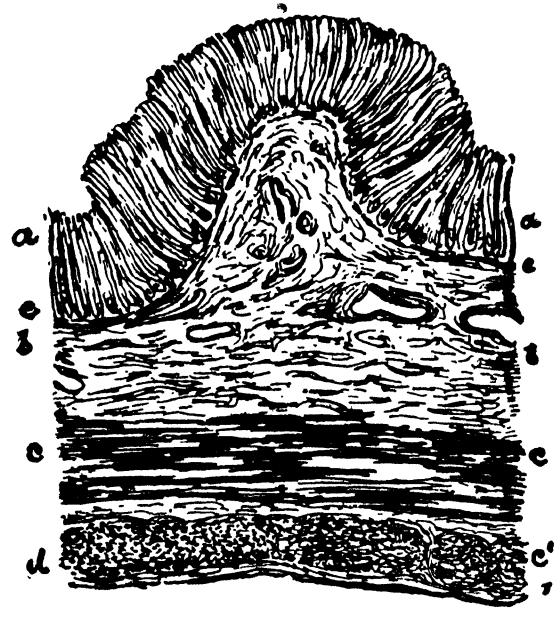

Fig. 132.—Section of human stomach: a, mucous membrane with gastric glands; b, submucous coat containing blood vessels, lymphatics and nerves; c, c, muscular tissue; d, serous coat.

which sets the whole stomach into a brisk churning motion. The food itself consists of a number of chemical elements which, appealing to the chemism of the coats of the stomach, calls forth its pepsin and helps to set the whole contents into a kind of spiral whirl until they are converted into *chyme*.

The leading constituent of the gastric juice is the ferment pepsin, the most important acid being the hydrochloric (muriatic). The submucous coat of the stomach is filled with blood vessels and nerves and must be a source of great activity. Fig 132, taken from Johnson's Encyclopaedia, gives a fine idea of the surface of the stomach greatly magnified. It is evident by looking at these coatings that the fiery character of alcoholic drinks must badly inflame and pervert the mucous linings so that in a short time a person will be unfitted to perceive the delicious flavor of foods and will be led to crave stimulating and unwholesome elements. Inflammable conditions will be liable to occur, also, if too much use of undiluted peppers and hot sauces should be used, although there are certain cold-blooded persons who will be benifited by these hot condiments when well diluted with the food. Children, full of excitability, as they are apt to be, will grow up better and stronger, if not fed upon coffee, tea, beer, wine or other exciting elements.

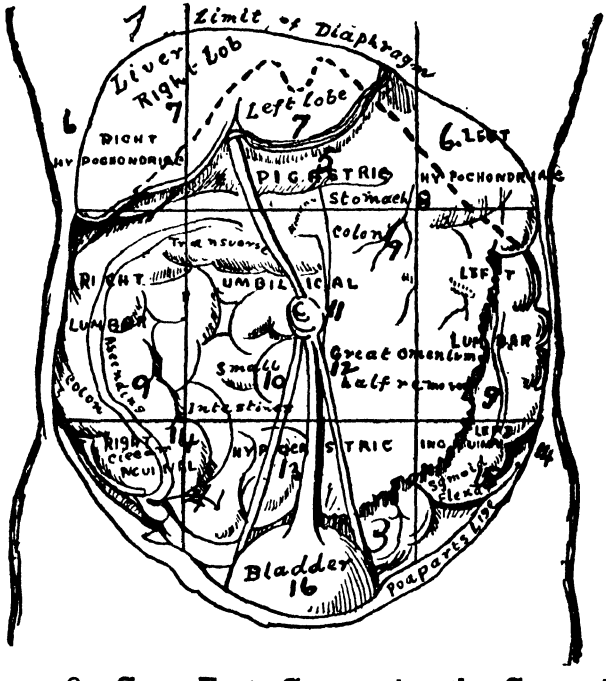

Fig. 133. Departments of Abdominal organs. No. 1 shows why the diaphragm is higher on the right than on the left, being pushed up by the liver. For this reason, too, the right lung is shorter than the left, although it has three lobes instead of two. No. 2 is the appendix, which, when inflamed, gives the condition of appendicitis that is talked so much about; 3, the rectum; 4, the caecum (blind), being the point where the third small intestine, the ileum, ends and the colon or large intestine commences; 5, region of solar plexus which develops from the two semilunar ganglia.

6. **Some Facts Concerning the Stomach.** When the food is mainly out of the stomach, its sides lie nearly contiguous to each other and

is small. When moderately filled with food it is about 12 inches long and 4 inches deep.

The time required for digestion is usually from 2 to 4 hours.

The quantity of gastric juice secreted in 24 hours is estimated at from 10 to 20 pints; the amount of saliva, from 1 to 3 pints.

The projections and pits of the mucous lining are largest in the pyloric end of the stomach. This part being small seems to concentrate the forces and thus develop the parts more largely.

7. **Moderate Drinking.** We know that in the United States, England, and most other countries, moderate drinking has led countless thousands into the drunkenness, brutality and ruin of full alcoholism, but France is always brought up as a country in which moderate drinking takes place without leading to intoxication, an admitted fact. But does this prove its safety? M. Mesureur, one of the most eminent of living Frenchmen, admits that "for *Continuous Respectable* alcoholism, the screwing up of nerves and heating of blood day and night, year in and year out, France goes ahead of all countries, producing in its train tuberculosis, epilepsy and insanity."

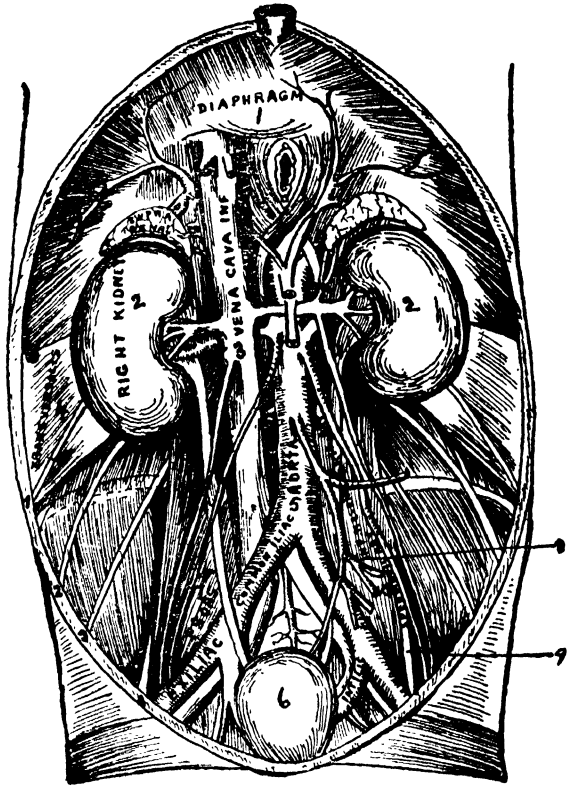

Fig. 134. Diagram of the Abdominal Aorta, Inferior Vena-cava, diaphragm, Kidneys, ureters, bladder, etc., (Holden)

8. **The Small Intestines.** I will defer treating of the diseases of the stomach until a brief survey of the remainder of the alimentary canal has been taken. Fig 135 will give a simple plan of the alimentary canal without presenting the many curves and winding arrangements of the bowels which nature itself adopts.

Fig 135—The Alimentary Canal.

A VIEW OF THE ORGANS OF DIGESTION; a portion of the esophagus has been removed on account of want of space in the figure;

1, the upper lip, turned off the mouth; 2, its fraenum; 3, the lower lip, turned down; 4, its fraenum; 5, inside of the cheeks; 6, points to the opening of the duct of Steno; 7, roof of the mouth; 8, lateral half arches; 9, points to the tonsils, 10, velum palati, soft palate; 11, surface of the tongue; 12, papillae near its point; 13, a portion of the trachea; 14, the esophagus; 15, its internal surface; 16, inside of the stomach; 17, its greater extremity or great culde-sac; 18, its lesser extremity or smaller culde-sac; 19, its lesser curvature; 20, its greater curvature; 21, the cardiac orifice; 22, the pyloric orifice; 23, upper portion of duodenum; 24, 25, the remainder of the duodenum; 26, its valvulae conniventes; 27, the gall-bladder; 28 the cystic duct; 29, division of hepatic ducts in the liver; 30, hepatic duct; 31, ductus communis choledochus; 32, its opening into the duodenum; 33, pancreatic duct; 34, its opening into the duodenum; 35, upper part of jejenum; 36, the ileum; 37, some of the valvulae conniventes; 38, lower extremity of the ileum; 39, ileo-colic valve; 40, 41, coecum, or caput coli; 42, vermiform appendage; 43, 44, ascending colon; 45, transverse colon; 46, 47, descending colon; 48, sigmoid flexure of the colon; 49, upper portion of the rectum; 50, its lower extremity; 51, portion of the levato-ani muscle; 52, the anus. (W. B. Carpenter.)

The small intestines are covered in their interior surfaces with minute hairlike projections called villi (singular-villus), Fig. 136, which give a velvety surface, being only a twenty-fifth to a hundred and twenty-fifth of an inch long.

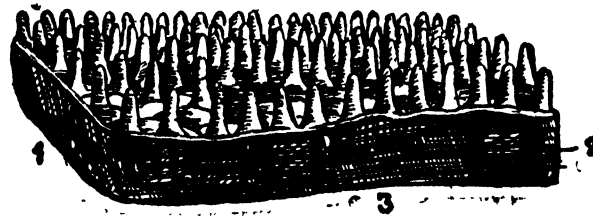

Fig. 136—Villi magnified.

These have small pores which are the mouths of the absorbent vessels. Fig. 137, will give a general idea of them. Small as they are, each villus is a little treasure house of arteries, veins, capillaries, nerves, and lymph vessels called lacteals, the whole of which is beautified by

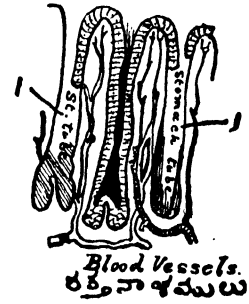

Fig. 137—Two of tha Villi (Gray and Watney)

a border work of columns. This figure gives imperfect idea of them. The spaces between them constitute tube-like follicles to assist secretion, the projecting points concentrate the electricities and the vermicular motion of the intestines themselves caused by the chemism of the ingesta, emulsifies the whole and aids in the transmission of the nourishing elements of the food through the thin membranes of these viscera for use in forming blood and lymphatic deposits. Kraus estimates that there are about four millions of these wonderful villi.

The small intestines are about an inch in diameter and diminish slightly as they go toward the large intestine. They are divided into three parts, the deodenum which means *twelve*, because it is twelve fingers or 8 or 10 inches in length; the jejunum (empty) because at death it is empty or nearly so, whose length is 7 or 8 feet, and the ileum which is about 11 or 12 feet long. The Greek for ileum means "turn about", from its winding character, and the term should not be confounded with

ilium which is a pelvic bone. The ileum pours its contents into the large intestine at the ileocaecum, at which place is the ileo-caecal valve that prevents them from returning.

We have seen that in the process of digestion the saliva converts the starchy elements of food, in part, into sugar. In the stomach this process is mainly stopped and it is only when the duodenum is reached that it is completed by the pancreatic and intestinal fluids. Starch is indigestible until it is converted into sugar, a substance that is easily soluble.

In the stomach the food is emulsifed sufficiently to become chyme, some of the soluble elements of which, such as sugar, saline matter and the gastric peptones are absorbed into the blood vessels. This chyme is passed on through the pyloric orifice into the duodenum where it is emulsified into a milky substance called chyle. The starch is made into sugar by the pancreatic and intestinal fluids, and for the digestion of fatty elements the bile and the pancreatic juice combine in a single tube just before the duodenum is reached and make an onslaught on them.

9. **The Larger Intestines.** It is quite common for anatomists to speak of the colon as consisting of four parts, the ascending, the transverse and the descending colon and the sigmoid flexure which merges into the rectum. I consider it simpler, however, to follow the plan of Dr. Eckley and some other writers, which has only three divisions for the whole of the larger intestine, namely the ascending colon, which passes up the right side to the liver, the transverse colon which passes under the stomach to the left side and the descending colon which passes down the left side, including the sigmoid flexure and rectum, the whole length being about five feet. Like the smaller intestine it has four coats and plenty of blood vessels but no villi. The longitudinal muscular fibres draw the sides into saccula (bag-like forms). This causes the ingesta to move more slowly than they do in the smaller intestines, which is doubtless desirable, as their chemism and vital elements having been lessened in their earlier pathway, they would require more time to impart nourishment to the blood vessels and tissues, and more time to work up any unassimilated elements that may have escaped the other parts of the alimentary canal.

The S shaped sigmoid flexure sometimes causes a telescoping of the bowels and great distress, and people wonder what advantage there is in such a feature. It is presumable that the great weight of fecal matter if not held back by this flexure, on the plan of a landing place in a stairway, would undoubtedly render it impossible for both the internal and external sphincter muscles at the anus to hold it subject to the will,

which of course would be disastrous. A nerve coming from the lumbar region of the spine is said to be one of the forces which strengthen these sphincter muscles. Those who are elderly or weak sometimes have much annoyance from imperfect sphincter action and should have the lumbar and sacral region of the spine well vitalized by massage and sunlight, also the cathode pole of a galvanic battery should be applied to the parts themselves when dormant conditions prevail.

The Sympathetic Nerve is the great leading centre of nervous action for the visceral system. When we say for instance that the vagus, coming from the brain, has a great influence on the stomach and its power of digestion, it is more proper to say that it kindles the solar plexus and through that the stomach.

10. **The Peristaltic Compressing Movement** of the esophagus, stomach and intestines, comes from the chemical affinities awakened by the pressure of the food against the membrane of these organs. This movement is some times termed *vermicular*, or wormlike. The longitudinal muscles tend to draw the parts upward, while the circular muscles have a downward pressure.

11. **Is Matter All in All** ? When I speak of the chemical power of food as it moves through the alimentary passages, or of the blood in causing pulsation, some may consider that I am following Haeckel in his monism, by placing all potencies in matter. Well, all potencies are in matter because a subtle something which we call spirit is in matter, but it is as unreasonable to say that all things are simply phases of matter as it is to say that all things are phases of spirit. The study of atoms or the material side of things, shows us that all chemical affinities and all formulating forces of every kind must include not only matter but an almost infinitely fine, elastic and infrangible substance termed spirit. Fine forces underlie the coarse. The millions of nerves throughout the villi and other parts of the system must include exquisitely refined ethers as I have already shown, but these ethers themselves must be vitalised by that which is still more refined. Thus much have I seen fit to say here at the eminent risk of being misunderstood by materialistic minds, although this position may be demonstrated by the severest principles of induction and deduction.

12. **Chemism and God.** As the ancients considered that everything was done by some good or bad spirit, so some theological extremists of to-day, instead of seeing the beautiful chemical action that works through all things, are ready to consider all the interior powers of the system as miraculous and divine, a direct work of God. Dr. J. H. Kellog, the famous medical head of the great Battle Creek Sanitarium, says in the

Pacific Health Journal that "digestion is done by divine power and not by human power. The gastric juice digests beef steak, a live oyster has actually dissolved two legs of a live frog in a dog's stomach, the stomach being preserved absolutely intact, and I make bold to say that not a living man on the face of the earth can tell why the stomach itself is not digested." Dr. Kellog should not assume that because he cannot solve this mystery of why the stomach does not digest itself no one else can do so. Medical men generally, being ignorant of chemical processes, often speak of the same mystery. The following points will make the matter simple, I think. I have already shown how the food itself, suffused with alkaline elements of the saliva will naturally call forth the acid gastric juices of the stomach; and how the food itself is a constant source of chemical affinity as it strikes the membranes of the stomach. As the food passes, the chemical action becomes less and less and the stomach becomes more quiescent, because as the walls of its two sides lie up against each other, being similars, they repel instead of drawing away the particles from each other by chemical affinity. When the stomach becomes quite thoroughly evacuated, however, the parts do begin to gnaw slightly on each other's tissue, producing the effect we call hunger. If the great forces that rule throughout the universe are to be termed God, how much nobler the conception of a Presence that rules by infinite law rather than by some special action in each case.

V. DISEASES OF THE STOMACH

1. **The Scope of this Work** being so extensive, it will be necessary to give only brief descriptions of the diseases and curative methods connected with the stomach.

2. **Gastric** * **Catarrh,** or Inflamed Mucous Membrane of the stomach, mild gastritis; feverishness; indigestion; gases and sour stomach caused by fermentation; sometimes nausea and vomiting cause imperfect gastric juice; improper mastication of food; over-rich diet; overheated drinks and especially alcoholic liquors. Sweet and fatty substances tend to develop those acids of fermentation called heartburn. A half a pint or more of hot water should be drunk on rising to cleanse the stomach, and ceruleo, the greatest of remedies for such conditions, should be taken on retiring, three or four swallows, or perhaps four tablespoonfuls at a time. The most terrible of cases of gastritis which must have reached far more deeply into the membranes than the mucous coat alone, have been cured by frequently sipping the ceruleo several times a day. When the submucous coat of the stomach becomes inflamed it is apt to carry red blotches all the way up into the mouth,

* Gastric is from the Greek gaster, the stomach.

painting the tip of the tongue and even of the nose, the latter being sometimes called a "brandy blossom." The submucous membrane is full of nerves as well as blood vessels and only the subtle forces of sunlight are sufficiently fine to thoroughly reach nerve force. Gargles of Ceruleo have proved greatly more effective for malignant sore throat, canker sores, etc., than any known drug, but some fresh ceruleo should be drank afterward each time.

There is a kind of very dangerous or **Toxic Gastritis** that is caused by mineral and corrosive poisons such as that by carbolic acid, corrosive sublimate, arsenic, potassa, copper, etc. The mucous and other membranes are more or less eaten away and most foods are rejected by the stomach. Milk and lime water are spoken of by physicians as the only foods that can be used at such a time and nourishment is to be given by enemas. But water magnetized by a magnetic hand, or ceruleo and purpuro alternately, may generally be tolerated and prove to be healing in their nature. To magnetize the water, jolt the fingers directly above the water for a minute or two.

3. **Chronic Gastritis** sometimes called **Drunkard's Dyspepsia** consists of a chronic gastric catarrh, thickened and dormant coats of the stomach, painful digestion, loss of appetite, vomiting, melancholia; caused by habitual use of alcoholic liquors, malaria, etc. The mucous membrane becomes tough like an extra coat. A purple disk or a purple lens should be focussed over the stomach and purpuro should be drunk with its animating yet antiseptic power; the blue should sometimes be used for healing the inflammatory condition, while at other times the amber lens or disk and ambero itself would be needed to kindle up the nerves, and quicken the bowels, the charged liquids being used awhile before meals. Perhaps the most important of all would be the solar sweat bath to clear out and purify the system.

4. **Cancer of the Stomach** (Gastric Carcinoma). This terrible and malignant growth, destroys gastric tissues, infects the lymphatic glands, perverts all digestive processes, causes frequent vomiting and brings excruciating pain. In fourfifths of the cases it attacks the pyloric end of the stomach. "It terminates," says an eminent physician, " in all cases by the death of the patient." In this case I must differ from him. J. H. Fulton, M. D., a Chromo-homeopath of Montreal, had a case diagnosed as cancer of the stomach, with excruciating pains and very severe vomiting each day. He gave frequent doses of cerulearsen high,* and had a blue lens focussed over the stomach a half hour to an hour twice a day. In seven days all vomiting ceased and the patient

* By this is meant a high attenuation of arsenicum in ceruleo (See pp. 113-115 of this work, Part 1st) The blue disk would have worked with still more power.

rapidly recovered. In other cases, in which a cancer or other tumor as surely fatal had attacked the stomach, ceruleo taken every few minutues for a while and a blue lens focussed over the stomach twice a day, cures have been wrought.

In cases treated by the ordinary method, disease endures about a year and the patient dies by exhaustion or hemorrhage or peritonitis. Should the patient become constipated by the use of so much ceruleo, a yellow lens or disk should be focussed over the colon, more on the left side than the right.

5. **Gastric Hemorrhage.** Blood thrown up by vomiting usually comes from some ulcer or tumor of the stomach; that thrown up by coughing comes from the lungs or respiratory organs. Ceruleo is the great styptic and sedative for the former, blue light on the skin is the remedy for the latter.

6. **Gastralgia or Stomach Colic, or Neuralgia of the Stomach.** These gripping pains are generally nervous spasms. A little daughter, whom I treated, was groaning every moment. After giving her one or two swallows of Ceruleo, all groaning ceased. "You do not groan any more". Said I. "No," she said; "that cured my colic in a second." Colic from inflammed bowels would generally require more time, and might need a cool compress rung out of Ceruleo.

7. **Dyspepsia.** A weak stomach and functional disorders of digestion of various kinds, are termed dyspepsia. Deficient gastric juice is one of the leading causes and numerous bad habits are at fault, such as bolting the food so rapidly and in such quantities that perfect insalivation and mastication are impossible; too much of fatty or rich substances; tobacco, alcohol or fiery elements of some kind; secret abuse with its exhausting effect; hatred, fear, jealousy, depression, with their poisonous influences; dissipation, late hours, lack of sleep, etc. Purpuro is the most important force for general dyspepsia, but for sharp pains, inflammed conditions, etc., ceruleo is important. In the morning an orange or some other acid fruit is good to neutralize the bile that may have drifted into the stomach during the night, or if the bowels are constipated, several swallows of ambero are important. It is very necessary to have plenty of good, healthy gastric juice to facilitate digestion and to act as an antiseptic against the over development of microbes and for the prevention of *vermes* (worms). Some hints for the development of gastric juice and general harmony are as follows: 1st, there should not be too much sameness of food, but generally that which the appetite calls for, as far as convenient, as this will make the saliva more abundant and satisfy the chemism of the system; 2nd, unless one's system is full blooded and warm,

water should not be drank during meals, as it dilutes both gastric juice and the saliva; 3rd, all strong coffee and tea are pernicious to a weak digestion, and the liver; 4th, exercise in the sun when not too hot and the out-door air are very important; 5th, keeping the system well cleared out by solar sweat-baths and use of rough towels; 6th, rocking the stomach briskly back and forth on rising, to kindle the vital and frictional electricities; 7th, atleast, in all ordinary conditions, those processes such as vomiting, which are unnatural and wrenching to the system should not be induced, the better method, when necessary, to flush the bowels or with laxatives to call the disturbing elements downward instead of upward; 8, the *starvation* system is another method which is contrary to nature and although fasting may sometimes be useful, the tendency of the gastric juice to feed upon the very coats of the stomach when it can reach nothing else, is a very well known fact. The famous Thomas Carlyle went through a fasting period and ever afterward was so afflicted with dyspepsia, that notwithstanding his high principles, he made a disagreeable companion in his own home. This fasting mania has carried many people to their graves before their time. The well known Miss Mollie Fancher of Brooklyn passed nine years wholly without food, but almost every vestige of physical power had been wrecked by an accident, and being under the rule of psychic force, was able to sustain life by absorbing the elements of the atmosphere.

The fearful nature of severe indigestion in darkening one's life and leading to a pessimistic and gloomy way of looking at all things, is an example in which matter is a more powerful factor than mind. On the other hand when the mind is kindled by love and faith and hope and joyous recreation and psychic power, until it feels that it can triumph over the ills of the flesh, it will sometimes revolutionise the imperfect body until it becomes well. This is mental power in predominance. We must learn how to use both in conjunction. Schopenhauer, the pessimistic philosopher of Germany, is said to have had a mother who was fretful with disease and he himself seemed to resemble her as he breathed forth his curses upon all things.

8. **Frigotherapie.** This is a method of applying an intense degree of coldness to gastric and other inflammation and extreme conditions by Prof. Raoul Pictet of Geneva, Switzerland. He cured himself almost immediately of gastralgia by subjecting his body with proper precautions to a grade of cold 110 degrees below zero, meantime having his body covered with fir and his head sufficiently outside so that he would not have to breathe the cold air. He did away with six years of suffering and gastralgia, since which he cured hundreds of cases of dyspepsia, nervous exhaustion from weakness, gastro-intestinal atony (lack of tone), etc.

VI. FOOD.

1. **Food** consists of those elements out of which the bodily organs are constituted and nourished.

2. **Food as a Force.** We have seen that all force requires a fluid form, hence when food is taken the teeth grind it, the saliva moistens it, the gastric juice, the bile and the pancreatic and intestinal juices change it into liquid form and this is refined and converted into blood and other fluids or semi-fluids for the nourishment of the body. The chemism of the food is then prepared to act freely in its secreting and eliminating process.

3. **Physio-mentalism and Drugs.** Physiomentalism, having its more common forces in the realms of refinement, usually avoids the use of drugs, the most of which have those characteristics of rudeness that we call poisonous, and makes use of the following:

Food Medicines including those foods that act curatively upon some portion of the body, or those simple remedies like sun-charged substances, high homeopathic potencies or other harmless elements that may readily be digested and assimilated on the plan of foods.

Antidotes, which though poisonous, are made necessary for swiftly offsetting by chemical affinity some other poison that has been taken by mistake. The question may be asked as to whether it would not be well to use tonic (poisonous) remedies in other cases in which toxic conditions occur, especially as one poison is neutralized by its chemical affinity. Not simply because we either cannot tell the exact nature of the poison or the exact quantity of the counter-poison necessary to neutralize it and hence a great number of diseases are communicated to the system. Physiomentalism has such a wealth of natural methods, including solar or other baths, the color forces, massage, electricity, heat, psycho-therapy and many other things, that it is not necessary to use coarse and dangerous elements.

4. **Nature's demands.** When Mr. Wright of Boston says: "What nature demands, God commands" is nearly correct and would be quite correct if he would add one word, thus: *What healthy Nature demands, God commands.* That is not a healthy nature when the gastric membrane is so inflamed by alcohol and overseasoned foods as to demand more and more all the time, until at last an insane extreme is reached. But the chemical affinities of the whole system speak forth from the stomach and alimentary tract reaching into the mouth, as well as elsewhere, and demanding those contrasting elements which the system so much

needs. In a bilious condition, for instance, the alkaline principle of the bile cries out so strongly for acids that even pickles will be greedily eaten and the cucumbers and vinegar usually somewhat indigestible, will prove entirely harmless. Some time ago when medical men were perpetrating the folly of forbidding cold water during fevers, a man who was almost dying from the torture of fever and thirst was told not to touch cold water; "It might kill him". But he concluded he would run the risk of dying rather than suffer so, and in the middle of the night, dragged himself in his weakness on his hands and knees to a spring and drank his fill. In the morning he was nearly well to the surprise of his physician.

As a general rule, then, we are safe in following nature's call in the kind of foods we take, or in abstaining from foods when we have no appetite. According to Aryan morals in the long ago: "We should neither eat without hunger nor fast with it." In morbid conditions of the stomach, however, we should beware of eating too much.

5. **Iced water.** Various cold blooded or dried-up specimens of humanity among physicians and editors are always clamoring against the use of iced water. They have sometimes drank freely of it and have found that it chills them and so may impede digestion. But thirst is a fever of itself and needs coldness. If ice-water chills some thin cold person, a very small amount will answer, a mere swallow perhaps. If one is very hot, the water should be sipped and drank slowly. Influenced by this absurd talk against cold water, our dining saloons are getting more and more into the use of insipid, half cooled water. While ice will not destroy all microbes, it gives the water a greater purity of taste after it has stood a while. "But when you drink ice-water," is the common remark, "it reacts and you grow warmer than before." Yes, then it doesn't chill, it simply reacts and you grow warmer. But do you know what this reaction does? It starts the vital heat into action, and vital heat is more safe and animating than ordinary heat. If you take a hot foot bath and you end off with a dash of cold water, the vital heat is awakened by its contrast and the feet become more enduringly warm. If you freeze your fingers, the tissues are liable to be destroyed unless you can plunge the hand briefly into cold water or snow to bring the refined vital heat to the rescue. Of course those who chill too easily to get up a good reaction, must take moderately cool water.

Hot water on rising is better than cold, as an amount of cold water sufficient to wash out the stomach, would be too chilling.

6. **The Philosophy of Hunger.** Hunger is a wise provision of nature to tell us when our systems need nourishment. A physiologist

has remarked that the impulse of hunger is a mystery that has not heretofore been explained. It seems to me that it need not be considered a mystery. When the ingesta have in great part passed onward out of the stomach, the gastric chemism, having but little food to act upon, works more or less on the tissues of the stomach. This causes an irritation which is communicated to the solar plexus and carried by the vagus nerve to the brain, thus imparting the consciousness of something wanting at the stomach. This consciousness we term hunger.

7. **Carbohydrates**, (starch and sugar) although very useful when combined with other food, will not sustain life when used alone. Dogs fed on sugar and distilled water, will starve to death in from 31 to 34 days or not far from the same length of time as if they were to receive no food. Olive oil and water have about the same result. Gelatine alone also soon ceases to be nutritive, though it is superior to the fats or the carbohydrates alone.

8. **Thermal foods.** *Fat* and *sugar* are sometimes called heating foods and *starch* may be ranked with them as it may be converted into sugar. These are termed non-nitrogenous. Nitrogen has warm elements as shown in its spectrum but on the whole its electrical colors preponderate. According to principles of force already explained elsewhere, a thermal force becomes intensified by a cold substance if not too large an amount of the latter be combined with it. The peppers, although red may predominate in them, owe some of their warming force to their electrical elements. Foods in which there is nearly a balance of thermism and electricity are far more delicious and wholesome than those which are one-sided, as the strawberry which combines the warm saccharine and red elements with the electrical element of acids. The amount of oily or fat substances eaten in frigid zones would soon clog and ruin one's system in the torrid zone, as in the latter case the electricity of cold air would be wanting.

9. **Nitrogenous Food or Albuminoids.** These consist of albumen as seen in the white of eggs and in other substances, such as the outside of grains, beans, peas etc., also in casein, gluten, lean meat, etc:, Although these substances all have warming elements they also have nitrogen and other electrical elements. They constitute an indispensable part of all nourishment, building up muscles, brain and to some extent the nerves. The white of fowl's eggs has over 20 percentage of nitrogen, no fat, 16 of salts and 78 percent of water. The yolk has 16 percent of nitrogen 30.7 of fat, 1.3 of salts and 52 of water. The inner and white part of grains, peas, beans, lentils, rice, potatoes, etc. has a predominance of starch. The United States Government after various experiments with different kinds of bread, seems to favour white

bread rather than either the so called Graham or entire wheat flour bread, mainly because the latter breads do not have the silex and the irritating parts of the grain sufficiently removed. It seems to me that in giving this opinion, all sides of the question have not been sufficiently weighed. I admit that the white bread has more nitrogen than it formerly had and is better in cases of diarrhea or inflamed stomach or bowels, but the fact that the entire wheat flour is richer in phosphorus which is so animating to the brain and nerves; richer in nitrogen and hence more upbuilding to the muscles; better for constipation, for lever, kidneys, bones, excessive adipose and dormant nerves, as signified by its yellowish colour, will show why it is that multitudes have acquired new health and vigour by its use. Besides this a certain amount of silex is useful for the elements of hair, etc.

10. **Obesity.** To reduce flesh is often a troublesome thing. The fatty tissues are a dormant kind of flesh and are composed of the white corpuscles of the blood. Rubio drank several times a day, two to four tablespoonfuls at a time, will kindle the red corpuscles and have a tendency to scatter or drive off the white ones. Solar sweat baths, if taken often and very thoroughly, will fire up and eliminate the dormant matter. Dr. Angell of New York, reports having reduced persons from two to ten pounds at a single very prolonged sun bath. One or two sun baths a week, if not well prolonged, might get the system in such a vigorous condition, that it would take no flesh as fast as it would eliminate it. A bath each day would be more effective.

Foods, of course, have much to do with the kind of flesh formed. Fatty or starchy or saccharine food will increase the adipose matter, if not balanced by nitrogenous foods at the same time, therefore potatoes, fat, rice, tapioca, white bread, cream, sugar, etc. must be offset by gluten mush, whole wheat flour bread, Graham gems, lean meat, acid foods etc. Prof. Schweninger, so skilful in reducing the weight of Prince Bismark and others, advocated the abundant use of fish, and not much drinking of water while eating.

Banning's starvation system of diet is out of date, as it does violence to nature's demands. *Gymnastic drill* and open air exercise are often very effective as fat reducers.

Laxatives such as ambero and the alkaline waters of mineral springs will carry off flesh. Ambero has reduced the body five pounds in one week, although used but slightly.

11. **Leanness.** While Obesity is unbeautiful and unwieldy, and tends to fatty degeneration of the heart, kidneys, etc., over-leanness is also unbeautiful and betokens weakness of the vital organs. Our physicians

are apt to consider it a hopeless task to add flesh to a lean person. Lean people will sometimes eat twice as much as fleshy ones, but are lacking in the power to assimilate their food. The great thing to be done, then, is evidently to kindle into action the nerves connected with the digestive system, especially those of the solar plexus and the vagus. It has been found that when the vagus in a rabbit is cut, all digestion ceases, but when a current from an electric battery is passed through this nerve to the stomach, digestion goes on again. Let a magnetic person place the fingers of his right and left hands just below the right and left ears at the point where pulsation is felt. This pulsation comes through the two carotid arteries by the sides of which are the two vagus nerves. These nerves (right and left) will carry a magnetic current to the solar plexus and stomach and awaken new action there. This should be kept up ten minutes or more on the skin. Then place the left fingers over the pit of the stomach and the right fingers over the spine somewhat higher so that a current can be carried through the spinal and sympathetic system to the same point. The author once treated a very thin little girl by these two processes and in one month she had increased eight pounds in weight. In the case of an old lady, whose digestive organs were so dormant that food, as she expressed it, "had no more taste to her than a stick of wood," the same method of treatment so awakened her appetite, that she was liable to eat too much. In case no masseur or masseuse can be had, one's own hands can be used some times over the two vagi, and the yellow light can be focussed over the epigastrium or the spinal nerves opposite with good effect. These methods without too much severe labour should conduce to the roundness and beauty of the human form and tend to finer health, and the prevention of dyspepsia.

12. **Fruits and nuts.** These are admirable in their place, but some intellects are so one-sided as to declare that they should constitute the only food of man, although there is almost an infinite world of foods all around us that contain the same elements. Nuts like cheese and even beans contain too much concentration of rich elements for some persons of weak digestion.

13. **Fruits as Food Medicines.** A physician of high standing makes the following remarks concerning fruits :

Under the category of laxatives: oranges, figs, tamarinds, prunes, mulberries, dates, nectarines and plums may be included; pomegranates, cranberries, black berries, sumacberries, dewberries, raspberries, barberries, quinces, pears, wild cherries, and medlars are astringent, grapes, peaches, strawberries, whortleberries, prickly pears, black currents, and melon seeds are diuretics; gooseberries, red and white currents, pumpkins, and melons are refrigerants; and lemons, limes, and apples are refrigerants and stomachic sedatives. Taken in the early morning an orange acts very decidedly as a laxative, sometimes amounting to a purgative, and may generally be

relied on. Pomegranates are very astringent, and relieve relaxed throat and uvula. The bark of the root, in the form of a decoction, is a good anthelmintic, especially obnoxious to tapeworm. Figs split open, form excellent poultices for boils and small abcesses. Strawberries and lemons, locally applied, are of some service in the removal of tartar from the teeth. Apples are corrective, useful in nausea, and even sea-sickness and the vomiting of pregnancy. They immediately relieve the nausea due to smoking. Bitter almonds contain hydrocianic acid, and are useful in simple cough ; But they frequently produce a sort of urticaria, or nettle rash. The persimmon, or diospyros, is palatable when ripe; but the green fruit is highly astringent, containing much tannin, and is used in diarrhea and incipient dysentery. The oil of cocoanut has been recommended as a substitute for codliver oil, and is much used in Germany for phthisis. Barberries are very agreeable to fever patients in the form of a drink. Dutch medlars are astringent, and not very palatable. Grapes and raisins are nutritive and demulcent, and very grateful in the sick chamber. Quince seeds are demulcent and astringent; boiled in water they make an excellent soothing and sedative lotion in inflammatory diseases of the eye and eyelids.

I should deem all very sweet pears, laxative instead of astringent and oranges that are especially acid would be more astringent than laxative, although the orange peal of all oranges, judging by the colour, must be laxative.

14. **Extremists.** Some persons condemn all cooked food, although cooking gives it more flavour, renders it more tender and digestible, causes the starch granules to burst and destroys some microbes that might prove very deleterious. Others want their tea and coffee almost boiling hot and by thus inflaming the stomach lay the foundation for future dyspepsia. Another way to bring on dyspepsia is to take fiery sauces, brandies, etc. and still another fearful way of doing the same thing is to swallow them pig like, in such haste, as to prevent proper mastication and insalivation.

15. **Food and Spirituality.** Some persons expect to spiritualize and ennoble their character almost solely by food. Of course refined foods and drinks will develop a finer mentality than gross ones such as pork, over greasy dishes, alcohol and the like and these in too great a quantity, but a high grade nature requires high grade elements for its noblest development, such as sunlight, the aura of superior persons, massage from a psycho magnetic operator, the psychic activity that comes from concentration of thought or "going into silence" as it is called, etc.

16. **A Flesh Diet.** Ultimately all flesh eating will be outgrown and what is called the *vegetarian system*, worked up into a variety of delicious foods, will take its place. Meat is said to putrify and develop microbes more rapidly than vegetables, and although it may give a hearty physique, is less adapted to a pure, high, intellectual nature. Many of the sages of the world such as Herodotus, Pythagoras, Socrates, Plato, Plutarch, Seneca and various eminent modern writers and philo-

sophers, have been vegetarians. The business of a butcher, which is the destruction of innocent animals, is brutalizing. The shooting of our pretty song birds and running down with dogs and guns, of animals whose meat is to be eaten, is not only a cultivation of a cruel disposition, but is a mistake, as the flesh of animals that die in the midst of excitement and fear becomes poisoned. In one case the flesh of animals that were maddened by hunters made every one sick who ate of it. The killing of animals makes war all the more attractive and eating their flesh makes it easier to run into alcoholism, as Dr. Richardson of England has so well proved. The expense of a flesh diet is also an argument against it with the great mass of people, who have such a struggle to live.

But it is constantly said by laborers and others that it is necessary to have meat for the sake of strength and that the Chinese and Hindus, going without meat are neither strong nor brave. The truth is that these nations live very much on rice which, being composed almost entirely of starch, is lacking in the strength giving and phosphoric animation of the albuminoids, which are so abundant in the outer coatings of wheat oats, peas, beans, etc. There may be an immediate stimulus in the flesh diet but various facts go to show that a vegetarian diet develops greater strength in the end. I will quote two facts from Dr. J. M. Peebles' work called Death Defeated, p. 82 :

"In a bicycle contest between three well known English clubs, the 'Shepherd's Bush,' the 'London Central' and the 'Vegetarian,' the disciples of Pythagoras won in both the three mile heats and the half lap contests, and were easy victors, leaving the flesh eaters in disgrace.

These performances ought not to surprise us, however, for five years ago in the celebrated walking contest between Berlin and Vienna, a distance of more than 360 miles, there were entered for the race, three vegetarians, two of whom arrived at the end more than twenty hours in advance of the first of the flesh-eaters."

Having given these facts, to prevent narrowness of conception, something on the other side of this question should be given. The killing of an animal need not be cruel. An ox struck on the head with a sledge hammer, falls unconscious in a moment and suffers far less than it would in a natural death. A fowl with its head struck off at a single blow, has all conscious sensation destroyed at once, its spasmodic action simply showing the obstruction of the electrical currents. A fowl's neck should never be wrung, as this must be a horrible cruelty. Fish, clams, oysters, etc., have but a very little sensation.

It will not do to say that all persons can suddenly change without damage a lifetime of meat eating, especially if their ancestors for centuries back have been accustomed to the eating of flesh. There are some persons, who are thus situated that will have a great longing for flesh, and if this longing is not more or less gratified, they will waste away and

die. Violent transitions are not generally wholesome ones. It is not necessary to be so bigoted, as not to touch meat if at a friend's house or if dining at a restaurant where almost no meal can be had unless a certain amount of meat be eaten. The whole world is so given to the "flesh pots of Egypt," that it is difficult to procure a delicious meal of fruits, cereals, nuts, vegetables, apple or fruit rolls, unleavened gems, puffs, etc. Even if you go to a vegetarian restaurant, you will too often be treated as if you were an invalid. All healthy persons can eat with impunity hot rolls, griddle cakes with maple or other syrups, mush, puddings and various other things that are so delicious that meat would be apt to go begging in their presence. Dyspeptics of course must eat the simpler foods suited to their case. It is somewhat amusing to hear those who are intemperate in carrying out their anti-flesh theories call their opponents, "murderers" "cannibals," "feeders upon corpses," etc. all of which are falsehoods, for murderers are those who kill human beings; cannibals are those who eat human beings not animals, and corpses are dead human bodies.

17. **The Most Digestible Meats.** These are beef and mutton, very young veal and lamb are less digestible and pork is the least digestible of all. Fish is not quite so digestible as ordinary meats, especially if too oily, and salt meats are less so than fresh meats. Dr. Everett calls pork "filthy meat" and the word *swine* means scrofula. Moses showed his inspiration by condemning it.

18. **Coffee** stimulates the brain, the spinal cord, the flow of saliva while eating and is somewhat preservative of the tissue. While thus giving pleasure and proving to be useful in some respects, strong coffee is liable to induce biliousness if the liver is not in a perfect condition while its stimulating effect will be followed by depression. The excitable nature of children is injured by coffee, tea, beer, etc., Sweetened milk would be far better for them.

19. **Tea** produces effects similar to those of coffee so far as stimulus is concerned excepting that it does not produce biliousness; while the green tea, having more tannin is more apt to induce constipation. Black tea is safer than the green, the latter often receiving its color from poisonous materials. Both strong tea and coffee constantly drank are apt to convert people into nervous and dyspeptic wrecks. The stimulus of sunlight is more refined and safe than that of coffee, tea and liquors.

20. **Some Mere Hints for Cooking** may be given. In many cases a slow and prolonged heat is much better for cooking than a sudden and violent heat. A certain nurse who was in the habit of feeding babes with beef broth that was thoroughly boiled found that several of them pined away and some died. Following another plan, she cut the beef

up into small bits, let it stand in cold water all night and then with gradual heating brought it barely to a boil. The babes flourished under the new diet. The white of eggs under powerful heating often becomes almost as tough and indigestible as white leather, while if fried with a gradual heat it will have a creamy tenderness. So in general cooking, if tenderness and digestibility are required. Of course, in the case of unleavened gems a brisk heat is required to make them rise properly. Ordinary boiled milk is a little constipating, but if heated gradually until it simmers, without boiling, it becomes a germicide without constipating.

VII. INTESTINAL DISEASES.

1. **Intestinal Colic** or *Enteralgia* or *griping pain* near the umbilicus—caused by constipation, indigestible food, flatulency—sometimes by syphilis, lead poisoning, rheumatism, etc.

If the colic comes from constipation, ambero two or three times a day at first with ceruleo on retiring, would be important. In case of lead poisoning, the system should be purified by a number of sweat baths. In colic of the stomach, ceruleo is useful.

2. **Constipation** or dormant condition of the nerves of the bowels, caused by too much use of white bread or starchy foods and too little use of brown breads and fruits, especially yellowish fruits like apricots, peaches, etc. Ambero is the best medicine. Up to this time we may safely say that from one to two thousand cures of costiveness by ambero have come under my immediate knowledge besides multitudinous cases through my students and others. In several of these cases the whole known materia medica had proved a failure, as the difficulty lying so fully in the nerves could not be thoroughly reached by the coarser remedies. Three admirable features of this exquisite remedy of the skies are as follows: 1st, it animates and heals the bowels so gently that sometimes the patient finds himself cured without knowing when it is done. The only approach to any severe effect is presumably when it starts the bile into action, which being yellowish and coarse, acts a little more rudely; 2nd, the effect is much more enduring than that of the regular drugs, which latter often operate exhaustively and leave the bowels weaker than before. I have known an ounce of ambero to cause two passages and then for weeks afterward to give a lively feeling in the bowels; 3rd, this medicine comes as a free gift from the sun, costing nothing after an amber bottle or lens has been secured, combined with a little pure water.

There are some cases in which ambero does not seem to act, and the person drinking it will pronounce it worthless. How is this to be accounted for? I have generally found that such persons have an

irritable stomach which perverts the ambero before it reaches the intestines. In this case the yellow lens should be focused over the bowels and ceruleo should be given a few times, especially at night, to cure the stomach. I recommend also that an unusually large dose of the ambero be taken, say half of an ordinary tumbler full, so that a portion of it may pass into the intestines before becoming very much influenced by the stomach.*

3. **Diarrhea.** Extra looseness of the bowels with frequent evacuations, caused by impure food or water, by an uncommon flow of bile as in bilious diarrhea, or by imperfect digestion or by more or less irritation or inflammation of the small intestines.

Ceruleo is the great remedy as tested by very many hundreds, perhaps by thousands of cases. Chronic diarrhea must naturally come from more or less congestion of the intestinal walls which our medical men find so much trouble in curing from not having any elements sufficiently refined to reach the nerves of the affected parts. The nerves are such a ruling power in human systems, that many cases cannot be cured at all unless they can be reached. A number of cases of chronic diarrhea have been cured by ceruleo after the whole materia medica has been tried in vain. " I cured an old soldier with ceruleo in two weeks, who had been troubled with diarrhea every day for thirty years," says J. T. Thorndyke, D. M.

" With the blue lens I have cured chronic diarrhea in various cases which have baffled the drug medication of physicians." **Luther Payne, M. D., D. M.**, *Edinburg, Ind.*

Master F. of Brooklyn, N. Y., 13 years old, had been afflicted with chronic diarrhea for several years. Just as we had him cured with ceruleo, Thanksgiving Day was at hand. I told him he had better not eat too heartily of the Thanksgiving dinner. Boy-like he said, " I'm going to eat all I can." He did so and brought back his diarrhea which took two weeks more to cure. His brother, an eminent physician of N. Y., was quite unable to master the disease with his drugs.

Sometimes when the disease gets under such fierce headway as to be not readily mastered in the ordinary way, the blue lens can be

* Numerous cases of the great power of yellow light and yellow charged water to animate the nervous system and act as a laxative are given in the Principles of Light and Color. While I was in Los Angeles, Cal., some prominent families there found the ambero so potent in constipation, that they soon bought out all my amber lenses and bottles. Word comes from all parts of the world of the achievements of this power. Even as I am writing this page a letter, from far off Queensland in Australia, has been received, with warmest gratitude for having cured an obstinate constipation with ambero.

focused over the bowels, or still better, a ceruleo compress can be tied over the bowels and around the body with the wet part toward the front.

Passing the hand in a circle over the bowels, upward on the left side over the descending colon, across the transverse colon, downward on the right side over the ascending colon, across the lower bowels and up again and around as before for a number of minutes, will have a fine tendency to lesson the diarrheal excitement, just as passes in the other direction tend to start the bowels when dormant.

4. **Inflamation** of the **Bowels** or **Catarrhal Enteritis**, is a very acute and painful condition. The patient should be kept quiet in bed, just as, in constipation, walking and activity of movement are useful. Repeated cool ceruleo compresses laid on the hot bowels, and repeated doses of ceruleo for general use varied at times with purpuro, constitute very effective treatment. If these cannot be furnished, cold water compresses should be used, or if the patient is extra sensitive the chill of the water should be taken off.

5. **Cholera Infantum or Summer Complaint.** An acute catarrhal inflammation of the mucous membranes of the stomach and intestines, more especially in connection with the first dentition in children. The teeth with their nerves that are so near the brain, create an excitement which sometimes results in spasms. Colicky pains as well as vomiting and purging are symptoms of this disease.

Ceruleo is the all potent remedy for this complaint, healing the spasms and checking up the vomiting, colic and purging in a gradual and healthy way. For awhile in a severe case, give a teaspoonful or two of ceruleo every fifteen to thirty minutes—afterwards less often. Up to this time we have no record of failure to cure even in a single case. By the latest medical books I see that opium, bismuth, carbolic acid, aconitum, mustard poultice over the epigastrium are prescribed for this disease. No wonder that we have the record of so many deaths. In severe cases a small ceruleo compress may be placed over pit of stomach and bowels.

6. **Dysentery, or Colitis or Bloody Flux.** The foregoing diseases belong mainly to the small intestines. Colitis, which is a shortening of the word colonitis (colon-eetis), is more especially an inflamed condition of the mucous membrane of the large intestine or colon. Dysentery more frequently occurs in the rectum, the congested parts of which sometimes burst and cause bloody stools. Vain efforts at passing the feces, (tenesmus), are common in dysentery while severe pains occur along the transverse and descending colon ending in a burning feeling at the rectum. Dysentery is not contagious, usually lasts about one week while five to twenty stools occur in a single day and night. It is apt

to cause much colicky pain, nausea, emaciation and enfeeblement. It is important that it should be healed as rapidly as possible before the tissues are eaten away or a false membrane, as in croupous dysentery, shall be formed. Nourishing but easily digested food should be taken to offset the wastes.

The following natural method of cure will be found effective.

Take at least two doses of ceruleo, four tablespoonfuls each (for adults) every day and flush the bowels as far up as possible with ceruleo twice a day for two days in succession, then one day two times with purpuro, having the patient hold the water as long as possible. The ceruleo will greatly soothe the pain and heal the inflamed parts while the purpuro will heal more or less and prevent the forming of ulcers or the tendency of the mucus to develop into a false membrane. The stools should be removed at once and disinfected. Prasada who has had great experience in Chromopathic treatment in India, says "no man can die of dysentery if treated with the blue water."

The latest medical works recommend the following poisonous remedies: opium as a leading medicine, corrosive sublimate, sulphate of copper, oxide of zinc, acetate of lead, sulphuric acid, sub-nitrate of bismuth, etc.

7. **Intestinal Obstruction**. These obstructions consist of:

Hardened feces, etc., within the bowels or pressure from without the bowels from peritoneal adhesions, tumors, etc.

Strictures or strangulations as the result of cancer, ulceration or the various forms of hernia; or worst of all:

Invagination or *intussusception* or telescoping, which is most commonly caused by the lower portion of the ileum slipping along into the caecum and ascending colon, a very severe and grave condition. The symptoms are constipation, severe colic, soreness and distension of the abdomen, nausea, vomiting and great distress.

Impacted bowels would be rapidly cured by washing out the stomach by a plentiful drinking of water and by flushing the bowels with two or more quarts of warm water to which ambero has been added or by using the pure ambero if it can be had. The focussing of a yellow lens or disk over the obstructed part would by animating the nerves, soften the feces and help them pass on. In the case of telescoping, it would not be well to purge and make the action of the bowels free before the obstructed part is reached as extra feces would wedge the parts all the more tightly. Chromopathy, however, offers a new power for good in the fact that the yellow disk could be focussed all along the colon beyond the obstructed part, thus kindling and drawing onward the feces which otherwise might impede the obstruction.

Scarcely had I got through with giving these directions before receiving a letter from Henry J. Lenz, D. M. confirmatory of the above plan. Dr. Lenz had been built up from a low condition and saved, as it were by the thermolume, but from many months of overwork and "bad neglect of himself" he came to death's door with dropsy, telescoping of the bowels at the sigmoid flexure, etc. I quote from his letter of Sept. 12, 1901:

"It is about six weeks since I was down in weight to 75 pounds, lost consciousness and expected to pass away at any moment. Well, I did not, and to-day I am healthier and look better than I have for many years, weighing 110 pounds without clothing, able to digest most any kind of food. You sized up my condition exactly and following your directions by focussing the amber lens over the sigmoid flexure started the feces and lo! what a lot of coagulated blood, decayed mucus and dried up particles did pass on. On some days I would have from five to eight passages without any unhealthy diarrheal form. Now I have one free movement each day; my dropsical swelling is entirely subsiding and the colon is going to its place."

Our medical men are constantly advocating the use of opium for these affections of the bowels, by which process they deaden the recuperative forces of nature.

8. **Appendicitis**, inflammation of the vermiform appendage, which projects from the lower portion of the ascending colon (see 2 of fig. 134, or 42 of fig. 135).

Our medical scientists have come to the conclusion that this appendix is one of nature's mistakes and wholly useless. It is high time they had learned that the unperverted action of nature is always with a high purpose. It seems to me that its *raison d' etre* is as follows: this appendix has a reddish brown fluid in it, which color, as we know, has an animating power on the blood and surrounding muscles. The large ascending colon has a heavy weight of fecal matter to carry upward, and the reddish liquid of the appendix must be very useful in kindling the peristaltic action of the colon itself. Without this aid, the feces might be liable to lie dormant and become impacted so as to cause serious constipation.

Appendicitis seems to be quite a boon to the surgeons who get large fees for their hara-kiri like operation of cutting into the bowels to remove seeds or particles of matter from the appendix which they claim will be almost sure death unless an operation is performed. But the late Dr. Pepper of Philadelphia, one of the greatest of medical authorities, declared that no one case in twenty needs any surgical operation.

while another physician affirms that not one case out of fifty needs it. But best of all Dr. H. E. Randall in the "Medical Age" of Detroit, says:

"Foreign bodies as a cause of Appendicitis are practically nil. N. Senn says he has found foreign bodies in only two cases out of a total of more than 300 operations for appendicitis, a straw in one case and a pin in another. Foreign bodies are found quite frequently in the appendix at autopsy, but during life they gave no symptoms whatever... My observations convince me that some bowel irritation or distrubance has been present in a vast majority of cases."

This being true, the very beginnings of irritation in the colon and coecum should be cooled off and scattered.

One half of the cases of appendicitis occur before the twentieth year and there are usually three times as many male as female patients. In a majority of cases there is a mere inflammation of the appendix or surrounding peritoneum or an impaction of feces. For the inflammable conditions of the appendix and vicinity focus blue light, or apply a ceruleo compress over the parts, and as often as every other day flush the bowels with tepid ambero. Liquid food is considered best for the time being, cathartics should be avoided but focussing the yellow lens or yellow disk on the left side over the descending colon would be healthful.

VIII. DISEASES OF THE LIVER AND SPLEEN

1. **Congested or Torpid Liver or Biliousness.** This is a condition in which the liver is engorged or enlarged with too much blood. As I have already stated elsewhere, the liver, which is on the right side of the body, and the spleen, which is on the left side, are closely connected by a chain of veins, arteries and nerves that enable the two organs to act together as do the poles of a bar magnet, the spleen having more of the bluish venus blood and the liver usually more of the red arterial blood. The spleen is thus the cool north pole, though on the warmer side of the body while the liver is the warmer south pole though on the cooler side of the body. Is this a balancing principle of nature for preventing too great a contrast between the sides of the body?

Brunettes have more venous blood and a larger liver than blondes, and negroes have much larger livers than white people. Darker colored people are usually more bilious and troubled with "liver complaints" than the fairer ones, from having more venous blood in that organ. Not only is the venous blood more blue and dormant than the arterial, but giving the liver so much of the bluish element, it becomes too similar to the spleen itself and thus hinders the life-giving affinity between the two organs. This is called the "passive liver," or the "nutmeg liver," but when overcharged with arterial blood, the "active liver". See Fig. 138.

In these conditions of congested liver, the glycogen or grape sugar is not properly secreted, hence too much carbon is thrown into the blood and, forming into carbon dioxide, makes the right auricle of the heart so electrical as to cause extra pulsations leading to fever, which is often termed bilious fever. At the same time, this dormant liver, blockaded with blood, fails to secrete the bile properly and it is carried all through the blood, making yellow patches on the skin, causing nausea, jaundice, eyes clouded with yellow, headache, stupid mental action, melancholia, constipation and sometimes dizziness.

Causes are malaria, over-eating of rich foods, strong coffee, alcoholic or malt liquors, excessive heat, ill-ventilated rooms, bad sewerage, etc.

Use solar sweat baths to clear out the debris and purify the blood, and animate the nerves, sometimes using the purple and sometimes the yellow light over liver and stomach, and when turning the back to the light, let the purple come over the kidneys. Alternate a yellow and a purple disk at times over the liver.

Next to Chromopathy comes a good magnetic hand for diseases of the liver. Give some massage to the whole system, dipping the hand every minute or two into some highly diluted acetic acid, or half-strength vinegar, to offset chemically the alkaline character of the bile which covers the whole skin and system.

Eat acid fruits or acids on the foods if the stomach is not in too irritated a condition to endure them; take no coffee except that made of cereals, run light on milk; use a little pepper or mustard on foods to kindle blood and nerve force and take one or two doses of ambero each day to animate the bile and prevent constipation. If the ambero should stir up the bile so as to cause nausea, take some ceruleo.

2. The **Gin Drinker's Liver** or **Sclerosis** (Hardening) of the **Liver**, a hardening and atrophy of the cells of the liver caused by the prolonged use of gin, whisky, beer, or other alcoholic stimulant; also by syphilis. Considered by medical men hopeless of cure, but powerful thermolume-baths and the focussing of red and purple disks may succeed in prolonging life a number of years.

3. **Intermittent Fever**, or **Ague and Fever**, sometimes called **Swamp Fever** or **Malarial Fever.**

This disease has its central field in both the liver and spleen, each of which is congested and enlarged at the time. As the philosophy of its features of periodicity and its succession of cold and hot periods does not seem to be understood, I shall make an effort to explain it.

This is called a *paroxysmal* fever, with three stages, the cold, hot and sweating, after which there is a complete intermission or apyrexia

until the next spasm of chills occurs. The beginning is with headache and yawning and nausea, then the chills with chattering of teeth, pale skin, goose pimples, blue lips and nails, headache, nausea and great thirst. That this chill occupies but a shallow layer of the body at its very periphery, is proved by the fact that a thermometer placed at the arm pit or in the mouth will rise to 102° to 104° F. This condition lasts from thirty to sixty minutes, after which the hot sensations commence, the heat rising to 106° and sometimes more and lasting from one to six or eight or more hours with headache, nausea and great thirst. Then the sweating stage commences and lasts from one to four hours, the thermometer goes down to 98°, or 99°, the patient feels greatly relieved and finally deems himself well with only a little weakness.

To understand these phenomena, we must recur to the law of vital electricities and affinities which have already been explained elsewhere and examples of which may be seen in the periodicity of pulsation, respiration and menstruation. The direct cause of ague and fever is admitted to be a vegetable microbe or organism the bacillus malariae, and the indirect cause is the perverted liver and spleen which have been induced by imperfect hygiene such as the use of strong coffee, greasy foods, alcohol and the like. These bacilli are developed in impure, damp and swampy places more especially during the nights of the latter part of summer and the first part of autumn and blown more or less to the country around. Persons whose systems are not in a perfect condition and drawing them into the blood through the lungs, will soon have their spleen surcharged with them as that organ seems to have a great chemical affinity for them. That organ, being naturally electrical with its large amount of blue venous blood, is made doubly so by their absorption until its force bursts over to the external system where the sensation of cold is vastly more keen than it is in the sympathetic nerve system. It is well known by medical men that pains and sensations of the sympathetic region are far less violent and strong than what is called the general or somatic system. We may see, then, why it is that this extra electricity thrown suddenly to the periphery where the nerves are so abundant and acute, must cause a severe chill to the system and show its contracting power in the way of goose skin (cutis anserina).

Having gone so far, what is the effect on the interior system? This is a point which our medical men should understand if they are to treat these malarial fevers intelligently. I have shown elsewhere that when a current of electricity goes through lines of atoms in one direction, a heat current must go in the opposite direction: hence the spleen and sympathetic system must be suffering with a burning heat at the very time when one feels the greatest cold. How important then that the

patient should drink iced water and especially somewhat sour and very cold lemonade, to help bring about a balance of forces, for the acid itself is highly cooling. Such things going into the stomach would cool all the parts around it, specially the spleen which lies right up against it, being just under its left side.

What is the next step of progress? When the surface of the body, especially the skin, has received all the electricity it can hold, the cold current will be forced to burst over and go back to the spleen and sympathetic system which is the true chemical affinity of the cerebro-spinal system. Following the universal law of force, while the cold stream sweeps to the interior the hot forces must come to the exterior where all sensation is keenest, so that in a short time the system seems to be on fire with fever. Now, when the fever has risen to its height or nearly so, is the time to drink water as hot as can be borne, or what is still better, hot water with capsicum in it. To make the capsicum more pleasant to take, it can be made up into capsules, enclosing one grain in each, two of which should be taken at the height of the fever and hot water drank. Sponging off in cold water would also give relief and lessen the fever. The breaking of the fever by the sweating period will be brought on much sooner by this method and the welcome apyrexia come to the patient's relief. An Eclectic physician, by adopting a part of this plan in the use of pepper, cured eighty cases of ague and fever. It is a method by which the bad after effects of quinine can be escaped. I would not say that if a person were travelling through some terrible malarial district of Africa or elsewhere it would be best never to use the ruder force of sulphate quinine, but I believe that under all ordinary circumstances this better and safer method would always be sufficient. At the well period, a capsicum capsule should be taken, and it is very desirable that thermolume baths should be taken to kindle the vital organs into activity at the same time it purifies the blood.

I have thus explained the periodicity of cold and hot conditions. It now remains to explain the periodicity so far as days are concerned. When the paroxysm occurs daily it is called quotidian. When it occurs every second day, our medical men, by a strange idea of numbers, instead of calling it secundan, call it tertian; when it occurs every third day, instead of calling it tertian (third) they call it *quartan* (fourth) and so on.

Why does it occur on set days? In the day time the sun is positive to the earth, driving its radiations back so that they become influx instead of efflux. In the night the earth becomes positive and fully efflux in its forces. Those who have developed their inner vision are able to see countless thousands of efflux streams in the night, sweeping upward and

outward. Then is the time that these bacilli are thrown up from stagnant pools and impure places for the winds to carry to all surrounding places. Those whose imperfect conditions form a good soil for them, inhale them and in most cases, by the second day, the spleen will become sufficiently charged to overflow and send its chilling forces to the external system, developing the three stages of the disease. Sometimes the spleen may be charged in a single night, in which case we have the quotidian effect. In ordinary cases it will require two nights to bring what they call the tertian paroxysms.* Knowing that the spleen blockaded by a torpid liver is the starting point of the whole disease and knowing that it is this surplus of electricity or coldness that causes the trouble, is it not plain to be seen why the heat of red pepper and even of black pepper has proved so effective in curing the disease? Is it not another example of the blue being balanced by its chemical affinity the red?—for even black pepper has a large amount of red secreted in it.

4. **Remittent**, or **Bilious**, or **Marsh Fever.** This frequently but not always commences with a moderately cold stage, has an intensely hot stage; violent headache and nausea, with delirium when heat is great. Cause, malaria with imperfect liver and spleen, both of which become swollen. It has some resemblance to intermittent fever, but the bowels as well as the liver and spleen seem to be much disturbed, the gastro-intestinal canal being hyperaemic (over-charged with blood). The sweating stage does not always occur, it sometimes becoming continuous instead of periodical.

Treatment much resembling that of intermittent fever, but in the hot stage. I would recommend the taking of a grain of capsicum in four or five table-spoonfuls of ambero, as the bowels are usually constipated. It is very important that some thorough solar sweat baths should be taken at the first symptoms of biliousness, as these may prevent the attack altogether. Sponging off the bowels with cold water would be useful in a hot stage, and a cool pack would give great relief by reducing the fever.

5. **Typhoid Fever**, called also **Enteric Fever, Abdominal Typhus**, etc.

This fever is caused by the typhosus bacillus and is communicated through water, milk and other perverted food. It is most apt to occur from bad sewage, from wells that are too near privies, etc. It is not generally contagious except through what is taken into the stomach. It

* Instead of tertian which means every third day, bitidian (two days) every 2nd day would be more proper and tritidian instead of quartan for every 3rd day. The old method misleads.

is characterized by enlargement of the spleen, diarrhea, inflammation or ulceration of the lower intestines (ileum), continuous high fever and sometimes delirium. From five to twenty small rose-colored eruptions appear on the abdomen or back on the seventh to the ninth day and lasts about five days. In malarial districts the fever sometimes commences with a chill. The onset brings headache, vertigo, bad digestion and a general bad feeling, a most admirable time for a thorough solar sweat bath to open up and clear out the system.

The old medical methods of treating this disease, which are far too prevalent even yet, sacrificed thousands of lives that might have been saved. Even our old school friends who once looked down upon the hydropath as a kind of a quack, have found that cool water is by far the most effective thing for reducing fever. Brand of Germany, at a military hospital in Munich, would put his typhoid patients in a bath of 60° F. for 15 minutes at a time and repeat it every three hours. Out of 1223 patients he lost only 12 or less than one per cent. and not one in 1200 patients, treated before the fifth day, was lost. This is generally considered too severe for ordinary cases and 70° F. is considered cool enough, when the temperature is 102.5 while with delicate cases 80° or 90° is used to commence with and then gradually reduced ten degrees or more. Formerly between 20 and 30 per cent were lost while now only one to seven per cent succumb.

If no bath tub can be had, a sheet should be wrung out of cold water and put around the patient and then blankets and comfortables should be piled over him until a thorough sweat is brought on, as this will relieve the internal inflammation. During the baths the head should be sponged off in cool water.

But Chromopathy presents a great advantage in its ceruleo, whose antipyretic, antiseptic and astringent character during diarrhea are just the things needed. The bacilli of typhoid fever are wonderfully active and multiply so rapidly as to fill the system with putrid elements. If ceruleo can prove so immensely beneficial in the cure of a multitude of cases of the bubonic plague in India, it should be especially effective, given four or more tablespoonfuls at a time, in a still less putrescent disease like typhoid and could be given every hour or two for a while. In the absence of a bath tub, two or three cool packs could be given in a day and night, in case great heat continues, and between times some cool sponging should be given. When constipation occurs, as it does sometimes, of course ambero should be given and in case the system feels chilled after a bath, a little capsicum in rubio can be administered. Milk is considered the best food, but sometimes can be changed for white of egg in water, etc.

To disinfect the sheets and the clothes of the patient they should be boiled for some time with perhaps the following disinfectant; 2 drachms (3 ij) of bichloride of mercury and 2 drachms (3 ij) of Potassium permanganate, in a gallon of water. After the fever has subsided, the patient must keep the bed for four or five days and must avoid solid foods. Thermolume sweat baths would be admirable for clearing out and purifying the system.

IX. FURTHER ABDOMINAL FEATURES AND DISEASES.

1. **A General Review** of the **Foregoing Illustrations.** We have already been considering the stomach, the larger and smaller intestines and the general character of the liver and spleen. The above illustration has the liver turned up to show the surrounding parts, thus making the

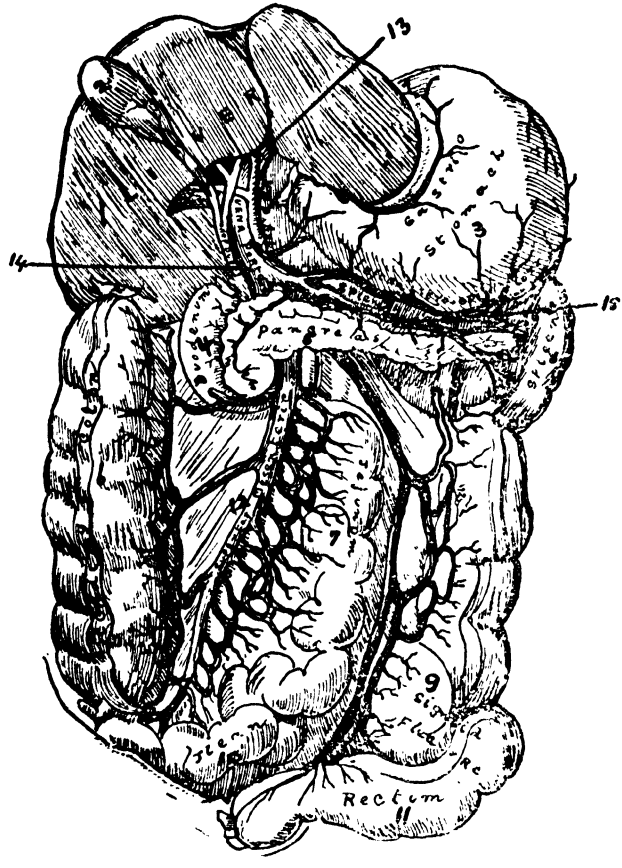

Fig. 138.—The Leading Abdominal Organs (Gray).

gall bladder seem to be above instead of below the right lobe as it really is. The position of the spleen is represented a little back of the

left side of the stomach, sending its splenic vein to the portal vein which connects with the liver. The cut represents well the irregularly convoluted sigmoid flexure and ileum, in both of which, when the system is allowed to run down and the bowels to become constipated, the parts are liable to become telescoped or blocked in a way to produce a fearful condition.

2. The **Peritoneum** is a serous membrane that covers the abdomen, having two thicknesses constituting mostly a shut sack. It invests, to a considerable extent, the viscera of the abdomen and pelvis which form the inside walls (perietes) or visceral layer of the membrane. The peritoneum is not a closed sack in the female, as it is continuous with the mucous lining of the fallopian tubes which open into its cavity. At a portion of the peritoneum there are four membranes instead of two called the **Great Omentum.** At another part is the **Gastro-Hepatic** or **Lesser Omentum** which has two folds. The **Mesenteries** are those parts of the peritoneum which connect the convolutions of the jejunum and ileum with the posterior or vertebral wall of the abdomen.

3. The **Liver** is the largest gland in the body usually weighing from three to four pounds. It is located more than elsewhere at the right hypochondriac region but extends somewhat into the epigastrium and left hypochondrium. Its purpose is threefold, 1st, it secrets bile which aids in the digestion of fatty substances, and being yellowish animates the nerves of the bowels and being saponaceous lubricates the ingesta; 2nd, it forms glycogen by which means some of the surplus carbon of the blood is secreted and the formation of carbonic acid so lessened that the blood which goes to the heart is prevented from being so electrical as to overwork that organ; 3rd, it co-works with the spleen and its interconnection of blood vessels, forming thus a kind of bar magnet which gives animation to both organs.

The liver has 5 lobes, 5 fissures, 5 ligaments and 5 sets of vessels and is almost entirely invested by peritoneum.

4. The **Portal Vein** or **Vena Portae** collects the blood from the whole digestive system for the liver to perform its beneficent work upon. It is composed of two veins, the superior mesenteric, and the splenic the latter of which also receives the gastric and inferior mesenteric. After entering the liver it divides off into a series of small veins and capillaries which pass all through the lobules, performing their chemical work there, and finally concentrating, from different quarters into the hepatic veins that pass the improved blood into the vena cava inferior and thence to the heart. This wonderful portal system thus prevents physical ruin, for if the currents of blood had to carry its broken down particles of carbon and carbon dioxide unmodified to the

heart, it would be so overstocked with electricity as to cause fever and death by the furious pulsations that would take place.

5. **Peritonitis** or **Inflammation of the Peritoneum**, popularly termed "*Inflammation of the bowels.*" This severe disease may come from inflammation of the peritoneum alone (idiopathic), or that which comes from wounds or bruises (traumatic), or from local conditions of contiguous organs as in the appendix, liver, uterus or ovary. Perverted blood or colds make the inroads of this disease all the more easy.

Treatment. Constipation is apt to go with this fever and of course this signifies that ambero should be drank plentifully. As soon as the extra heat and severe pain become manifest, place a cold ceruleo compress over the painful parts, or if ceruleo cannot be had, use cold water or an ice bag. A hot mustard foot bath and downward passes for ten minutes or more over the whole length of the legs would tend to draw the hot blood away from the inflamed part. If the irritation is at or near the stomach or liver, the drinking of half a wine glass of ceruleo or verdo would be important. Sometimes when the acute condition has ceased, a hot application, if the patient feels that it would be more agreeable, might be useful. In the form of peritonitis which occurs at child-birth, called **Puerperal** Fever, flushing the parts well with an antiseptic preparation like ceruleo, with a little salt in it, will tend to clear away those septic conditions which otherwise might be fatal.

6. **Dropsy of the Abdomen, Ascites** or **Peritoneal Dropsy**, caused by a collection of serous fluid in the peritoneal cavity. This form of dropsy is said to be caused by an obstruction of the portal system on account of the hardening of the liver, or imperfect conditions of the heart. This obstruction causes such a pressure on the walls of the veins as to cause the watery part to exude and collect to such an extent as to greatly enlarge the abdomen and press upon the lungs, heart and other organs.

General dropsy of the serous and areolar tissues (small open space tissues just beneath the skin), is called **Anasarca**. Water on the brain is called **Hydrocephalus**. Excessive secretion of water from the pleura is called **Hydrothorax** or dropsy of the chest. Obstructive organic diseases of the heart and kidneys, are the most frequent causes of general dropsy. **Hydrocele** or dropsy seated in the scrotum, is reduced very rapidly by a red or purple disk.

I believe that the solar sweat bath is to be the great remedy of the future for dropsy. The sweating carries off the water in a natural way while the sun aided by proper colors kindles the liver, kidneys and blood generally, and rouses the whole peritoneum which is so apt to be affected. I have said something about the case of Miss Celia W. Hunt, a

lady of culture who had been a teacher in seminaries, but her case was so remarkable that I think the details should be stated more fully. Prof. Bowman's account of the case has already been given in the Principles of Light and Color, p. 346.

While spending sometime in Cincinnati, Miss Hunt was brought to us, and with crutches dragged herself into my office. I concluded to take her case and see what could be done, although it seemed almost hopeless. A familiar friend chided me by saying, "Why do you take a case like that, when you know it can never be cured?" She was so bloated with dropsy that she weighed 271 pounds. She had a bad umbilical hernia over which she had worn a truss for a long time; also two inguinal hernias. She had such a burning gastritis that one physician diagnosed it as cancer of the stomach. She declared that she had to drink cold water five hundred times a day to quiet her stomach. But a difficulty of immense importance was rheumatism, which for eight months had held her leg from her knee down, stiffly anchylosed at an angle of about 45°. All this time prominent physicians, including hospital authorities, had been trying in vain to control her condition and finally concluded that her leg would have to be forced out straight and held there by bundles of splinters tied fast to keep them in place. This method of violating nature by the use of rude forces, instead of employing those refined elements which lie at the very basis of the life energies, is a very common thing with our medical friends, and would have caused fearful suffering and undoubtedly destroyed her life, as her blood was already too sluggish with impurity to withstand any compressions. In this condition we put her into a thermolume and gave her a full sun bath without any special color force over the knee itself. She sweated profusely over every part of the system except at the knee which was still cold as a corpse, without the least sign of sweating. Now comes an important lesson as to the power of color. Knowing that it requires red forces to rouse the red, we placed red glass over the knee to kindle the blood. The knee shortly began to become warm, the perspiration started over it and the blood of the whole system got into such a brisk movement that she was unable to sleep during all the night following excepting a little while near the morning. But what was her surprise and astonishment to find that now, after only the second treatment, she was able to straighten her leg completely out. We continued these solar-sweat baths, ending off each treatment with some massage and in a few weeks had lessened her weight by 50 pounds. In two or three weeks the tissues around the umbilical hernia had been made sufficiently strong by sunlight and massage as we thought, to hold the parts in place and removed the truss. By some accident the hernia appeared again and

the truss was used for a little while more, after which all the hernias were cured and remained all right. Once more I will mention a feature in her case which shows the power of color, and the superiority of fine forces as compared with the coarser. I have already spoken of the violent burning feeling in her stomach, in which the electricity of cold water was perfectly useless for assuaging, giving her relief only for the moment. Our blue bottles and chromo lenses were of the mazarine kind as in most of the blue glass at present, consequently it transmitted a large amount of violet as well as blue light. I had the water charged in these by standing several hours in the sun, and had her drink it in place of the ordinary water. In two or three weeks her terrible gastritis, which had thwarted the doctors so long, was perfectly cured. The coarser grade of coldness stored up in cold water could produce no permanent effect, but the refined grade of coldness (electricity) as stored up in the water from the blue ray, was so searching that it could penetrate and heal the very nerves. Are not nervous and mental forces among the master principles of human systems?

While Miss Hunt was thus having her system revolutionized on a natural plan, a powerfully built man of the same religious society as herself became dropsical, was tapped by his physician, gangrene ensued and he died.

As she went forth into the business of life she sent us the following letter:

"The Thermolume is God's best gift to man in the nineteenth century... I hope the time will come when it will be considered as indispensable a piece of furniture in every household as a cooking stove.... Chromopathy is an absolute science."

7. **Jaundice** or **Catarrh of the Bile Ducts**, characterized by derangements of the stomach and intestines, yellowness, itching of the skin and depression—caused by excesses in eating and drinking, malaria, strong coffee, a debauch, etc. The biliary ducts become closed with mucus so that the bile exudes into the blood, the tongue becomes coated, nausea and perhaps vomiting occur and when fully developed the bowels become constipated.

For nausea and vomiting take ceruleo—later take ambero to animate the bile ducts and bowels. Flush the bowels with from one to three quarts of water, or ambero so far as it can be got. Thermolume baths would be a great animating and purifying agency and massage over the whole body with hands frequently dipped into ceruleo in which some vinegar or acetic acid has been placed.

8. **Gall Stones** or **Biliary Calculi.** In this case the mucus in the gall bladder or its ducts becomes thickened and especially the crystalli-

zable parts of the cholesterin form into hard masses which, in passing the gall ducts, gives excruciating pain, that is sometimes called *hepatic colic*. This pain is not only in the gall bladder, but spreads over the abdomen, right chest, etc.

Olive oil, say 2 tablespoonfuls during 24 hours, has a greatly soothing effect. Dr. J. H. Fulton a chromo-homeopath of Montreal, reports an almost universal success in the cure of this distressing disease by the use of calcarea carbonica, 200th or 1000th potency. Carbon being the leading element in mucus and considerably strong in the cholesterin, should, in its higher potencies, have the contrasting element which cures: but cholesterin being the greatest cause of trouble in these calculi, should be the most effective remedy of all if raised to a high potency. For the principle see part I, p. 101 *et seq*.

To vitalize one's system and clear it of impurities by solar sweat baths, will not only cure such diseases as catarrh, jaundice, biliousness, gall stones, impure blood, rheumatism, etc. but is the best preventive of them.

X. THE KIDNEYS AND THEIR CONNECTING ORGANS

1. **Object of the Kidneys.** As the object of the intestines is to secrete or eject chemically the more solid elements of the food and blood, so the object of the kidneys is to secrete or eject by chemism the more fluid elements of the blood and food including what is called *urine* with its salts and worn out materials.

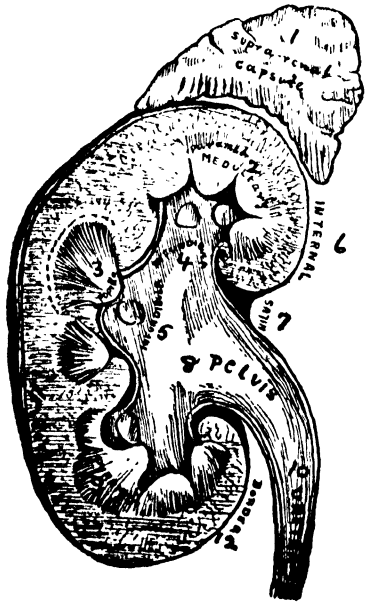

Fig. 139. Vertical Section of Kidney.

Commencing at the bottom of the cut the ureter widens out into the Pelvis, this in turn widens into the infundibula (funnels) and calyxes (cups). The hilus or hilum shows above and below the pelvis.

2. **A Brief Description.** Fig 139 presents the leading parts of the kidney, including the cortical portion near the outside, the medullary substance consisting principally of straight uriniferous tubules, etc; the pyramids of Malpighi whose bases are in the cortex, while their apexes or papillae extend into the calyxes (often called calices) of the pelvis; the pelvis, which is a kind of widening out of the ureters and includes seven to eighteen calyxes (cup-like tubes); three infundibula (funnels), etc; and the ureters or the excretory ducts, about the size of a goose quill, which connect with the bladder. The kidneys are located in the lumbar region, on each side of the spine, slightly above the small of the back,

are about four inches in length, two in width and one in thickness.

3. **General Plan of Renal Circulation.** Fig. 140 gives a general view of the uriniferous processes. The Malpighian body contains a mass of blood vessels called glomeruli which wind in multitudinous directions, so that by the chemism of the contiguous parts the blood is modified and filtered into the uriniferous tubules. These tubules wind in the most tortuous way so that the debris and various salts of the system may be strained off still further by chemical affinity and carried along sometimes spirally or back and forth through the cortex or labyrinth of the kidneys, until at last it passes down through the converging straight channels of the pyramids to their apex emptying into the pelvis and ureter. It is well known that the arterial pressure in the glomeruli crowds a certain watery part of the blood into the tubules, so that what constitutes urine is not entirely the immediate result of chemical filtering.

It may readily be seen that when the blood becomes impure, the system clogged and devitalized, the multitudinous channels of the kidneys with their great epithelial surface would be especially liable to engorgement or to inflammatory conditions or sometimes to dormant and shrunken conditions.

4. **Bright's Disease** or **Nephritis** is essentially a degeneration of the structure of the kidney, sometimes by blockading the passages and thus shutting in poisons that ought to be excreted. Sometimes there is a **Tubal Nephritis** or **Acute Bright's Disease** in which the epithelium (inner surface) of the uriniferous tubules become inflamed. Sometimes there is a **Chronic Bright's Disease** with its chronic inflammation of the tube and cortical structure or *Interstitiale Nephritis,* another kind of chronic condition in which the interstices between the tubes become sclerotic (hardened) in a way to produce the "small red kidney" or goutry kidney. Generally, though not always, the presence of albumen in the urine indicates Bright's disease, though albumenuria may occur in other conditions.

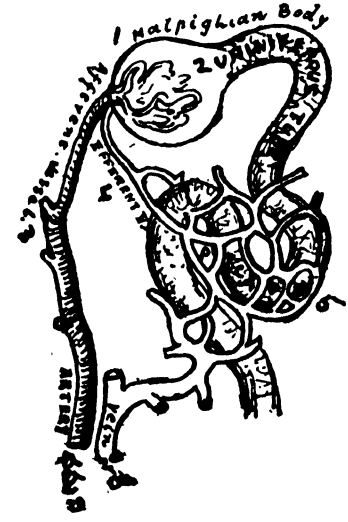

Fig. 140.—Uriniferous Tubules.

Among the **Causes** of disease of the kidneys are wet and cold, gout, infectious diseases, particularly scarlet fever, syphilis, alcoholism, irritating drugs, mercurialism, lead poisoning, continuous grief, rheumatism, etc.

Of course all mental lack of equipoise, all hatreds, jealousies, spirit of vengeance, fear and selfishness, tend to poison the blood and thus impede the healty action not only of the kidneys but of all other organs, while good cheer, love, aspiration and times of happy recreation, kindle up a new play of the life forces and contribute to physical harmony.

In acute Bright's disease there is fever, nausea and severe vomiting, pain over the kidneys and ureters, frequent desire to urinate, diarrhea, dropsical condition, albumen, swelling of the abdomen, scrotum, etc. The greatest of all means of cure is the thermolume with blue glass over the lumbar region or sometimes purple glass. The blue disk focussed for 15 minutes over each kidney would be highly useful also and ceruleo should be drank. Of course massage over the whole system and especially the lumbar region would be excellent. Drink freely of water but avoid tea, coffee and stimulants. Milk and fluid diet desirable. This is less dangerous than chronic Bright's disease and is said often to be cured in from one to four weeks. Chromopathy will cure still more rapidly.

In chronic Bright's disease dropsical conditions often cause dyspnea (labored breathing) by pressing on the lungs, cardiac palpitation, increasing vomiting, headache, vertigo, defective vision, etc. Rest and diet very important, ambero should be taken. In the chronic phase of the disease, whether in the case of the increased or diminished size of the kidneys, the purple disk or purple light in the thermolume are the best for general use, the yellow or the blue light being only occasionally used, according as some conditions may seem to justify them. In massage, the ends of the fingers should be held for awhile from the 9th to the 12th dorsal vertebrae and at the beginning of the lumbar vertebrae, as the renal plexus and some important vasomotor nerves will be reached in this way.

5. **Renal Calculi.** A *Calculus* is a small stone, a lime stone originally. Renal calculi or **Urinary Calculi** when very small are called **Gravel.** Uric or other acids may form concretions by combining with lime, sodium, magnesium, potassium, etc. If the system should become inactive and the blood and vital energies of the parts too dormant, these concretions or stones are not carried away until they become so large as to scrape against or abrade the walls of the ureter as they pass toward the bladder, in a way to produce the most agonizing pain. When the bladder is reached the pain suddenly ceases.

A sitz bath, as hot as can be borne will give great relief, so will a steam bath under the seat. By far the best treatment when it can be had would be sitting in a thermolume, back toward the sun with purple light coming over the kidneys and the steaming arrangement under the

seat. A series of such baths would get the kidneys and other parts of the body into such an active condition as to prevent such distressing diseases. A hot water bag placed under the back where the greatest pain is felt, would give great relief.

6. The **Bladder** and its **Appurtenances** (See Fig. 141 which shows the base of the bladder). The bladder is situated in the pelvis in adults but much higher in the young. The two ureters which convey the urine from the kidneys, enter the bladder a little below the middle. The neck of the bladder is the smaller part which passes through the prostate gland and enters the urethra while the fundus or widest part is above.

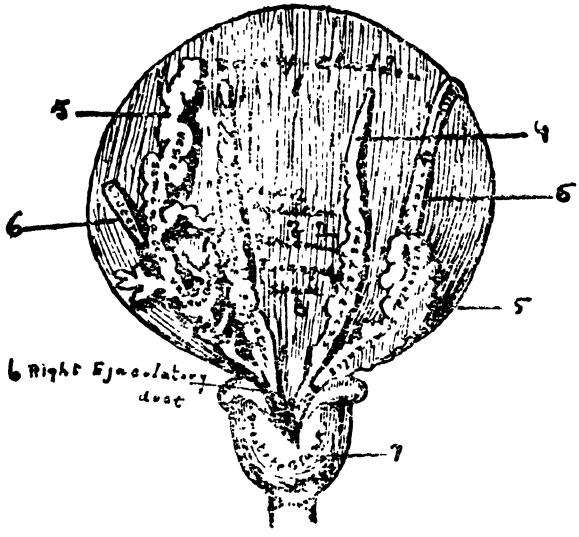

Fig. 141.—The Urinary Bladder.

Chemism in the form of peristaltic action passes the urine through the ureters to the bladder, and over the whole bladder is a system of muscles which are able to contract and also to admit of expansion when necessary, but they should not be abused by allowing an over amount of unvoided urine. At the neck of the bladder where the water is passed into the urethra, is a valve and sphincter muscle to regulate its action in connection with the will.

To animate the sphincter muscle focus a yellow disk over the sacral nerves: also in massage hold the ends of the fingers for some minutes over the same lower part of the spine. But to reach the whole bladder including its mucus membrane, use also all the nerves of the lumbar region and one or two of the lower dorsal nerves.

7. **Cystitis or Catarrh of the Bladder**; in other words an inflammation of the mucous membrane of the bladder. In acute cystitis, the walls of the bladder are red, swollen and sometimes very painful, micturition is slow and difficult and the urine red or cloudy. The symptoms are chills, slight fever, sometimes nausea and vomiting pain over the parts and depression of feeling. If there is much heat, as there is apt to be, a compress of cool ceruleo on retiring would be excellent and the blue disk or blue lens should be focussed over it, or the blue glass in a thermolume bath. If the water is very difficult and slow of passage, the

focusing of purple would be desirable for a few times. The cause of cystitis may be calculi, gout, a blow over the pubes, or the holding of urine too long in the bladder, especially if highly acid or alkaline, etc.

In Chronic Cystitis the mucous membrane is very thick, pus is sometimes discharged, stricture, stone in the bladder or enlargement of the prostate glands causes micturition to be difficult or sometimes impossible without the catheter. A purple or even a red disk should sometimes be focused over the parts in front and also over the spinal nerves that reach the same organ, including the lower dorsal, the lumbar and the sacral. Magnetic fingers should be held on the same parts also.*

8. **The Prostate Gland and its Purpose.** In looking over numerous physiological works, I find no one that explains or seems to understand the purpose of the prostate gland. This gland is about the size of a horsechestnut, surrounds the neck of the bladder (see fig. 141) and is penetrated by the urethra. "The prostate is enclosed by a thin but firm fibrous capsule," says Gray's Anatomy. ... "Its substance is of a pale reddish-gray color ... In old age, this gland is liable to be enlarged and its ducts are often filled with innumerable small concretions of a brownish red color," etc. Having thus established the thermal nature of the prostate from its reddish colors and knowing how intimately it is connected with the action of the testes, let us see if some chemical correlation can be established between them. I quote from Gray's Anatomy, p. 862: "The tunica albuginea is the fibrous covering of the testis. It is a dense fibrous membrane of bluish white color, composed of bundles of white fibrous tissue, which interlace in every direction." Thus we have the blue to complete the chemical affinity between the two organs, or rather we may call it a horse-shoe magnet, embracing the sweep of curvature which includes the epididymis and vas deferens, the north pole being at the testes and the south pole at the prostate. This gives a great quickening power to the flow of the semen while the white, viscid prostatic fluid is thought by some to assist the seminal progress, a mistake as I deem it, as the liquor seminis is the more natural lubricator.

Fig. 141 shows, on the sides of the bladder, the seminal tubes which have connection with the testes. During the sexual act, the electricity

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* I desire here to call the student's attention to **Drs. Eales** and **Taber's Anatomical** and **physiological Chart** of the **Human Body.** This is a somewhat extensive Chart in colors printed on both sides, giving the whole system of Nerves, Muscles and every part of the body including their connections and uses, with greater completeness than is found in any single whole volume, sent prepaid for $ 5.00 by Drs. Eales and Taber, Waukesha Wis, or 1315 Masonic Temple Chicago, Ill. or those preferring it may send to E. D. Babbitt, M. D., Geneva, New York.

that is developed contracts the whole sexual system, throwing the semen from the testes into these tubes and hurling it, through the ejaculatory duct to the uterus.

In part second of this work, commencing with p. 173, I have shown that the right testis of man and the right ovary of women are used to develop male offspring, the left testis and the left ovary being usually required for female offspring. Physicians generally are so ignorant of these subtle principles of life, that they make special efforts to oppose them, and one physician declares that this theory is incorrect because the vesiculae seminalis contain semen which could impregnate aside from the testes. A little greater acumen would have shown him that the testis is not a useless development of nature and that all spermatozoa will die in a brief time if separated from that organ.

In prostatitis, especially the acute form, it would be well to focus blue or sometimes purple or green at the base of the abdomen; also at the small of the back and below, as the lower dorsal, the lumbar and some of the sacral nerves communicate with the same organ or vicinity. In massage press the ends of the fingers between the vertebrae of the same region.

9. **A Lesson from Real Life.—The Two Shakers.** Many years ago when I was living in the East, two tall, thin and somewhat pale, members of one of the Shaker communities came to my office to be treated. They were certainly true souled and among the most conscientious of men. They informed me that their prostate gland was badly swollen and had given them much pain. I immediately remarked that I presumed they had a good deal of pain along the small of the back. They agreed to it very emphatically. And a good deal of suffering right here, pointing, as I said it, to the cerebellum or region of amativeness, as I knew that was a central point of the sexual forces. They agreed to this very decidedly. Then I knew that amativeness was the negative pole of causality in the front brain and so I remarked, pointing to the place, "I think you must have had a good deal of suffering here and confusion of thought, at times, when you have tried to think hard." They admitted it and said they had been on the point of insanity at times. They admitted too that they had a fearful struggle against the burning sensations of their passional natures. Mastrubation often induces an irritated condition of the prostate gland, but in their case I think their ideas were so rigid against all amative impulses, that the semen in the seminal tubes would become stagnant and perverted by long standing, and thus add to their disease. To pass it off once in two or three months would, no doubt, have added to the general purity of the system. If they had been married, an occasional intercourse would have tended

to balance and cool their systems. In women's sexual system there are more acids, which are the cooling principle, in man's more alkalies or the thermal principle. The union of these chemical affinities tends to balance and harmonize both sides of the question.

I explained this philosophy of life to these gentlemen, but they said they would rather die than give way to impurity. I attempted to show them that true marriage is the purest of all conditions, and that these impulses which God and nature have implanted in human beings are beautiful and good when regulated by reason, but the principles of celibacy of their order may have thwarted my kindly efforts.

10. **Diabetes Mellitus; Glycosuria, or Melituria,** a chronic urinary discharge which is both frequent and abundant, and characterized by the constant presence of grape sugar. It comes much from the nervous system, also from the condition of the liver and kidneys. It results from the over-use of saccharine and starchy foods, fermented and distilled liquors, mental worry, sexual excesses, Bright's disease, sometimes from conditions of heart and lungs, etc. The blood has an excess of urea, fat and sugar, and the disease may be increased or induced by affections of the pancreas, or of "the diabetic centre" of the medulla by conditions of almost every part of the body. Considering that this disease is generally pronounced fatal, although it may run for years, and considering that so many other diseases have a fatal and most painful character, how vastly important it is that we renovate the system by means of baths, correct diet, friction of rough towels, deep breathing, hygiene, out-door exercise, mental and psycho-therapy, sunlight on the bare body, etc. Advanced minds feel ashamed to be sick unless some inherited or unavoidable conditions are upon them, and even inherited conditions may usually be overcome by statuvolism or some other phase of psycho-volition. When this disease of diabetes begins to get a foothold, it is very important that sweets and fatty and starchy foods should be avoided, including most sweet fruits and the whiter part of vegetables and cereals. The greatest food for diabetics is gluten bread and still better, gluten mush eaten with milk, but this gluten must have the starch taken out, in other words must be diabetic gluten." Those who still cling to the *fleshpots* can have lean meat, and milk is allowable, though some would say use only skim milk, but this is uselessly severe, as the system must have some elements of nourishment. All alcoholic drinks must be tabooed at once. We have a record of the cure of diabetes by the free use of gluten. Some years ago I gave an account in a Chicago paper of the effect of suncharged substances, recommending as a general practice the use of ambero on rising and of ceruleo on retiring. Shortly after, an old man, 79 years of age, wrote me that he

had cured his diabetes of several years, standing by the use of these waters. I wrote him to let me know if he continued to be well. He answered that there had been no return of the symptoms. I did not learn what phase of diabetes he had but suspect it might have been glycosuria, a form which aged people frequently have and which at certain times does not have grape sugar in the urine. In diabetes the patient is apt to both eat and drink excessively and the bowels often become greatly constipated, hence the usefulness of the ambero in the old man's case, as well as of the ceruleo, the tendency of which would be to destroy the extra bacilli.

11. **Diabetes Isipidus or Polyuria (Much Urine).** This is characterized by the discharge of a great amount of pale or watery urine and by its freedom from albumen and sugar, though urea and other solids are increased. The discharge of urine is from one to five or six gallons in twenty-four hours, is confined more to children and young adults, and diabetes generally is more common to males than females. *Causes:* injuries to the nervous system, exposure to colds, fatigue, malaria, dilatation of the renal vessels, syphilis, etc. This condition is evidently largely caused by nervous derangements as it can be induced experimentally by cutting portions of the sympathetic nerve or by irritating a spot in the fourth ventricle which borders on the medulla in front and the cerebellum behind.

The diet can be more varied than in diabetes mellitus. The system should be toned up as rapidly as possible by methods already described, as the waste of flesh and strength is rapid and it is not a disease to be trifled with.

12. **Uraemia or Uraemic Poison,** sometimes spoken of as **Uraemic Convulsions.** These consist of certain impurities, such perhaps as urea which has not been strained off properly by the kidneys and may result from Bright's disease. The poison works in the form of drowsiness, convulsions, vomiting, etc, which may terminate in death unless the poison can be eliminated somewhat rapidly. The solar sweat bath would be the best thing possible, or if that cannot be had, give a vapor bath with profuse sweating. Wake up the system by brisk massage over lumbar and lower dorsal nerves and by animating the medulla.

13. **Hydrocele,** a form of dropsy which effects more especially the testes and causes the enlargement of the scrotum. Sometimes this enlargement has been so great as to reach almost to the knees, although hydrocele is not usually attended with very much pain. Focus the purple and sometimes the red dish upon it, or in the absence of the disk, the next best thing is the purple or red chromo lens. If any conditions that are too irritable appear from this use of colors, use the blue briefly.

I will give one case of treatment. When our college was first established in New York, one of our students had his brother come to the city, to have a surgical operation at a hospital, for a well established hydrocele. I told him that was not necessary as we could treat it much more effectively and pleasantly with a disk. He then used the disk daily and I think it was not more than two weeks before he was entirely cured.

14. **The Abuse of Surgery** Surgery is a very lucrative thing and has a perfect fascination for many physicians, not only on account of the big fees charged, but the cutting and slashing of the quivering flesh of their fellow beings, is an exciting pastime to the lower grade of surgeons. Of course severe cases have their pain deadened by anaesthetics, but even then it is a criminal thing to mutilate human beings unless the condition is beyond all other power, either physical or mental, to remedy. The present mania of surgeons for removing the ovaries and even the uterus is fearfully criminal in very many, if not in most cases, as the process deadens the womanly impulses and converts the subject into a dull feeble being. They commence by scaring the the person and declaring that life depends on the operation, I will mention one person with whom my family has been familiarly acquainted for years, Mrs. Elizabeth, Regnier of 841 W. 10th St., Los Angeles, Cal. She had been confined to bed for several weeks and her physician told her that ovariotomy would be necessary and perhaps the removal of the uterus. Her husband called upon a well known mental healer, who, after hearing of the lady's case, immediately sent a force to her. When the husband reached home, he found his wife sitting up in bed and feeling very happy, instead of suffering as she did before. She took, in all, three absent treatments and three treatments in his presence, which made her perfectly well, since which time now several years, she has herself healed hundreds and has been in fine condition, constantly engaged in her noble work.

15. What is the **Rationale** of this? How can such things be done? For ordinary cases of uterine or ovarian inflammation we focus blue light over them or flush the womb with ceruleo or purpuro, or draw off the hot blood by passes down the limbs to the feet and deprecate all surgical operations. Why was not all this necessary in Mrs. Regnier's case? Because she is a *sensitive*, in other words is amenable to the psychic forces. In such cases Mental Cure has its greatest triumphs. A majority of people are not sensitives, and cannot at once receive these swiftest and most potent influences. But how does the healer send his forces, sometimes to a great distance, through the air? Here is a point in which nearly every mental curist is at sea. I have shown repeatedly that every force is a fluid, in other words, a substance, an entity that has weight

and demonstrable being. This being the case, the mental or psychic force that is projected from one person to another must be a fluid or entity. Repeatedly of late years persons have willed that a certain form shall appear on sensitized paper, such as a circle, a triangle or outlines of a house. Immediately a kind of substance will be transferred to the paper which can be photographed, giving the real forms thought of and then be photo-engraved and printed. In the same way a person well stocked with vital magnetism and a good will power may project his enkindling forces to another's brain or body and sometimes perform a miracle of cure. It is a sad thing that many persons are so under the rule of the coarser grade of material elements that they cannot grasp this simple line of reasoning.

16. **The Broad Thought.** But there is another point in connection with this question that should be considered. We must transcend the **New Thought** system to some extent, and reach out into the **Broad Thought**, which latter embraces both spirit and matter, instead of aiming mainly at the mental and spiritual alone in its therapy. It is constantly being taught by mental curists that we must rest only in God and get help only from God, ignoring all lower influences, all the wonderful forces of nature in which "every bush is aflame with God." It is grand to aspire after as much as possible of divine perfection and to realize that we have a portion of eternal spirit within ourselves, but when a flighty transcendentalism declares that you are the great "**I am**" or as Swami Vivekananda of India says: "You are omnipresent and omniscient;" "you are the sun and moon and stars; you are all God," you should spurn all such falsehoods and with due humility, combined with mighty resolutions and a sense of your kinship with angelic life, press forward toward the infinite perfection. You should realize that the Deific Fulness whose life measures eternity and whose presence fills billions of worlds, must send its illumination through vast grades of being downward and downward before it reaches a style of life coarse enough for us mortals to appropriate and comprehend. Do you not believe and even know that ascended human beings, under the law of evolution must have risen to angelhood, to archangelhood and some to godhood? These when not too far above you, may fill your souls with joy and aspiration and your bodies with a new tide of health if you keep yourselves above debasing habits of food and drink, alcoholism, sensualism, tobacco-use, and low associations, and put down violence of feeling, malice, selfishness, fear, jealousy and the whole brood of poison producing and darkening qualities. If you can do this and cultivate the love forces toward all human and animal life as well as spiritual aspiration, your mental forces will grow more refined, and your psychological influence over others more powerful and more enduring in its nature.

Do you say it is too difficult to reach these heights of the soul and dwell in an atmosphere of love and harmony? I admit that in this era of competition in which neighbor is led to war against neighbor, this era of poverty in which the few have most of the money, and the many have a great struggle to keep head above water, the conditions will tend to sour even a loving soul, but the warfare against self must be doubly strong. We must not only reach up to the higher world for help, but develop our own diviner psychic nature, by which means we may reach the very foundation principles of mental and physical harmony.

While the **New Thought** as explained by Mr. Horatio W. Dresser and other apostles of the system, has much that is lofty and beautiful and has saved multitudes of persons, the **Broad Thought** includes the New Thought and a world of important truths not hinted at in that system. The promulgators of that theory admit that there is a material as well as a spiritual world and are thus in advance of Christian Science, but where do they ever advocate the ordinary forces of nature for human cure or human upbuilding? The use of water for the cure of typhoid fever, sunstroke, diphtheria, etc., is greatly superior to mere mental forces. A portion of the sunlight is equal in fineness to mental forces but they rarely use it. Even massage is not generally commended by them although in a well charged healer it becomes a great conductor of both the animal and psychic forces. And so with many other things which they ignore. "Spiritual help," says Mr. Dresser, "comes directly from the great All Spirit instead of disembodied or advanced souls." In other words, the countless spiritual beings extending from the deific realms, down through all the grades until man is reached, are a kind of a helpless and idle class of existences who are not fit inspirers for man, and God himself must do all the work.

To show the one-sidedness of the New Thought, I will quote something more from Mr. Dresser. "Mind and nought but mind," he says, "proves to be fundamental in all experience." From the New Thought point of view, "causation is always mental." I have shown repeatedly that spirit and matter must always work together. We know that **Mind** itself combines a physical brain with something more subtle which we term spirit. When we use the term *mental* as distinguished from *physical*, we mean our thinking apparatus rather than unconscious matter. Let us see then how Mr. Dresser's theory will stand the simplest application of facts.

Strike one's head with a heavy club and for the time being it will destroy all mental action.

Alcohol will make a man silly and convert a fine, affectionate nature into brutality toward his family.

A clot of blood on a certain part of the brain will paralyze the body and, to a great extent, destroy the will power.

Cut away the front brain and one can no longer reason connectedly.

The use of hashish will fill the mind with strange hallucinations.

A weak fluttering heart leads to cowardice.

Softening of the brain leads to idiocy.

The use of opium will sometimes convert people of principle into liars.

A diseased liver and stomach are apt to make a person pessimistic and sometimes will lead to suicide.

In all of these the predominant causation lies in the physical and material rather than in the mental. Why blind ourselves then by considering that "mind and nought but mind is fundamental in all experience."

Of course there is an equal catalogue of experiences in which the mental predominates over the physical. I am very anxious to have my readers grasp full orbed truth and hence must give some cases in which the mental forces predominate.

Prof. Elmer Gates has demonstrated by chemical analysis that under violent excitement of hatred, fear, jealousy, etc., the blood of a person becomes so poisoned that a few drops of it will kill a dog. His very perspiration is poisoned also.

The milk of a nursing mother, who becomes greatly excited or worried, will poison her child.

A person of strong passional nature, in case his intellect is not active enough to animate his vital forces is apt to be short-lived.

The athletes of ancient Greece (also of modern times) who cultivated principally their muscular system to the neglect of their intellectual nature, have generally been short-lived, just as persons with active intellects and feeble bodies are apt to be short-lived. The harmonious blending of the mental and physical is necessary for the greatest perfection.

Violent excitement frequently destroys life or leads to disease. One of the Vanderbilts became hopelessly paralyzed from the excitement caused by his son's opposing his wishes as to marriage. Even a great spasm of joy, when the heart is weak will sometimes cause instant death.

Sensualism, hatred, feelings of revenge kept up for a time, will destroy the beautiful outlines of the face and the lovely expression of the eye, while love, cheerful habits and spirituality will give an indescribable charm to the expression.

A sensitive and psychic student of the College of Fine Forces, living in Philadelphia, was laid on a bed of sickness. Her doctors had no perception of her real nature or condition, and dosed her with the ordinary rude elements. After their treatment had given her indescribable suffering and brought her to so low a point that they declared she could not survive but a few hours, she dismissed them and then feeling a mighty impulse, she declared she would not die. The next morning she was a new being, got up, dressed herself and attended to her duties.

But there are multitudinous points on both the physical and mental side that could be adduced. We know that fineness is power, and that the mental and spiritual energies sometimes cure in a moment diseases of years' standing, especially in sensitive persons. But there are grades of the atomic forces which belong really to the material side of the universe, that are equally fine with the so-called spiritual and can work with equal rapidity. The lady in Virginia, who was on the point of insanity with prolonged insomnia, was put into sleep and health in 8 to 10 seconds by a blue lens, and Prasada of India cured an insane lady in one minute by throwing a blue light over her face. And yet blue light is a substance, a stream of fine atoms, as can be absolutely demonstrated.

One great deficiency in the present development of humanity is that they are still too narrow to perceive the quality of things. They will follow Haeckel and declare that matter is the beginning and end of all things, or they will proclaim the ideal school which includes the Christian Scientists and many Hindoo theorists, in declaring that spirit is all in all. It seems impossible for them to realize that spirit and matter are eternally correlated. Many of our old school men have made a vast study of the coarser grade of material elements but are mere children in their knowledge of the subtler forces. When they hear of these remarkable cures, they say "There was no disease; it was merely imagination." And yet these people that had no disease often lay helpless and in great pain for years, perhaps with features distorted, eyes dimmed and nerves paralyzed. A highly charged healer comes along and with a mighty tide of magnetic force sweeps out the clogged and almost dead nerves and the patient awakes into newness of life and power. A tide of sunforce may accomplish the same thing. A grand cure is thus made, perhaps in a few minutes, perhaps in a few days and weeks which the physician can not do in ten years because his drugs are not refined enough to have any thorough action on the nerves, which are such master principles of power in human systems. The physician will consider himself very acute when he hands a patient some bread pills or colored waters and makes him believe that they have a wonderful healing power. In some sensitive cases a complete cure will

be made, and hence he declares the patient was hallucinated—in reality had no disease and by imagination got rid of the spell that was on him. Instead of being acute, such reasoning shows ignorance. I have shown repeatedly that thoughts, suggestions, imaginations are brought about by exquisite streams of real substance which can be photographed and engraved. They are real things and not nonentities as many people seem to think. A strong positive mind may psychologize another to a certain extent and make him think that a certain element will cure him. Having faith in the matter, sets his own mental ethers into a brisk action which cures him. It is not a play of nonentities which cures him but of a real substance as truly as is hydrargyrum or opium which physicians love to use so much. *Ex nihilo nihil fit.*

XI. DISEASES OF THE BLOOD.

1. **Character of the Blood.** I have room here for only a few of the salient points concerning the blood. The blood is a liquid, by means of which, through chemism, all the tissues of the body are built up. It consists of a fluid called the plasma in which its solid parts, the red and white corpuscles, float. The fibrin which causes the blood to clot, is drawn mainly, if not entirely from the plasma. The blood of a human body is estimated to weigh a twelfth to a fourteenth part of the whole weight. The principal elements of the blood are the red corpuscles which are only about $\frac{1}{3200}$ of an inch in diameter and the white or colorless corpuscles which are somewhat larger. The red corpuscles are from 250 to 700 times more numerous than the white ones, which are called leucocytes. The red ones are more thermal and are admitted to have a strong chemical affinity for oxygen, which latter is the blue principle. The leucocytes are more electrical, and must have some quickening power on the red corpuscles. Both kinds of corpuscles may be dissolved in large numbers, especially in fasting. "The spleen is the grave of red corpuscles," says Kirke's Physiology, which fact is doubtless one cause of that organ's being the electrical end of the vital magnet, of which the liver is the more thermal or negative end. The normal heat of the blood as measured at the axilla and tongue is about 98½° F., but in the deeper parts of body is considered about 100°.

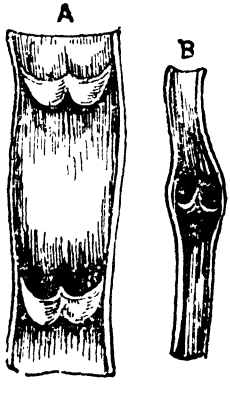

Fig. 142.—A, a vein with the valves open; B, a vein with the valve closed.

2. **Temperature and Pulse in Fevers.** We have already seen the philosophy of fevers and how they are caused by a quickened pulse dependent mainly upon the condition of the liver. This heated condition

of the blood that we term fever, is caused by the increased rapidity of pulsation, which gives too frequent an exposure of the blood to the oxygen of respiration and also develops an undue amount of frictional electricity and heat by the rapid dash of blood through the arteries. As a general rule

A pulse of 60 a minute causes a temperature of 98° F.
" 70 " " " 99° F.
" 80 " " " 100° F.
" 100 " " " 102° F.
" 110 " " " 103° F.
" 120 " " " 104° F.
" 130 " " " 105° F.

When higher than that the fever is considered intense. All high fevers are wonderfully reduced by cool baths, cool packs or cool sponging, but in case of a sensitive or excitable heart, cold water must be used carefully, especially over the heart.

3. **The Great Upbuilding Forces for the Blood.** *Deep and long breathing* is one of the most important as it brings extra oxygen into direct contact with the blood. It would be well to take twenty or more respirations in pure air each day, as it would strengthen and expand the chest and gives a better color to the cheeks.

Walking briskly in the sun when it is not too hot and dressed in light colored clothing so as best to transmit the light to the body, is of great value. If the face, for the time being, should become a little sunburned, rub it over with ceruleo a few times, leaving it to dry without wiping. The smarting will soon cease and the over-redness become modified into a ruddy and pleasing appearance.

Sun bathing in the thermolume is still more effective as the sun strikes the whole bared body, being strained through glass it prevents burning and the thorough perspiration caused eliminates impure elements. The great antiseptic power of the sun so important for destroying cancerous and other microbes and the necessity of clearing the system of drug elements which most persons have partaken of in their past lives, might require twenty or more of these baths, but it will pay abundantly. Then if they keep up good cheer, avoid greasy foods and those things that do not agree with them, practicing deep breathing, frictionizing the skin and other simple methods, they can have triumphant and continuous health.

The importance of pure and perfect blood is almost incalculable. It will prevent diseases of the brain, eyes, nostrils, teeth, throat, bronchial tubes, lungs, heart, liver, stomach, intestines, skin, bones and, in a general

way, of all other organs. Tumors, cancers and catarrhal conditions also would be impossible.

4. **Leading Elements of the Blood.** Arterial blood has 20% in volume of oxygen, 39 per cent of carbonic acid and 1 to 2 per cent of nitrogen. Venous blood has 8 to 12 per cent of Oxygen, 46 per cent of Carbonic acid, and 1 to 2 per cent of Nitrogen. It will be seen that arterial blood has quite a predominance of the rubific oxygen which accounts for its redness, and the venous blood of carbon dioxide, which accounts for its electrical or bluish nature, hence the beautiful chemical harmony between the right and left side of the heart. 90 per cent of the blood consists of the red globules composed of hemoglobin (blood-globe), a small portion of which is iron, the reddening principle of the blood when combined with oxygen. So minute are these, it has been estimated that more than ten millions of them will lie on a surface one inch square, while if all the red corpuscles of a healthy human body were placed in line, they would reach four times around the globe, which last is probably somewhat exaggerated.

Fig. 143.—Human blood-globules; *a*, seen from the surface; *b*, from the side; *c*, united in rouleaux; *d*, rendered spherical by water; *e*, decolorized by the same; *f*, blood-globules shrunk by evaporation; *g*, white globule or leucocyte.

5. **The Redness of the Arterial Blood** must be kept up or the system will become poisoned. In explaining the philosophy of pulsation (11, 6), I have shown that the right side of the heart being bluish and the left side red, a beautiful chemical harmony is established. If anything should occur to interfere with the redness of the left side, the chemical affinity would be destroyed and disease or death would occur. Take carbon dioxide for instance. In what is called soda or other effervescing drinks, their pleasing foaming character which comes from carbonic acid (carbon dioxide) is innocent. But as soon as one inhales this element in the form of smoke, he begins to strangle; asphyxiation soon takes place and the machinery of life stops. How is this done? Carbonic acid, like most other acids, contains a bluish element. On being inhaled it goes directly to the left side of the heart, giving a bluish cast to the red blood and hence destroying its chemical affinity with the right side, which is bluish, as similars repel. In such cases our medical scientists say "the heart becomes paralyzed." Under the law of chemical affinity we can see just why it becomes paralyzed and just why chloroform and other electrical substances become poisonous when inhaled as they mingle with the oxygenised red blood and pervert it.

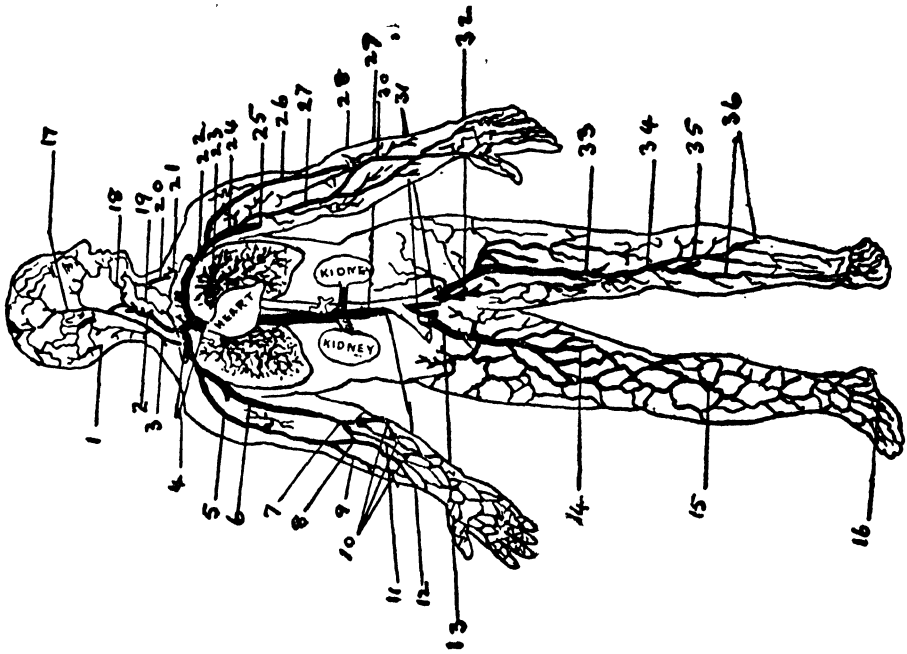

Fig. 145—Scheme of the Venous System.

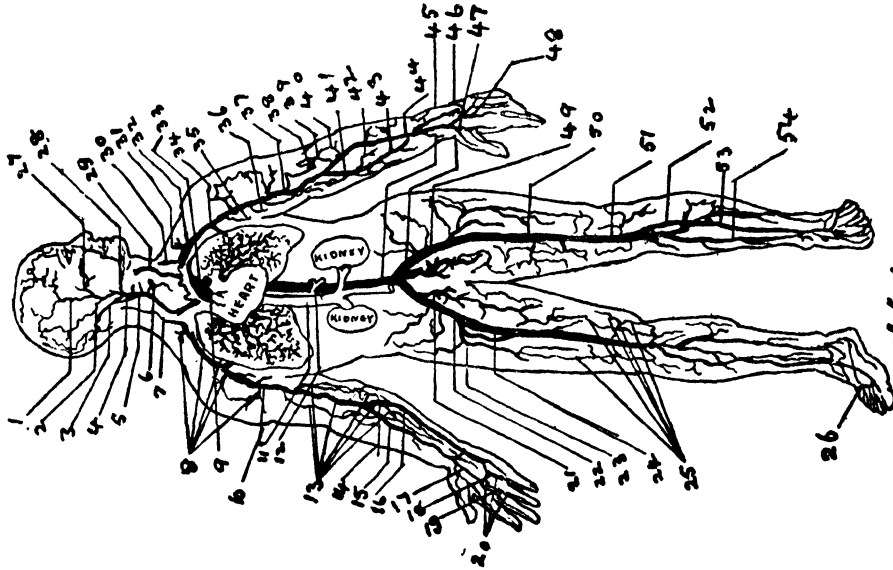

Fig. 144—Scheme of the Arterial System.

Fig. 144

1, Temporal Artery. 2, Postauricular A. 3, Occipital A. 4, External Carotid; 5, Internal Carotid; 6, Sup Thyroid; 7, Vertebral A. 8, Anastomosis at shoulder; 9, Cephal Cava; 10, Brachial A. 11, Caudal cava; 12, Coeliac Axis; 13, Anastomosis at elbow; 14, Interosseous A. 15, Radial A. 16, Ulnar A. 17, Volar A. 18, Deep Palmar Arch; 19, Superficial Palmar Arch; 20, Palmar Anastomosis; 21, Int Iliac A. 22, Common Femoral A. 23, Deep Femoral A. 24, Superficial Femoral A. 25, Anastomosis at knee; 26, Plantar Anastomosis; 27, Transverse Facial; 28, Facial A. 29, Common Carotid A. 30, Inf Thyroid A. 31, Thyroid axis; 32, Subclavian A. 33, Arch of Aorta; 34, Axillary A. 35, Circumflex Arteries; 36, Superior Profunda A. 37, Brachial A. 38, Inferior Profunda A. 39, Anastomotica Magna A. 40, Radial Recurrent A. 41, Ulnar recurrent Arteries; 42, Inter osslous A. 43, Ulnar A. 44, Radial A. 45, Abdominal Aorta; 46, Dorsal Arterial Anastomosis; 47, Common Iliac A. 48, Ext Iliac A. 49, Sup Femoral A. 50, Popliteal A. 51, Ant, Tibial A. 52, Peroneal A. 53, Post Tibial A. 54, Malleolar Branches of Above Arteries.

Fig. 145

1, Occipital vein; 2, Interior Jugular vein; 3, Ext. Jugular vein; 4, Right & Left Brachio-Cephalic veins; 5, Cephlic vein; 6, Basilic vein; 7, Mediun Basilic vein; 8, Mediun Cephalic vein; 9, Superficial veins (Radial Median ulnar, and postulnar) 10. Deep Mediun vein; 11. Caudal cava; 12, Ext. Ilian vein; 13, Long Saphena vein; (Superficial); 14, Long Saphena vein(Superficial); 15, Superficial dorsal arch; 16, Temporal vein; 17, Facial vein; 18, Ext Ant Jugular veins; 19, Int Jugular vein; 20, Ext Jugular vein; 21, Subclavian vein; 22, Pulmonary artery; 23, Axillary vein; 24, Scapular veins; 25, Cephalic vein; 26, Brachial vein; 27, Abdominal aorta; 28, Venae Comities; 29, Com Iliac veins; 30, Interior Iliac vein; 31, Femoral vein; 32, Popliteal vein; 33, Ext. or Short saphena vein; 34, Venae comites.

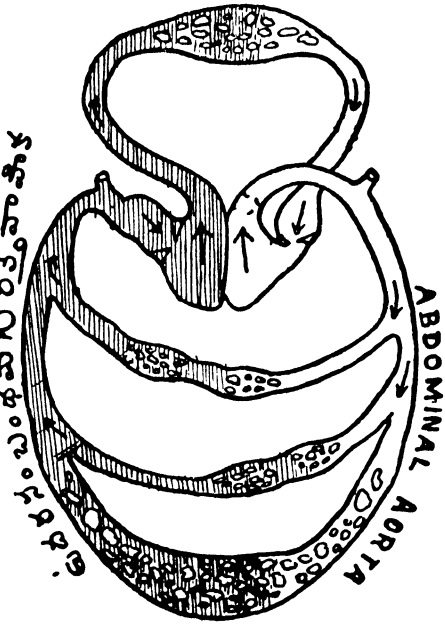

Fig. 146.—Diagram of the Circulation. The shaded lines represent the blue venous blood; the white lines, the red arterial blood.

6. **The Circulation of the Blood.** On the left side of the diagram fig. 146, will be seen the vena cava superior, or vein through which the descending venous blood is carried from all the upper part of the system and emptied into the right auricle of the heart. The still larger vena cava inferior carries to the same point the venous blood of all the lower part of the system. As I have already shown, the electricity of this blue blood attracted strongly by its affinitive red blood on the left side, will collect enough power at regular intervals of less than a second, to burst over the septum, contracting powerfully every chamber of the heart, driving the blood of the right auricle into the right ventricle, thence by the pulmonary artery into the right and left lungs; thence after being aerated and purified is pushed onward through four pulmonary veins into the left auricle, then into the left ventricle and onward through the aorta into the whole system. These arteries divide off into smaller arteries and arterioles; then into channels so small that no unaided human eye can see them. These finest channels are called *capillaries*, millions in number, thousands of miles in total length, ramifying through the tissues of the body so that every particle of its substance can be watered and fed by the passing blood. How is this done ? On the principle of chemical affinity. The capillaries have thin porous walls and as the blood passes, the red elements of the tissues will seize some blue elements of the blood and vice versa; yellow tissues will seize violet elements of the blood and vice versa, etc. After this capillary blood, pushed ever onward by the arterial pulsations, has properly nourished the system, its channels begin to widen into minute, then larger veins that pass on to the right auricle again. The complete circuit is presumed to require only about half a minute, though through the bones, etc., the blood must move on a little more slowly.

Besides the *systemic* blood that passes through the general system is that of the digestive organs, which is called the portal system, in which the liver performs its beneficent work; also that of the first renal circulation in which the kidneys perform their work of *filtration* and the second renal circulation in which the mucous membrane of the tubes of the kidneys perform their work of *secretion*. I have already shown elsewhere the electrical and chemical processes by means of which the blood is sent forward, purified and returned to the heart by means of respiration.

7. **Nervous Force** *is a kind of a master principle in human systems and goes to every blood vessel and muscle* to see that they behave properly. The **Vaso Motor Nerves** for instance, are attached to the walls of the blood vessels and stimulate them. The central principle

of their power lies in the medulla oblongata, and a magnetic hand placed over that organ will effect the vascular system.

8. **The Lymphatics** have a complete circulatory system of their own with capillaries and larger channels which for the most part empty into the thoracic duct, a tube in front of the spine which empties into the veins on the left side at the base of the neck. The lymphatics of the head and neck empty into the nerves on the right side. The lymph consists of the fatty elements of the chyle which needs some extra refined processes before it is best suited to enter into the tissues and blood and so it is strained through the little lymphatic glands that exist in nearly every part of the body. By chemism, the veins attract certain elements from the lymphatics as well as from the tissues (endosmosis), and by chemism also, the tissues attract certain elements from the veins and capillaries. Sometimes such an amount of greasy food is taken into the system that the bile and pancreatic juice and lymphatics all combined cannot assimilate it and it forms into pustules or joining other impure substances breaks forth into angry tumors or other eruptions.

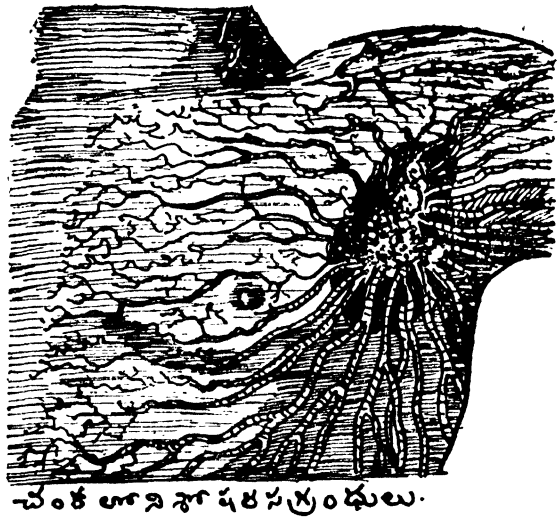

Fig. 147 Lymphatic Circulation. Lymphatic glands are seen, at the axilla (armpit).

9. **The Elimination of Impure Elements.** Dr. Austin Flint, in his "Text Book of Physiology," presumes that the method by which the impure and broken down elements of the blood are selected and carried onward is a mystery that transcends human power to explain. Our old school friends build on a theory of force contrary to nature and being unacquainted with the processes of chemical affinity, find it difficult to explain many points which in themselves are simple. It seems quite simple and natural that the blood, nascent and powerful in its freshly

oxygenated condition, should seize chemically the more dormant molecules of the tissues and drive off the weaker elements into the current of blood which moves toward the heart and lungs.

10. **Anemia** (spelled also anaemia); a deficiency of red corpuscles, causing pallor of the skin, weakness, poverty of the blood, comes from deficient sunshine and poor outdoor air, worry, overwork in-doors, nocturnal emissions, intestinal irritation, etc. Woman is more given to anemia than man.

Symptoms: lifelessness, deficient appetite, poor digestion, irritable temper, hysteria, vertigo and sometimes epilepsy. In children it causes marasmus or the wasting disease, but this is rapidly cured by letting them play together naked in a sunny room, or especially in a sun-garden described on p. 83, of this work.

Treatment. Avoid the causes that have produced the condition. Take out-door walks and exercise but not enough to weary yourself too much. Get tanned in the sun and air, of course, take sun-baths and have red light over the legs, but not over the chest if the heart is excitable. Have nourishing foods, warming the system with pepper, mustard, horse-radish, etc., but have them well diluted with other foods. Massage is excellent, frictionizing the skin with rough towels and flesh brushes is good but, of course, not equal to vital magnetism.

11. **Clorosis or Green Sickness**: a decided anemia in girls at the age of puberty, and presumably has nervous as well as vascular conditions. It causes a change of disposition, the girl becoming despondent and morose, and parents must deal patiently and tenderly with her. The complexion becomes pallid, sometimes muddy, the heart irritable, the breathing short, the stomach, painful, the appetite deficient. The prognosis under the old methods of treatment is " unfavorable " and the bad effects lasting, but a treatment as in other forms of anemia by sun-baths, vital magnetism, and *suggesstion* while the girl has been made more or less psychomic by " going into silence, " or by becoming almost lost in sleep, will have a great and revolutionizing effect upon her.

12. **Lucemia**, a phase of anemia in which the white corpuscles (leucocytes), are too abundant in proportion to the red corpuscles; causes great pallor of the skin, liver and spleen are greatly enlarged and of course made dormant so that their correlative action must become too feeble ; symptoms, poor appetite and digestion, palpitation, loose bowels, waxy, pale skin, blood almost watery, etc.

" No case of recovery has yet been recorded," says Dr. Daniel E. Hughes of Philadelphia. Then I believe it remains for Chromopathy to

break this record, by means of the solar sweat-bath with plenty of red glass over the legs and lower bowels, purple over stomach and liver, or when sunned on the back, over the kidneys, and an abundance of deep breathing and out-door life. Any and every way must be adopted to give the red corpuscles predominance over the white ones. Massage would help in waking up the blood but the color forces are the great power.

13. **Profuse Bleeding at the Nose (Epistaxis)** or **Excessive Menstruation (Menorrhagia)**, is often the result of poverty or thinness of the blood rather than over fulness, as some suppose. For nose-bleeding in its milder form throw the head over backward. Gravitation increases the bleeding when the head is held forward. In continuous bleeding douche the nostrils with ceruleo, which is a great styptic. For menorrhagia or other severe uterine hemorrage, give a vaginal douche of ceruleo while the hips are raised by resting on a bed-pan or chamber, or if ceruleo be wanting, use water with only the slightest amount of heat in it.

14. **Scurvy or Scorbutus.** This is a kind of anemic condition which comes from a lack of vegetable foods and especially raw cabbage, cresses, horse-radish, potatoes, etc. In old times, sailors who have been long at sea have died off to such an extent that their ships have been left to float before the winds without a hand to guide them. The greatest cure turned out to be lemon juice, and oranges, apples and other acid fruits and were excellent. With modern hygiene in vessels and canned fruits and vegetables, very few sailors are affected. There has been a great change since the monster Pizarro, early in the sixteenth century, with his squadron of 2700 men lost all but 100 of them.

The sponginess of the gums with teeth loosening or falling out; thinness of the blood with tendency to great hemorrhages, lifelessness, despondency, the skin pallid and rough, spleen and liver enlarged, show the great importance of treatment already described for anemia, and a proper variety of foods, including especially fresh vegetables.

XII. THE SKIN AND ITS DISEASES

1. **Nature's System.** God and Nature have established throughout the organic universe a beautiful system of insulating sheaths or coverings which protect not only against external friction but against the escape of some of the most refined and precious interior elements. The skin shuts in largely the electricities of fruits and vegetables which otherwise might radiate away the finest flavors. In animal life it usually covers the whole body and tends to prevent the vital aura from escaping. In

fact every organ including the lungs, heart, liver, stomach, spleen, kidneys, intestines, blood vessels and even the minute nerve channels have their protective membranes.

2. **Some Features of the skin.** Nature very cunningly provides all kinds of necessary elements for the harmonious working of the vital processes, some of which are shown in fig. 148. Thus the outer part of the skin, called the epidermis or cuticle, where the greatest protection is needed, is made harder and tougher than the inner part which is variously named the corium, or cutis vera or true skin or derm. The innermost layer of the epidermis is called the *rete mucosum* (mucous net), in which the color of the different races is given, as black, yellowish, reddish, or so-called white, although a perfectly white person would be frightful to look upon. In the derma, and subcutaneous tissue are papillae, fat cells, sweat glands which are in part spiral, blood vessels, nerves, fibrous tissue, the roots of hairs, sebaceous (fatty) glands for oiling these hairs, etc. The skin is not only an organ of protection but of excretion. It is estimated that about five-eighths of all that we eat and drink is eliminated through the skin, mostly by what is called insensible perspiration. The number of sweat glands in the whole body is estimated at over two millions, the palms of the hands and the axilla having the greatest number. The tactile corpuscles which are especially active in the papillae of the hand, at the ends of the fingers and some other points, abound in nerves and are keenly sensitive.

3. **An Inactive Skin.** When the skin becomes dormant, the impurities of the body are bottled up, the liver and kidneys and blood vessels become overburdened and the wheels of life run low. In such cases microbes become over abundant, diseases of the skin are easily induced, and internal congestions take place. To remedy this condition, water baths and sun baths, the friction of coarse linen towels or flesh brushes and especially massage from a magnetic hand are exceedingly important. For the cure of skin diseases the solar sweat bath is quite unequalled by any known remedy. Two cases come to mind now of persons who were unable by vapor baths or any other means to induce perspiration. One of these was that of a lawyer in the burning climate of India. In both of them sweating was abundantly established by means of the thermolume. One advantage of the solar sweat bath is that it reaches more deeply into the tissues of the body and eliminates greater impurities than other methods, sometimes causing a mass of sticky matter to appear. After powerful sweating the pores should not be left unduly open, from the danger of taking cold. A brief sponging off in cool

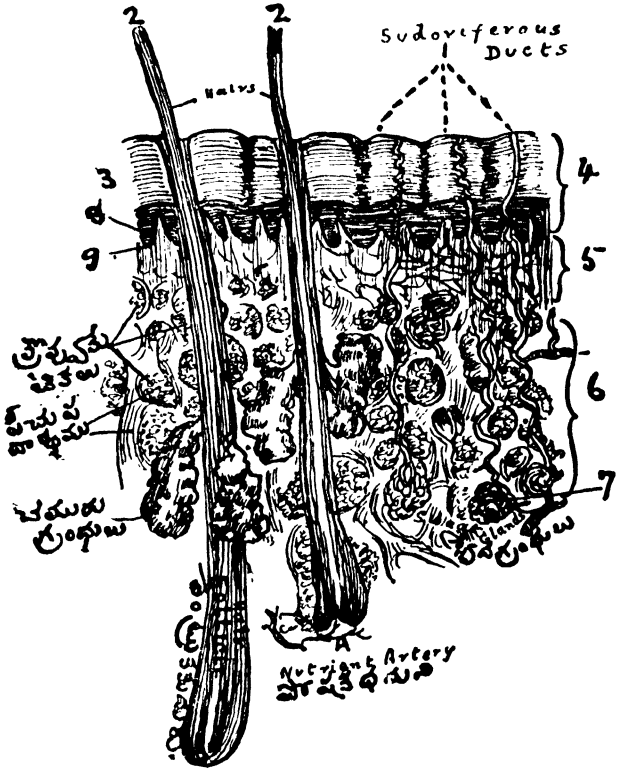

Fig. 148.—Different Layers of Skin magnified (Gray.)

ceruleo, which is an astringent, proves very effective and is the favorite method of Chromopathy.

4. **Seborrhea** or **Dandruff**, which latter is *Seborrhea capitis* and has scalp for its principal seat. The fatty elements, especially the sebaceous glands, become too abundant, or the cuticle develops into scales and falls off frequently, causing baldness. Sometimes a vegetable parasite interferes with the roots of the hairs causing a disease called *favus*, and baldness thus produced is supposed to be incurable. At A, fig. 148 are minute blood vessels and nerves entering the follicle of the hair. When these are destroyed by bacteria, the hair is liable to fall out, hence baldness ensues. See next paragraph.

5. **Baldness** or **Alopecia**. Baldness does not come from dandruff alone but from a number of imperfect systemic conditions. When taken in time ceruleo, varied at times by purpuro, has proved very effective. The ceruleo, should be rubbed in well so as to destroy any bacteria and has an excellent effect in preventing dandruff, although it would be well to have the scalp shampooed first and in a bad case to rub in some olive oil to soften and loosen the dandruff scales before the shampoo or

ceruleo is applied. Several physicians and others have been surprised to find that ceruleo has arrested the falling off of the hair, and the author had his beard freshened up and entirely restored by ceruleo after it was becoming badly broken off and thinned out. The blue principle tends to prevent all withering processes, and all putrid conditions, and ceruleo is excellent for hair which is too red. A New York lady artist, was using it for an eczematous sore on her head and finding it was darkening the hair where it was applied, ceased its use, as she desired the auburn color. But she should have used it until cured and afterward brought back the hair to its fair color by applying ambero or rubio.

Baldness is liable to occur from wearing a hat almost constantly. A friend informed me that his hair was rapidly falling of, but was brought into vigorous growth by wearing an old hat in the sun, while gardening, in which the top was cut off.

6. **Blackheads** or **Comedo.** These, when abundant, give a dirty, greasy look to the face. Blackheads are a perversion of the sebaceous glands. Aim at better blood, become sun-tanned for a while, and rub in ceruleo over face and neck to kill the parasites that often cause them, and to purify and soften the skin.

7. **Wen** or **Sebaceous Cyst.** This is usually a painless but unsightly little tumor that comes on the surface of the body, especially on the face and scalp, and evidently comes from an inactive condition of the skin. A student of the College of Fine Forces focused a sun-burning glass on a small wen for 15 seconds and thus dissipated it. The author has found that the larger wens need to have the glass focused several times and several minutes at a time.

8. **Wart** or **Verruca** comes from the enlarging of the papillae of the true skin surmounted by portions of the cuticle. It is more common with children than with adults. It is easily dissipated by paring it off with a sharp knife or pulling it off and then focusing a burning glass on it.

9. **Excessive Sweating** or **Hyperidrosis.** This is apt to be under the arms or at the genitalia, but may be over the whole system. The great remedy for this is bathing in ceruleo, which being cooling tends to quiet the excitement of the sweat glands and being astringent tends to narrow the opening of the pores, and this in a gentle, safe way.

10. **Acne.** An affection of the sebaceous glands and other near parts developing in the form of papules (solid elevations of the skin), pustules, or both combined. This is very apt to be chronic and comes from imperfect conditions of the blood, digestive organs, etc. The

skin should be frictionized. with coarse towels, massaged but above all sunned. A Mr. Groene, then of Cincinnati, who had been afflicted with acne for years, had his acne dissipated and a chronic sick headache cured by three thorough solar sweat baths. A young man who had a number of small red eruptions cured them in one or two days by washing the parts with ceruleo. For yellowish eruptions I would use purpuro.

11. **Eczema**, in other words, **Salt Rheum** or **Tetter.** This is an inflammation of the skin, which in certain places will have a serous discharge and a crusting over. It has an over-redness, often manifesting in the form of papules, vesicles, pustules, etc., and is non-contagious. Eczema appears in many forms and colors and is the most common of skin diseases. Our physicians find great trouble in treating the different phases of the disease. Sometimes the blood of the derma and below is crowded outward and being shut in by a dormant cuticle, will cause swellings, scabs and sores which exude a serous fluid. Eczema rubrum, or an excessive redness, is a very common form and causes patients the full sunlight on their bare skin. In such cases, and in fact in all cases of eczema, I put blue veiling over the face of the thermolume for a few times. This gives a soothing and healing effect, and also transmits many of the animating rays, which of course are much needed. In fact chronic eczema needs some very stimulating rays to start with, such as red purple, or at least purple.

Intense itching is apt to go with eczema. For this a ceruleo wash is fine, or when very severe add a little vinegar, or a little boracic acid. In parts where there is crust or scales, sweet oil will give a softening effect, after which it can be washed off by the aid of castile soap.

Causes should always be considered in such a disease. Rich indigestible foods, dormant liver, kidneys and intestines should be remedied and a bad condition of blood should be treated with deep breathing and other simple remedies. The greatest of all causes of eczema and a general scrofulous condition is undoubtedly vaccination. But by far the greatest of all remedies for these conditions is the solar sweat bath. A proper series of these baths should eliminate the whole matter from the system.

12. **Hives** or **Nettle Rash** (Urticaria). An inflammation of the skin in the form of wheals (whitish or pinkish elevations), frequently caused by heat or poison irritants, or by a swelling of the papillae of the skin. The disease causes such a pricking, tingling and itching sensation that the patient will be liable to scratch and tear the surface until a bad matter is made worse. Sometimes the wheals will vary in size from that of a

pea to that of a walnut and larger. Sometimes they will form in the shape of a ring (urticaria annularis), or spiral, etc. The parts should be washed with ceruleo and vinegar or in the absence of ceruleo with vinegar, and water, or alcohol and water or salt and water and the whole surface of the body must be kept clean and active by baths, friction, light and sweat baths.

13. **Fever Sores** or **Herpes**, an acute inflammation of the skin, such as little groups of vesicles, causing sores upon the lips when one has taken cold, or upon the genetalia from lack of cleanliness. It is a hint to keep the bowels open and attend to the digestive organs. What are called "Shingles," or **Herpes Zoster** (a girdle) is generally preceded by severe neuralgic pains. A burning glass focused a few seconds on a herpes will scatter and eliminate it.

14. **Water Blister** or **Pemphigus**, forms between the cuticle and derma and sometimes grows to the size of an egg. It should be pricked and evacuated as soon as formed, and can be sprinkled with flour or some oatmeal to advantage.

15. **Prickly Heat** or **Miliaria**. Miliaria means millet, i. e., it causes papules, sometimes vesicles of the size of millet seed and comes from the inflammation of the sweat glands. It causes a distressing prickling or burning heat, especially in very hot weather, and is most common with fleshy people and children. Wash off with purpuro or ceruleo, allowing it to dry in without wiping, in bad cases combining some lemon juice or vinegar.

16. **Boil** or **Furuncle**. This does not begin in the derma, but in a sebaceous gland, a sweat gland, or a hair follicle. As it advances to its full size it reaches into the subcutaneous tissues, destroying them and converting the central part into pus or into a core. A hot poultice will bring it to a head all the sooner and focusing a purple lens over it will stir up the dormant elements and assist nature in getting rid of them. Boils are nature's hints for attending to the blood.

17. **Carbuncle** or **Anthrax** (a coal). A hard dark red and very painful swelling, including not only the skin but subcutaneous tissue. It is caused by the bacillus anthracis, but these bacilli themselves are apt to spring into being from the impurity of the blood. The carbuncle is distinguished from the boil by its great size, by its flatness, by the many points of suppuration, etc. It is characterized by a deep throbbing and burning pain. Focus the purple lens or purple disk over it powerfully or when the pain is too severe, use the blue. The late Dr. Wilbur of Chicago, who was powerfully magnetic, would magnetise several thicknesses of tissue paper and placing them on the carbuncle,

the malignant elements would be drawn outward very rapidly, so powerfully in fact that no one was seemingly able to endure it continuously. If there is no magnetic person present to charge the paper, take some red or red purple paper, put it in the sun a few minutes, then bind it over the tumor.

18. **Freckles** or **Lentigo** (lentil-shaped). These unsightly little spots seem to be more common in children than in adults. It is probable, from their yellowish or brownish character that they are composed mainly of carbon which is driven into the skin by a warm summer's sun. Being thermal, as signified by its color, it must necessarily require some electrical elements for balancing and offsetting it, hence a ceruleo wash, with some lemon juice mixed in, must be a scientific remedy and should be rubbed in once or twice a day until the spots have vanished. Freckles frequently become chronic and keep their place for years when nothing is done to remove them.

19. **Corn** or **Clavus**. A corn is a calloused portion of the cuticle of the toes generally caused by too tight or ill fitting shoe. The pain comes from pressing it upon the interior skin (derma), not from the corn itself. To cure it shave off the hard portion until sensation is reached, then focus a burning glass upon it. The author completely cured a corn of many years' standing in this way, using the burning glass without pain only once. Those between the toes are so influenced by the perspiration as to be termed *soft corns*. These are more inflammable and are best treated by a blue chromo lens.

20. **Ringworm** or **Favus.** This is a contagious affection of the skin caused by a vegetable parasite—*Achorion Schonleinii*. This *tinea favosa*, as it is called, is the honey-combed ringworm that is confined almost entirely to the lower classes, and is not much known in America. The tinea circinata or *ringworm of the body* is also a contagious parasitic affection more common with weakly or poorly nourished children than with adults. Such diseases as well as many others are induced and developed by an inactive skin and blood as their favorite soil. A ceruleo compress would tend to destroy the microbe (trichophyton) and to heal the irritated skin. The ringworm of the beard usually called "Barber's itch," is caused by this same tricophyton. If a ceruleo compress, applied several times, will not destroy its influence, kerosene oil may be effective.

21. **Scabies or the Itch.** This is caused by an animal parasite called the acarus and is contagious. This industrious little anima burrows under the horny part of the cuticle thus forming cuniculi or red

lines—also causing vesicles, pustules, papules, etc., while the patient or rather the impatient makes a bad matter worse by severe scratching. Wash the whole system two or three times in one day in ceruleo, or a half pint of ceruleo with a dozen drops of carbolic acid in it; or the following ointment may be rubbed in over the whole body.

Flowers of sulphur ..... 3 j.
Peruvian Balsam ..... 3 ss.
Vaseline ..... 3 j.

22. **A Felon** or **Whitlow** is very often a disease of the bone rather than of the blood. An abscess forms under the periosteum, the fibrous sheath that surrounds the bone, especially at the end of the finger, the flesh becomes turbid and swollen and the pain is fearful. It should be treated immediately. Physicians generally approve of surgery as the only thing. Poultices are generally useless as they cannot reach the cause. The following practical methods have been efficient. Dr. C.O.B., who was then studying with me had the whole end of the finger inflamed and painful. I advised him to bare his arm and make passes upward all the way to the elbow for a half hour. He did so and quickly cured the trouble. A physician in New Jersey focused red light for some time directly over a felon and scattered the imperfect blood in a way to cause a complete cure. But I must give a method discovered by the late Wm. E. Dunn, M. D., D. D. S., and D. M. of New York. He would tie the top of the finger tightly with thread wound several times around it, and after a few minutes untie it. Then he would repeat the tying perhaps once or twice more. He says he had never had a failure. The pain is a little greater just while it is tied, but some cases that could not sleep night or day on account of the agony, grew quiet and went to sleep in an hour after the tying. What is the explanation? The following: the arterial blood can push itself to the end of the finger, unimpeded by the tie while the capillaries and veins are in part shut in so that when it is untied it rushes out so strongly as to carry away the inflamed elements and give relief.

23. **Lupus** consists of red or considerably elevated spots which most frequently attack the face. Its severer form is *Lupus Vulgaris*, a tuberculous inflammation of the skin which sometimes ulcerates badly. Red light is fine for scattering the red nodules (small swellings), but the antiseptic or healing power of blue light should also be used.

Dr. Finsen of Copenhagen, Denmark, deserves great credit for waking up the slow medical world to the effects of a color force, although it is mainly the colors red and violet which he uses and finds highly

effective for the cure of small-pox and lupus. He is only in the a.b.c's of Chromopathic science, however, as he considers the red a mild force and blue and other colors which he incorrectly calls *actinic*, he considers fierce and irritating. Red is really a roaring lion in some cases, while blue and violet, as tested a thousand times over, are especially soothing and quieting. The upper invisible thermel which belongs to the X-ray colors is more burning than the red which it so much resembles and produces the caustic effect sometimes seen in the X-ray experiments.

24. **Eruptive Diseases**, though having much to do with the skin, may be ranked also as fevers and will be treated of in Part Sixth of this work.

XIII. OSTEOLOGY OR THE DEPARTMENT OF BONES

1. **The Bones**, while constituting the framework of the human temple, an important and very necessary thing, are still, according to the law of power, not the most potent part of man. The bones, muscles, cartilage, etc. are not of themselves capable of acting as a force, being solids. The real forces must be fluids, such as blood which carries nutriment to all parts of the body, the nervous or mental ethers which control muscles or convey the elements that produce sensation, etc.

2. **The Composition of Bones.** I shall not have space here to give more than the briefest account of bones and it is not necessary, as all works on anatomy and physiology give descriptions of them. About one-third of the substance of bone consists of organic or animal matter and two-thirds of earthy salts, such as phosphate of lime (calcium phosphate) which constitutes more than half of the whole substance of bone, calcium carbonate, magnesium phosphate, sodium chloride (common salt), etc.

3. **The Skeleton.** The number of bones in the adult is 200, the cranium having 8 ; the face 14, the sternum, ribs, and the hyoid bone at the root of the tongue 26, the upper extremities 64, lower extremities 62, and the spine or vertebral column 26, the five vertebrae of the sacrum and the 4 terminal bones of the spine, called the coccyx, being each merged into a single bone in adult life. There are also 6 minute bones in the ear. "At birth," says Dr. G. A. Persol, "there are 278 bones; at the age of twentyfive, 224 ; and in advanced old age, 194." In the next paragraph it will be shown how it is that certain bones coalesce and form together as the years pass on.

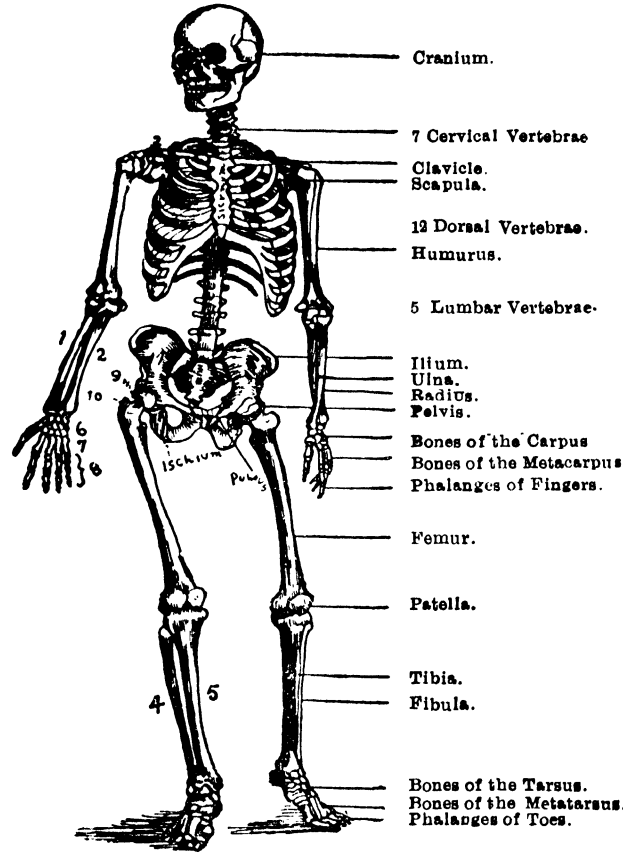

Fig. 149.— The Skeleton (Holden).

1. The radius ; 2, ulna; 3, clavicle, or collar bone; 4, fibula; 5, tibia (shin bone); 6, carpus or wrist bones; 7, metacarpus, which are the next bones higher than 8, the phalanges of thumbs and fingers; 9, the head of the femur or thigh bone; 10, the neck of same; 11, os innominatum (nameless bone); the scapula or shoulder blade is scarcely visible here.

4. Fig. 150 will give a hint as to **Human Development** showing that nature requires twenty years to perfect even a human hand At birth most of the bones appear in the form of cartilage and ossify later.

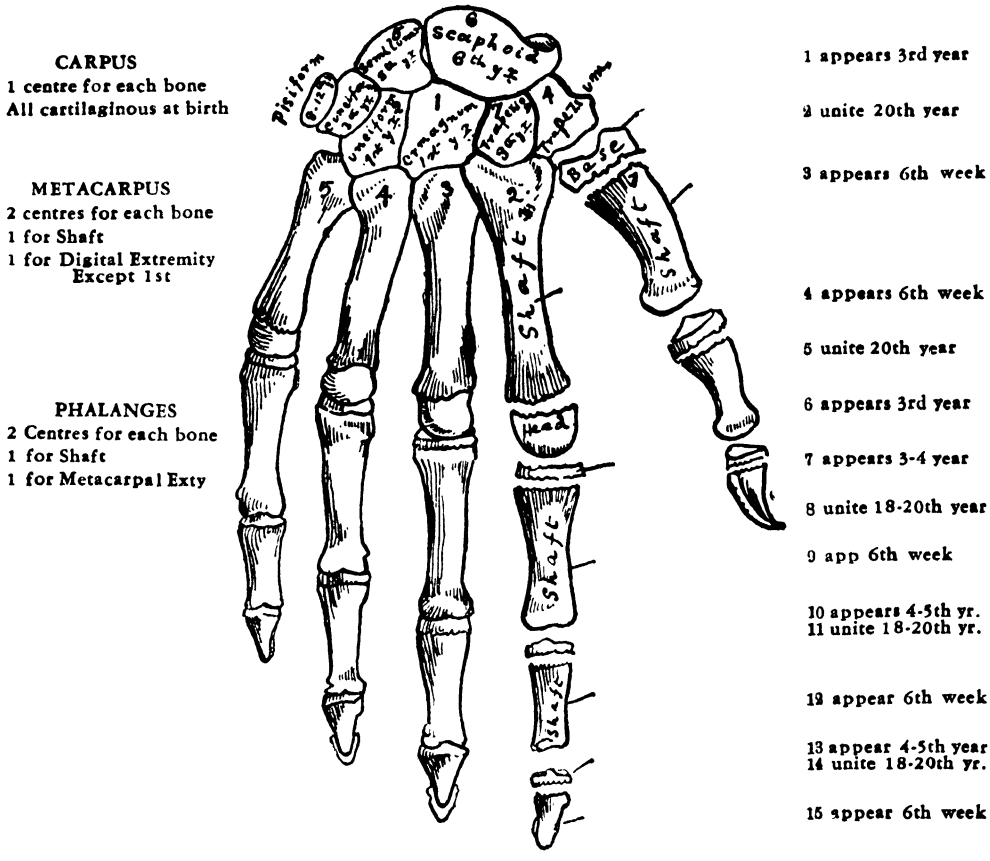

Fig. 150.—Plan of Development of the Hand (Gray).

5. **The Sutures.** Fig. 151. In massaging the skull it is evident that the vital magnetic current will pass into the brain through the sutures, more freely than where it has to pass through the solid bone, although some of the more subtile part of the current may be transmitted through even the bones. For this reason the vital magnetist and electrician would do well to study the course of the sutures, though if electricity be used at all on the brain, it should be done with the gentlest current possible.

6. **Nutrient Channels of bones.** The larger of the microscopic channels for the blood passing through bones are called *Haversian canals* ; near by are minute cavities called *lacunas*, (lakes), and connecting each lacuna with a Haversian canal is a very small channel, the canalicula (little canal). The periosteum is a membrane on the outside of the bone, which is well supplied with blood vessels.

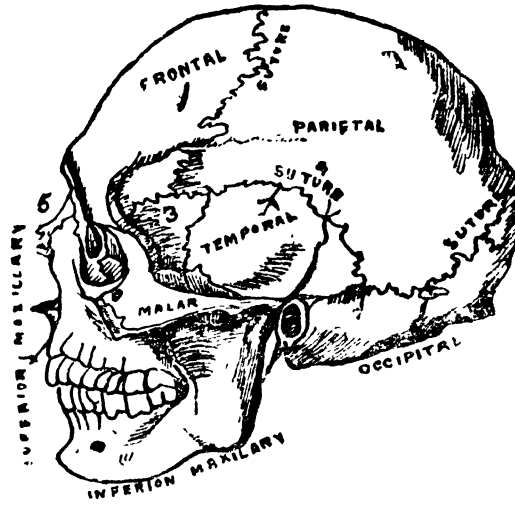

Fig. 151.—The Skull.

No 1 is the coronal suture; 2, the occipito-parietal suture; 3, is the sphenoid bone which has been called the keystone which wedges together 14 other bones; 4, squamous suture; 5, nasal bone. The malar is the cheek bone; the two superior maxillaries constitute the upper jaw-bones; the inferior maxillary, the lower jaw-bone

7. **Earthly Immortality.** A fad is spreading more and more widely, that by proper living and correct food people will be able to repair the waste of the system as fast as it occurs and so live on forever in this world. It makes no difference with them when we remind them that not one of the countless billions of people who have ever lived have escaped this transition of death. Some of those who are under the delusion, are already stricken with disease and have one foot, as it were, in the grave, but their large hope or self-esteem or love of this earthly "vale of tears," leads them to feel that their case will be exceptional. The old theory that all parts of a human system are changed and made over new once in seven years is very inaccurate. It is probable that the softer tissues of the system through which the blood has free play, are changed as often as once a month. Why then do people continue to pass onward into a downward curve as age approaches? The gray hairs have to come, the joints grow weaker and stiffer and the sturdiest form must bow.

This is my answer. After the bones have become fully matured and rigid, I believe it will not be possible for them to renew their elements rapidly enough to supply the waste that is going on. The system for many years may be powerful and the powers of life and death may keep nearly even. There are numerous blood vessels, as we have seen, in these bones to bring nourishment to them, but they do not at all compare with the countless millions of capillaries in the fleshy parts. Besides this, there are numerous cartilages that have no blood vessels; in other words they are admitted by our anotomists to be "non-vascular." These strong elements must gradually wear away, and how are they to be recuperated?

What a beautiful provision, then, by which nature lets us down so

gently and opens the door to a diviner life! I have shown in Part Third of this work that within the grosser form of this earthly life is a psychic body with higher perfections of brain and bodily organs which are adapted to a more exalted clime. A body so refined, so akin to the incorruptible ethers and electricities of space, is not composed of the material that perishes, but is made to be an heir of immortality.

I have now spent a considerable time in portraying the diseases of the body and I desire to say a word about the perverted conditions of the psychic being that shall go hence in due time. I have shown in another place that "thoughts are things" which can be impressed on a senitized surface and photo-engraved; that bad thoughts such as hatred, selfishness, jealousy, impurity fill the whole being with poisons and with a hateful expression. Is it not immensely important then, that we cultivate the beautiful side of this human life of ours, filling the soul with noble aspirations so that the hell-part of our natures shall be more and more eliminated as time rolls along?

My study of both the visible and invisible sides of being has led me distinctly to the following conclusion, namely, that the worlds of the external universe have a predominance of the coarser grade of matter and are not intended for the permanent habitation of mankind, and moreover that all life must have its starting point in these words and nowhere else. If we take any position but a few miles above the surface of our world, for instance, no animal life can exist.

It seems to me that people who are so willing and even desirous of living forever among these ruder grades of earthly matter, have but a poor conception of those more glorious ethereal realms which are naturally suited to the psychic body.

8. **Diseases of the Bones.** There are such diseases as **Caries** (rottenness) in which the bones wear away in minute particles, often becoming crooked; and Necrosis (deadness) in which a bone or part of a bone becomes dead or mortifies; and Rechitis or Rickets (spine), a disease of children in which the spine has a tendency to soften and grow crooked, and **Periostitis** in which the periosteum or outer membrane of the bones becomes inflamed, etc. There is nothing so deep reaching for all such diseases as sunlight and massage. Curvature of the spine has been cured entirely by a magnetic hand. Such cases should also have nourishing food.

XIV. THE MUSCULAR SYSTEM.

1. The word **Muscle** comes from *Musculus*, a little mouse, from its quick movements backward and forward as it controls the motions of the body. Muscles are the instruments of motion for all parts of the

body, though in all voluntary muscles the power of motion itself is imparted to them from the vital electricities that are transmitted through the motor nerves.

2. **Two Kinds of Muscles.** *Involuntary* muscles, that is, those that are not directly under the power of the will, have more smooth and simple filaments while the *voluntary* muscles are more fibrous, or have striped fibres or tubes containing filaments. The involuntary muscles include those principally of the interior system, in which the sympathetic nerves rule and receive their motions principally from the chemism of vascular and food elements. The voluntary muscles are mainly on the limbs and external system, though influencing some internal organs also and are governed by a more compound system of chemical affinities, which I shall explain presently. The muscles of the heart, though involuntary are more or less striated, as they should be on account of the great power they exert.

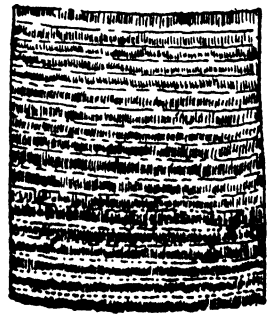

Fig. 152. A human muscular fibre, magnified 800 times.

Fig. 153. Separated bundles of fibrils, *d* being the smallest that could be detached.

Fig. 154. The motor nerve connecting with a muscular fibre.

3. **Explanation of Muscular Action** I have already explained the chemism that lies at the basis of involuntary muscular action as pertaining to respiration, pulsation and the processes of the alimentary and intestinal channels. I must now explain a little more fully than I have heretofore done, the muscular action that is controlled by the will.

All forces that are projected outward from the brain by the will power must go through the motor nerves, in which the bluish or electrical currents are predominant. What causes these contractive forces thus to move outward ? First the muscles which constitute the reddish or lean meat of animal life will naturally attract chemically the bluish forces of the motor nerves. These motor nerves naturally go directly

to the muscles looping themselves into the substance of these muscles or spreading themselves out over them, as seen in fig. 154, in which the nerve spreads along the muscle at S. P. P. S. so as to get a good purchase upon it and throw its contractive power into it. But not only are these blue ethers attracted to the muscle by chemical power but volition gives them a special impulse thence, and this volition itself is but another process of chemism, for explanation of which see Part Third, II. 25—also IV, 5.

4. **Muscular Fibres.** A muscle consists of a bundle or fasciculus of fibres and each fibre consists of numerous fibrils.

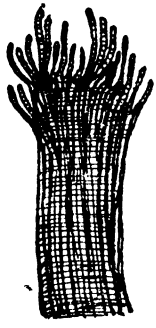

Fig. 155.

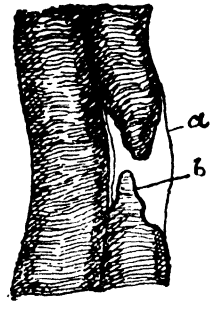

Fig. 156.

Fig. 155 shows a fibre magnified 35° diameters, with its longitudinal fibrils. To impart the very great strength required of muscles and their tendons, most of the lines of polarization are longitudinal, but some are also transverse. Fig. 156 exhibits two fibres, one of which under a violent strain has its inner part broken, leaving what is called its sarcolemma or enclosing membrane *a* hollow. Some persons with great spiritedness or activity of nervous force without correspondingly strong muscles, will sometimes overstrain their muscles in a way which is most difficult to cure. A refined vital magnetism or the subtle power of sunlight, perhaps the blue or violet ray, is the most effective thing that can be done in such cases. Such an institution as a solar gymnasium, to be described hereafter, would develop both the nervous and muscular force.

5. **Muscles of the Head and Neck.** I think it well to give many of the leading muscles of the system as being prominent agents of power and as showing the masseur the direction of movements to influence them. Downward movements over them soothe, upward movement strengthen: The student can gain some idea of the meaning of the terms by noticing that *levator* is that which raises; *depressor*, that which lowers; *major*, greater; *maximus*, greatest; *minor*, less; *minimus*, least; *latissimus*, broadest; *superior*, upper, *inferior*, lower etc.

Orbicularis palpebrarum, the muscle that closes eyelids; pyramidalis nasi, depresses the eyebrow; levator labii superioris alaeque nasi, elevates upper lip, dilates nostril; compressor narium, contracts nostril; dilator naris anterior, dilates nostril; Dilator naris posterior, dilates

nostril; levator labii superioris, elevates upper lip; zygomaticus minor and zygomaticus major, draw the upper lip upward and outward; levator anguli oris, raises the angle of the mouth, sometimes called the "grinning muscle"; orbicularis oris, closes the mouth as in kissing, etc., depressor labii inferioris, depresses the lower lip; depressor anguli oris, depresses the angle of the mouth, as when a person is downhearted, quite the opposite of the levator angle which sometimes gives a haughty appearance; platisma myoides, wrinkles the skin and depresses the mouth—to prevent such muscles from giving a premature aspect of depressed old age, it is important to keep up good health and a happy frame of mind; epicranial aponeurosis spreads as a kind of a membrane the frontal and occipital muscles; attollens aurem, elevates pinna (ear); attrahens aurem, retracts pinna; it is very rarely that these *aurem* muscles can really move a human ear, but there are persons who can move the ear much as an animal does; masseter, a muscle of mastication, especially connected with molars; risorius, the laughing muscles; sterno cleido mastoid, depresses and rotates the head; trapezius, draws head backward; platysma myoides wrinkles skin and depresses mouth.

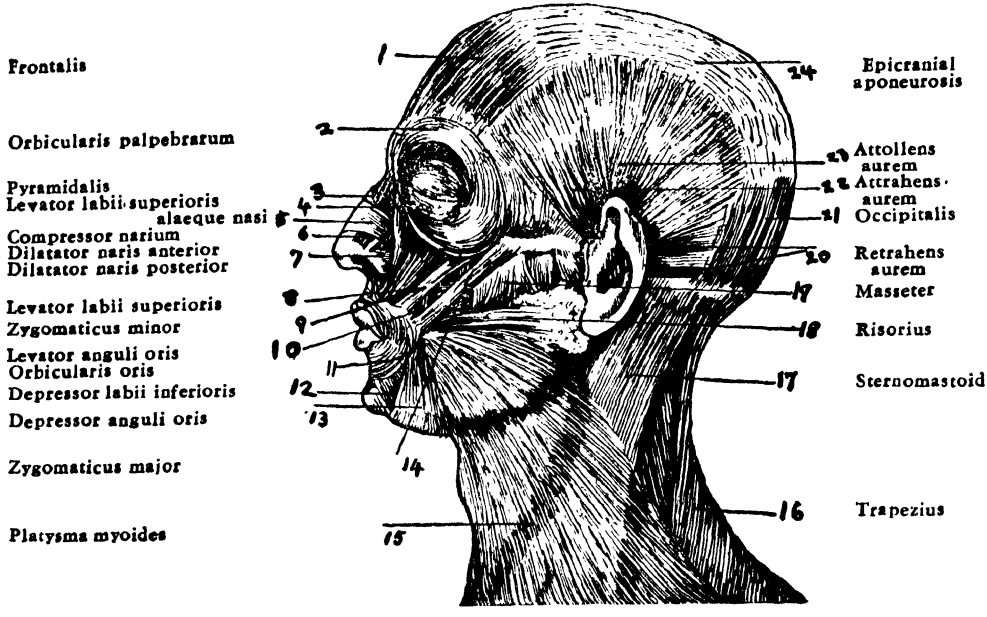

Fig. 157.—Superficial Muscles of the Face and Neck

6. **Muscles of the Back.** Fig. 158 is a part of the superb Temple of Man, which has its pillars of bones, its head for a dome, its mighty sheathing of muscles, its heating pipe work of blood-vessels, its countless

millions of exquisitely carved cells and columnar forms, and its nerves through which move electric and thermal currents as forces of illumination. For adaptation and beauty combined, the human form, in its general features, is the highest conceivable and must be virtually the same in all inhabited worlds, quite contrary to the theories of the French astronomer.

Trapezius, described above: deltoid, raises the arm; triceps, extends forearm; teres minor, rotates humerus outward and adducts it; infraspinatus, rotates humerus outward; teres major, draws arm down and back; rhomboideus major, elevates and retracts scapula; pectoralis major, draws arm downward and forward; serratus magnus, elevates ribs in inspiration (8 upper ribs); latissimus dorsi (broadest muscle of the

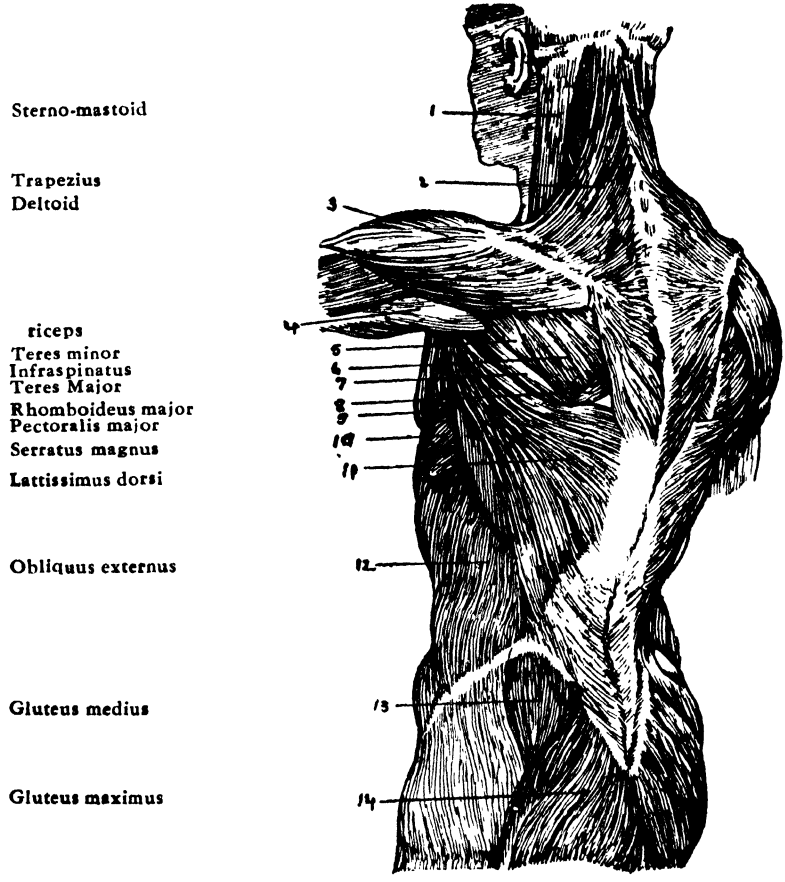

Fig. 158.—The First Layer of the Muscles of the Back (Eckley).

back), draws arm back and downward and rotates it inward; obliquus

externus, external rotator of thigh, gluteus medius, rotates, abducts and advances thigh; gluteus maximus, extends, abducts and rotates thigh outward.

7. **Muscles of the Chest and Upper Arm.** Fig. 159. The pectoralis major or greater muscle of the breast issues from the costal cartilages, the sternum and the clavicle. There is a sternal portion and a clavicular portion. It draws the arm downward and forward and under volition has the power to elevate the ribs. It should be remembered that when

Fig. 159.—Superficial Muscles of the Chest and upper Arm.

certain muscles are said to elevate the ribs during inspiration and depress them during expiration, that is not the normal process by which respiration is performed as a continuous matter, this being the result of chemism acting through the blood of the lungs, as already explained. The pectoralis minor is a smaller muscle that lies beneath the pectoralis major. The biceps flexes the forearm and turns the palm upward (supinates it.) The brachialis auticus also flexes the fore arm. The coraco brachialis adducts and flexes the arm.

8. **Extensor Muscles of Arm and Leg.** The human system with its marvelous cord work and its countless forces both visible and invisible is the most wonderful piece of machinery in the universe. I have placed a cut of the forearm and another of the leg side by side, all the better

to show their analogous features. Thus there is the extensor communis digitorum in the arm which divides off into four tendons that run down

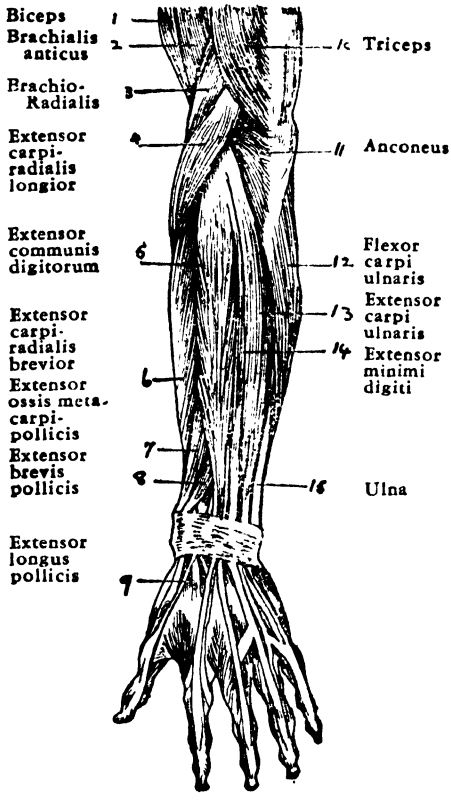

Fig. 160. Muscles of the Back of Forearm.

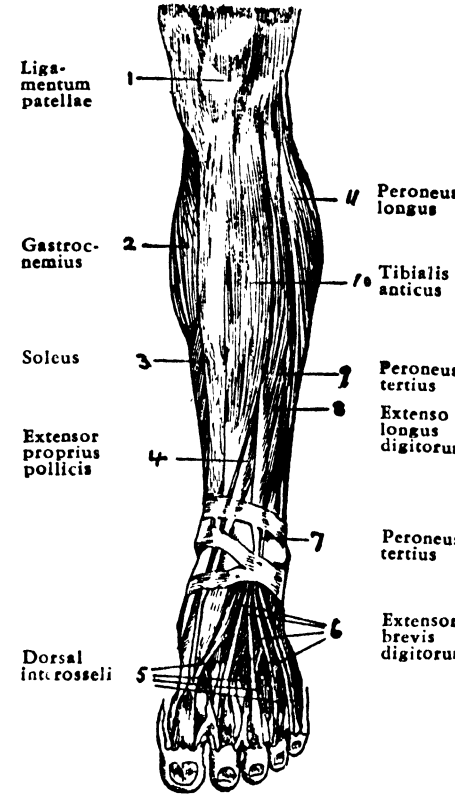

Fig. 161. Muscles of the Front of the leg.

into the *common* fingers, and similar to this in the leg is the extensor longus digitorum which divides into four tendons that run into the four *common* or smaller toes. Then there is the extensor longus pollicis (pollicis, meaning *of the thumb*) in the arm which extends the thumb to match the extensor proprius pollicis which extends the *thumb* of the foot. It will be noticed that these extensor muscles occur on the back of the arm but on the front of the leg.

The brachialis anticus, flexes the forearm; the brachio-radialis or supinator longus, supinates forearm and hand; extensor carpi radialis longior, extends the wrist; extensor communis digitorum, extends the fingers; extensor carpi radialis brevior extends the wrist; extensor ossis metacarpi pollicis extends the thumb; extensor brevis pollicis assists in extending the thumb; extensor longus pollicis extends the thumb; triceps extends forearm; anconeus extends forearm; flexor carpi ulnaris flexes the wrist; extensor corpi ulnaris extends the wrist; extensor minimi digiti extends the little finger.

9. **Muscles of the front of the Leg.** I have already spoken of two leading muscles of the front leg, as given in fig. 161. The other muscles presented aside from the ligament of the patella (knee pan) are the gastrocnemius the leading muscle of the calf which extends the foot; the soleus which extends the foot; extensor proprius pollicis, extends the great toe; dorsal interosseli, abducts toes; peroneus longus, extends and everts the foot; tibialis anticus, flexes the ankle and everts the inner border of the foot; peroneus tertius, flexes the ankle and raises the outer border of the foot.

10. **Frontal Muscles of the Forearm.** Fig. 162. shows the first layer of the muscles of the forearm, the most of which are flexor. On

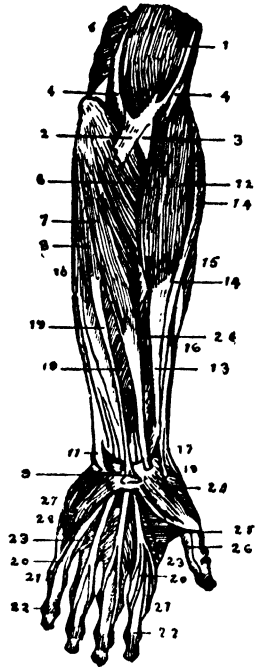

Fig. 162. Superficial Muscles of the Palmar aspect of Forearm.

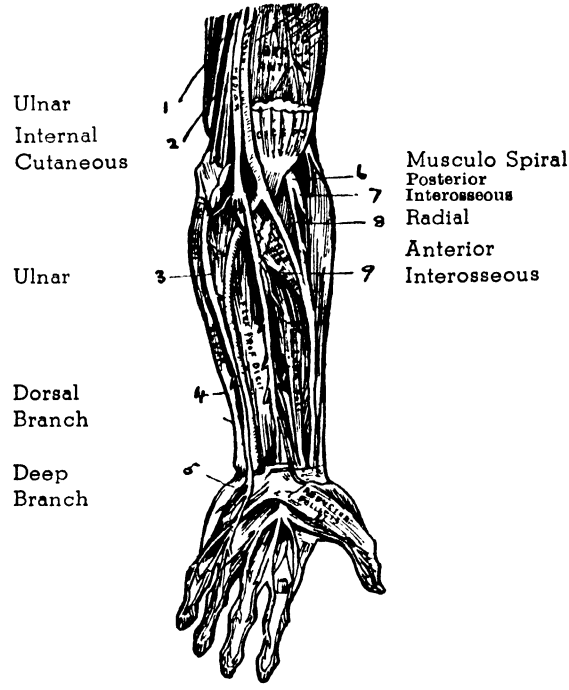

Fig. 163. Nerves of the Front Arm (Gray.)

Fig. 162. 1. Lower portion of biceps. 2. Bicipital fascia. 3. Tendon of insertion into radius. 4, 4. Brachialis anticus. 5. Internal head of triceps. 6. Pronator radii teres. 7. Flexor carpi radialis. 8. Palmaris longus. 9. Its termination in palmar ligament. 10. Flexor carpi ulnaris. 11. Its attachment to pisiform bone. 12. Supinator longus. 13. Its attachment to styloid process of radius. 14, 14. Extensor carpi radialis longior. 15. Extensor carpi radialis brevior. 16. Extensor ossis metacarpi pollicis. 17. Its tendon of insertion into base of first metacarpal bone. 18. Tendon of extensor secundi internodi pollicis. 19, 19. Flexor sublimis digitorum. 20, 20. Tendons of this muscle. 21, 21. Their attachment to second phalanges of fingers. 22, 22. Attachment of tendons of flexor profundus digitorum to last phalanges of fingers. 23, 23. Lumbricales. 24. Abductor pollicis. 25. Its insertion into first phalanx of thumb. 26, 26. Flexor longus pollicis. 27. Flexor brevis minimi digiti. 28. Abductor minimi digiti.

the thumb side of the arm are the radial and other muscles which flex the thumb and parts of the hand near by, while on the other side of the arm are the ulnar and other muscles which flex the smaller fingers. A broad muscle 19, 19 called the flexor sublimis digitorum sends down four tendons that flex the second phalanges of the four fingers, and various other muscles are kindly furnished us by nature, layer upon layer, so that we shall be able to move in every conceivable direction and with every style of motion, extensor, flexor, rotary, pronator, supinator, adductor, abductor, etc. Muscles that *pronate*, turn the palms downward so they may lie *prone*, and they are called pronators. Muscles that supinate turn the palms upward and are called supinators. Abductors throw the fingers apart sidewise, while adductors draw them together.

11. **Nerves of the Front Arm.** Fig. 163. I have placed fig. 163 here, in part to show the harmony between the muscular and nervous system, the nerves though small being master principles and following up the muscles, to invigorate them and see that they behave themselves. It will be seen by comparing the course of the nerves in fig. 163, with that of the muscles and tendons in the fingers and other parts as seen in fig. 162, how closely they resemble each other in their general directions. The arteries such as 1, 2, 3, are rivers of life carrying forward their liquid currents for the nourishment of the system, but the nerves carry forward their still finer and swifter ethereal waters of life, to quicken or electrify both muscles and blood-vessels. It will be seen that all the leading nerves have their branches or offshoots which pass onto or into the sorrounding muscles. Into the powerful biceps muscle where it is bisected several nerves are represented as penetrating the solid mass of the muscle. The fingers show the minor nerves, especially at the ends where the greatest sensitiveness exists.

The names adopted by Anatomists, of bones, muscles, blood-vessels and nerves are made to harmonize as far as possible, although the long drawn out terms in Latin are monstrous. To simplify matters they call the outside bone of the forearm the radius, the inner bone, the ulna. Then they speak of a muscle near the radius or a nerve or blood-vessel as a *radial;* thus the brachial artery figure 1 divides off into the radial artery 3 and the ulnar artery 2. The radial nerve is near the radius, the ulnar nerve on the other side near the ulna, the median nerve between them about midway and all three of them have many branches. In Part Fourth of this work, III, ii, I have copied from Potter's Compend of Anatomy, the brachial plexus, which comes mainly from the cervical portion of the spine and in which these nerves of the arm may be traced to their source.

I must leave for the concluding portion of this work, Part Sixth, Diseases of the Muscular System, Eruptive Fevers, Vision, Hearing and many other subjects of great practical importance.

XV. HOW TO REACH DIFFERENT ORGANS THROUGH THE NERVES.

1. **Only Refined Elements** can reach the nerves directly and effectively, such as the aura that flows from human fingers, sunlight and the mental and psychic forces, which last are the most searching of all when the patient's mind is in a condition to receive them.

2. **What is Nerve Force?** I have already shown that if nature is to be our guide, it can be absolutely demonstrated that nerve force is an ethereal *fluid* which flows through the nerve channels and that even the psychic forces flow naturally through the nerve channels, although they are so subtile as to transcend these channels at times and be projected by the operator to a person who may be far away. I say to my students that if a person shall deny that nerve force, vital magnetism, electricity, etc., are fluids on the plea that it is contrary to science, stand firm on the everlasting basis of things as seen in the whole known world, and ask him to tell of a single force in all nature that is not fluidic. What kind of a science is it that thus tramples under foot the most obvious principles of nature?

3. **Scientific Direction of Nerve Force.** If we ascertain with what part of the interior system the spinal and other nerve connects, we may diagnose the condition of those organs, more or less well, by means of the electrical battery, or by pressure of the ends of the fingers between the vertebrae. If we find certain vertebrae tender to pressure, signifies more or less inflammation of the parts with which the nerves connect. During the first half of the nineteenth century, Dr. Henry Hall Sherwood of New York recognized this fact and made a general statement that if certain vertebrae were irritible, it signified disease of the internal organs slightly below the vertebrae themselves. This is a pretty good general rule, but at the present time we are able to be more accurate.

4. **Methods for Effecting the Brain and Facial Region.** The Brain is the centre of centres for nerve force and the region of conscious sensation. If the head of a very sensitive person or one who has been placed in a mesmeric condition, be touched by another person, especially by one who is mesmeric, he will manifest emotional and mental phases mainly in harmony with the organs of the brain as signified by Phrenology, modified slightly at times by the characteristics of the operator. But a person who is not so sensitive can be greatly improved by having the magnetic hands of another placed for awhile upon

different organs of the brain which may be deficient. Thus one who is too weak and wavering in his impulses and will power, can be greatly benefited by charging up the region of firmness, self-esteem and at times combativeness and vital energy above and back of the ears and great improvement in the mental, moral and spiritual powers by charging the front and upper head.

There are cases in which persons get into almost a death like sleep which is not a trance but rather a clogging of the frontal gray matter of the brain that shuts off consciousness and of course when consciousness ceases we call it sleep. This condition may last for days or even for weeks or months, as the ordinary medical men do not understand the treatment of such cases. I was called to see a lady in New York who could not be wakened, and found that only a few brisk passes over the forehead were necessary to bring her to full consciousness. Sometimes the left hand should be held quietly for awhile over the reasoning powers. Persons who have gone into a trance and seemingly died, sometimes on coming into consciousness have forgotten all that they have heretofore learned and have to commence their studies anew, while others have forgotten all that had taken place during a certain period of their lives. Such should have the whole sincipital region treated by a person of fine magnetic or psychic powers. I have shown in Part 3rd that the sensorium includes a vast series of picture plates. The debris of a disturbed brain in these cases has settled down over these memory pictures, and the psychic streams that flow from a highly developed nature are needed to clear out the obstructions. These mysteries could be easily cleared up if people would remember that the same fluidic processes of force that rule in external nature must rule in the exquisite realms of mind.

The first six cervical and some other spinal nerves have some influence on head and face.

5. **Nerves Reaching Different Parts of the Body.** It should be remembered that motor nerves carry their contracting ethers outward from all nerve centres, from the brain downward, from the spine laterally and inward, and from the ganglia outward, while the sensor nerves carry their warm ethers to all nerve centres, to the ganglia, to the spine and onward to the brain, where conscious sensation occurs. To send power through the motor nerves, we place a positive electrode along the spine or near the brain or sometimes over a heated part, the negative pole being below or at a more dormant part, or we get a still more searching power from magnetic human fingers especially of the right hand placed each side of the spinal column between the vertebrae

or over the part affected. In case the spine is in an irritable condition, it will be necessary to forego in part or entirely, all treatment through the spine until by blue or violet light it can be healed. The student will remember that the involuntary ganglionic (sympathetic) system acts upon the interior organs more directly, while the more voluntary organs of the spinal system acting more externally, are generally connected with the sympathetic by two little branch nerves, the *rami communicantes*, which proceed directly to and from the interior ganglia. Of these, one ramus has a reddish cast and carries the sensor forces from the sympathetic to the spinal system, while the other, being bluish white, carries the motor forces from the spinal to the sympathetic system.

The **Heart**, so far as the *cranial* nerves are concerned, may be reached by the pneumogastric (vagus) nerve. This arises from the medulla oblongata and a little higher, from the floor of the fourth ventricle. The best point to place the fingers to reach this is just in front of the ear where pulsation is felt, the right hand over the right side, the left, over the left side. To reach the heart through the *spinal* nerves charge most of the cervical and the first half of the dorsal nerves.

For the **Lungs**, treat the pneumogastric and the first nine dorsal nerves. For the **Pleura**, 3rd to 4th cervical and first 7 dorsal.

For the **Pharynx** and **Trachea** treat the pneumogastric which is to a certain extent a spinal as well as cranial nerve. The medulla oblongata is the real centre of respiration and in pharyngitis (sore throat), I would warm the medulla at times but treat generally in front of the ear to reach the vagus.

For the **Larynx** treat the pneumogastric and the first three cervical nerves.

For the **Esophagus** (gullet), treat the pneumogastric and between the 8th and 9th dorsal.

For the **Diaphragm** treat the two lowest dorsal nerves, also the phrenic nerves (3, 4 and 5 cervical) which last tend to inhibit hiccups.

For the **Liver**, when dormant, stimulate it by treating the 6th and 7th cervical erves and wake up the splanchnic nerves and hepatic plexus by treating the lower six dorsal nerves.

For the **Stomach**, treat the pneumogastric nerve, especially, as it goes directly to both the solar plexus and the stomach itself. The pyloric end of the stomach is reached by the 4th to 5th dorsal and the cardiac end by the 6th to 7th dorsal.

For **Spleen** treat left side of spine, principally 8th to 12th dorsal.

For the **Duodenum**, treat the pneumogastric and sympathetic nerves.

For the **Jejunum**, treat first five dorsal nerves.

For the **Ileum**, treat 5th to 11th dorsal.

For the **Caecum** treat 1st to 4th lumbar nerves.

For **Vermiform Appendix**, 11th to 12th dorsal.

For the **Colon**, treat 1st to 4th lumbar nerves.

For **Rectum**, treat 2nd, 3rd, 4th sacral; defecation centre, 2nd to 5th lumbar.

For **Kidneys** treat 3 lower dorsal and first 2 lumbar nerves.

For the **Bladder**. To reach its neck treat all the sacral nerves; for too great relaxation of muscles and enuresis (involuntary passing of the water), treat the two lowest dorsal and first lumbar nerves.

For **Ureters**, treat last 3 dorsal and first lumbar nerves.

For **Urethra**, treat 4th to 5th lumbar nerves.

For the **Penis**, for impotence treat 2nd. lumbar. Solarise and tone up the whole system.

For **Uterus**, all the lumbar and first 3 sacral nerves; for mouth of uterus (os), all the sacral nerves; for cervix (neck), 9th dorsal; for amenorrhea, stimulate 2nd to 5th lumbar; to hasten labor, 2nd to 3rd lumbar.

For **Ovaries**, treat 9th to 11th dorsal nerves.

For **Prostate Gland**, treat last three dorsal, 5th lumbar and first three sacral nerves.

For **Testes**, treat 10th dorsal nerve.

For **Sphincter Ani**, the external one, 4th and 5th sacral nerves.

For **Limbs**. Treat last three lower cervical and first dorsal for dormant or paralytic condition of **arms**—also make upward passes over arms for dormant sensory nerves and downward passes for dormant motor nerves. For **hips** and **legs** treat all the dorsal, lumbar and sacral nerves and make upward or downward passes over legs according to whether there is paralysis of sensor or motor nerves.

For **Arteries**. The aorta with its 58 branches is reached somewhat through the cervical nerves and the vagus, but more directly through the sympathetic system, reached at the solar and cardiac and renal plexuses, placing hands at pit of stomach as well as above and below.

The **Eye** is reached between 2nd and 3rd dorsal nerves as well as by the cranial nerves.

For **Peristalsis** treat last three dorsal, especially the 11th.

For **Cardiac Plexus** treat the vagus, 2nd dorsal and between the 5th and 6th cervical.

For **Solar Plexus**, treat the vagus in front of ears and 6th, 7th, 8th and 9th dorsal nerves.

For **Renal Plexus**, treat 6th, 7th, 8th and 9th dorsal nerves.

For **Hypogastric Plexus** treat lumbar nerves.

For **Spermatic Plexus**, treat 2nd lumbar.

XVI. SOME GENERAL ITEMS AND REMARKS

1. **Nerves, Veins, Ganglia, and Plexuses** are generally named after the arteries of the same region, as splenic artery, splenic vein, splenic nerve, splenic plexus, splenic ganglion, gastric artery, gastric plexus, etc Arteries must be watched over by not only ordinary nerves but by vaso-motor nerves.

2. **Somatic Nerves** (soma, body) are those which reach the main bodily organs, especially in their external portions, in opposition to the sympathetic nerves. Dr. Eckley, in his Anatomy speaks of the character of pain in the somatic nerves as being cutting, tearing, shooting, intense, severe, etc. while milder terms are applied to the sympathetic inerve, such as a sensation of weight, fullness, heat, uneasiness, oppression, distress. Under the fluidic theory of force this may be understood when we realize that the somatic ethers have a longer and larger sweep, than those of the smaller and more impeded sympathetic nerves. Dr. Eckley is forced to take virtually the same grounds in explaining nerve forces, as follows: "Nerve impulses of whatever kind are projectiles and amenable to the law of projectiles," in other words, nerve forces are substances which are projected through the nerve channels.

3. **It seems that each artery as it branches out from the aorta must have a ganglion near its beginning** and its little nerve plexus. Is it not probable that a ganglion with its fiery chemism was required to burst a passage through the walls of the parent artery as the smaller artery was being formed ?

4. **The Vaso-motor nerves** are usually divided into two kinds, the vaso-constrictors or those which carry constractive or electrical forces to the walls of the blood vessels and the vaso-dilators, or those which carry expansive or thermal forces to the blood vessels, although this dilation may occur from contracting some contiguous parts as I have shown. The medulla oblongata is the leading centre for reaching vaso-motor nerves, but they can be reached all along the spine; thus, for the vaso-motors for the legs, treat from 2nd dorsal downward; for ovaries, 9th to 10th dorsal; for uterus and vagina, 12th dorsal and 2nd to 5th lumbar; for face and mouth (vaso-dilators) 2nd to 5th dorsal. These are probably constrictors which, drawing outward, make the parts dilate.

It is a question really if there is any such thing as a motor dilator, for as we have seen, the nerves running from outside inward are motors and the motors are always contractive. The pupil of the eye dilates by the contraction of the radial fibres of the iris. The vaso-motors for the body generally are best reached through the vagus and the first six cervical nerves.

5. **The Treatment of Inflammations** requires some discrimination. We say, of course, that for all active, acute or positive inflammations we need the blue or some other cooling principle, like the blue, purple or green. But there are often chronic or dormant or negative inflammations which need more or less of hot forces, such as the red or red-purple or hot water forces for awhile. In most inflammations there is both an acute and dormant condition, and the two styles of force should be alternated.

6. **The Position of the Bed in Sleeping** is a matter which should never be overlooked. I have given the rationale of sleeping with the head to the north in Part First of this work, (II, 4), and a large number of persons are beginning to understand the importance of this direction, but I desire to impress upon my readers the danger to all nervous and sensitive persons of sleeping with the head to the west. On page 434 of the Principles of Light and Color, I have presented a plate showing the horizontal color forces of the earth as seen by Reichenbach's sensitives. In this the yellow forces are seen in the western direction, which color as we know is especially exciting and arousing to the nervous system. Why should this style of force be in the west? Because the warm, luminous beams of the sun as they move west-ward around the world must ever carry a thermal tide westward and this tide being luminous must naturally be yellow, the leading element of luminosity. I have known a man and his wife, who were naturally strong, to be reduced almost to the point of insanity by habitually sleeping with head to the west, and Reichenbach found some excitable persons who suffered more from the west-east than even from the south-north direction. For fuller development of this subject, see Chapter ninth of Principles of Light and Color.

7. **Retching and Vomiting.** Several cases of Sea-sickness have been cured in a remarkable way by ceruleo which is most cooling and soothing in agitated and over-heated conditions contrary to the theory of Dr. Finsen of Copenhagen concerning the blue color. Mrs. E. M. Lee D. M., 329; Ellis St., San Francisco, a graduate of the College of Fine Forces, writes me as follows:

"I intended to have sent you before this, a report of a case showing the wonderful efficacy of ceruleo. A boy in this house underwent a serious surgical operation on his hip one morning. All day he was

retching and vomiting until seven o'clock at night. They then asked me if I could suggest anything. I gave them some ceruleo and ordered a teaspoonful every 15 minutes. This stopped ther etching immediately and he went to sleep and slept all night. The next morning they gave him a drink of ordinary water and it brought on the retching again, but the ceruleo again stopped it so that it did not return."

8. **Tobacco Use.** The assertion is made that at Harvard University no smoking student in the last fifty years has stood at the head of his class. Dr. Brodie, President of the Royal Society, says that one of the worst cases of neuralgia he ever saw was caused by tobacco use and ceased with the habit. It is well known that amblyopia or dimness of vision is frequently caused by both tobacco and alcohol, and paralysis of the optic nerve leading to blindness often comes from tobacco use. But palpitation of the heart, the perversion of the nervous system and other disasters caused by the foul weed, should cause those who aim at a perfect manhood to avoid its use entirely.

9. **Gout.** Linnaeus cured gouty pains in one or two days by a plentiful use of strawberries.

10. **The Principles of Chromopathy** are constantly being confirmed in various parts of the world. Dr. A. H. Chamberlain, a dentist of Wellington, New Zealand, writes as follows:

"I have used color charged water in several cases with wonderful results. The blue charged water I find to be excellent for summer complaint in children and diarrhea in adults. The ambero has done me a world of good in regulating my bowels. The purpuro has strengthened my stomach marvelously."

11. **Achievements of a Brahman.** A Brahman, Mr. K. S. Ayyengar of Kurnool, Madras Presidency, India, calls himself a "Sunlight Doctor." This noble worker, for many years a teacher and editor, has been healing multitudes of people gratis, by sunlight during several years back. I have room for only a part of his letter here:

Kurnool, Feb. 20th, 1902.

To **E. D. Babbit, M. D.**—Respected Sir:

Though I have wanted to write to you every day for the last five years, what prevented me from doing so I cannot say. About five years ago I met with some of your books and began to treat diseases accordingly. I could not get proper measurement for a funnel (disk). After some time I made one according to directions in your Principles of Light and Color. People used to laugh at me when I began the work. I stood all such ridicule. When I began to show some results, orthodox physicians spoke against me and would not allow cases to come to me I then opened a big hospital with ten funnels and boxes and entertained patients gratis as usual. When some cases, incurable by other methods, were cured by me, the neighboring Doctors could not but accept the superiority of sunlight treatment. . . With a funnel, I cured more than 600 cases during a year and in Kurnool where I am camped now, I cured more than 100 cases in October alone. The gentleman who has consented to advance me money ($72, forwarded for other instruments), is worth some *lacs*. I cured cases of apoplexy, enlargement of liver and spleen, etc., in his family."

12. **All India to Adopt Chromopathy.** I quote a part of a most encouraging letter from Hemchandra Sen, M. D. Lecturer on Materia Medica and Therapeutics, Campbell Medical School, Calcutta, India, July 15, 1902.

Dear Dr. Babbit. It is with great pleasure that I beg to communicate my views about the Cromopathic system introduced by you. As my countrymen are the poorest of all the inhabitants on the face of the earth, it is a God sent boon to them to enjoy the benefit of so wonderfully efficacious and cheap method of cure as your Chromopathy. From what I have experienced about the efficacy of your method of treatment with the sun's rays, I can assure you that the day is not far off when the whole of India will follow it devotedly and enjoy its benefit. Many medical men and energetic lay practitioners have already commenced to relieve the sufferings of their fellow brothers by the aid of Chromopathy. I have been convinced by prolonged experience it is very efficacious because it is based on sound scientific principles. Your method is rapidly gaining ground amongst the Hindus, for the essence of their religion, as described in the Vedas, is to worship the Almighty as manifested in the sun and the different rays which emanate from it."

It would be a blessed thing if our western nations should typify their religion and build their therapeutics more extensively on this sublimest object of the external universe.

13. **The Magic of Ceruleo.** George Ivins, M. D., a skilled Chromopath, now of San Jose, gives the following items from his experience concerning blue-charged water:

"On the afternoon of Aug. 7, 1900, I was bitten by a ferocious dog on the right leg, the four canine teeth penetrating the calf of the leg, immediately causing tumefaction, tenseness, twinging pain, preternatural heat and a dark blue color which spread down to the feet. After walking half an hour I bathed the wound with ceruleo from the blue lens, warm from the sun, then bound absorbent cotton saturated with ceruleo on the wound, which gave immediate relief from tenseness, soreness or pain. It was dressed three times a day for three days only, with ceruleo as above, and caused the dark color to rapidly disappear.

"The day before, the thumb of my right hand was bitten by a rat, causing a transverse wound a half inch and reaching nearly to the bone. After pressing out what blood I could, I immersed the thumb in a cup of ceruleo warm from the sun for about five minutes, then dressed it the same as I did the dog bite, three times a day for three days. The wound healed from the bottom. I did not experience a particle of pain or soreness, nor did the wound bleed one drop after ceruleo touched it, thus showing the styptic power of the blue principle.

"The day after the dog bite, my thumb was accidentally slightly cut with my knife. To test the power of unaided nature as compared with that of ceruleo, nothing was applied. The result was that it smarted and was sore for several days.

"It is unsurpassed for diarrhea and dysentery taken internally and in large enemas warm from the sun, I have also found it excellent for the scalp, falling hair and inflamed eyes"

It is true as the doctor intimates in the above, that color forces are especially active when newly charged in the light, but many wonderful things have been done weeks and months after the charging has taken place.

14. **Color Music.** It is a startling fact that every musical tone produces its own special color to those who are sensitive enough to perceive it. There are octaves of color that exactly correspond with the musical octaves, a fact that shows how the different departments of the universe are interlinked and blended. Mme. Crawford, formerly of Boston and for some years a student of music under the eminent masters of Leipsic, Germany, is the first one to establish this fact on an immutable basis. Madame Crawford, now established in San Jose,* California, is one of the most brilliant and scientific lady pianists in the United States. She is able at times to see the most delicate degrees of pitch in tone pictured forth in equally delicate degrees of color tints. A seven degree color scale to match the seven notes of a musical octave I have found to be about as follows and Mrs. Crawford substantially agrees with me :

The first note or do develops thermel.
The second „ or re „ red orange.
The third „ or mi „ yellow.
The fourth „ or fa „ green.
The fifth „ or sol „ blue.
The sixth „ or la „ indigo.
The seventh„ or si „ violet.
The eighth „ or do „ thermel.

Thermel is mainly a beautiful red in it its higher scales, with a bluish tinge.

15. **To Prevent or Lessen Pain** while using the sun burning glass in destroying birth-marks, moles, cancers, corns, etc., the parts should be wet repeatedly with a solution of eucaine b. This is a much safer and better anaesthetic than cocaine. Dr. Marcinowski says "the anaethesia is complete in from one to three minutes and lasts up to 40 minutes. The average strength of solutions for the eye is two per cent.; for the urethra up to two per cent.; for the nose and throat 5-10 per cent ; for dental work 2-5 per cent. Place the lens back of a piece of blue glass and the pain is greatly softened even without eucaine.

16. **The Verdict of France on Alcohol and Moderate Drinking.** In France it is admitted that drunkenness is rarely seen, and our tipplers point triumphantly to that country as a proof that moderate use of alcohol is harmless. But Mesureur, Director of the Department of Charities, Paris, declared that alcohol, though used in this moderate way, was slowly but surely destroying the French people. This enraged the liquor

* Mme, Crawford has her office for piano technics and classics in the Letitia building, 1st St., San Jose; and her daughter, Mrs. Alice Crawford-Sarony, who for several years was a member of the famous Augustin Daly Company of New York, gives her Shakespearean readings and forms her dramatic classes at the same place.

dealers to such an extent that the government took it upon itself to subject the offensive report to a careful scrutiny. The result was that Mesureur was confirmed in every respect. The report which was signed by the President of the Medical Faculty of Paris, by the chairman of the Institute of France and other eminent medical men, includes the following, which is about the straightest shot against alcohol ever given:

"Alcoholism is the chronic poisoning resulting from the constant use of alcohol, even if this does not produce drunkenness.

"It is an error to say that alcohol is a necessity to the man who has to do hard work, or that it restores strength.

"The artificial stimulation which it produces soon gives way to exhaustion and nervous depression. Alcohol is good for nobody, but works harm to everybody.

"Alcoholism produces the most varied and fatal diseases of the stomach and liver, paralysis, dropsy and madness. It is one of the most frequent causes of tuberculosis.

"Lastly, it aggravates and enhances all acute diseases, typhus, pneumonia, erysipelas.

"THESE DISEASES ATTACK A SOBER MAN IN ONLY A MILD DEGREE, WHILE THEY QUICKLY DO AWAY WITH THE MAN WHO DRINKS ALCOHOL.

"The sins of the parents against the laws of health visit their offspring. If the children survive the first months of their lives they are threatened with imbecility or epilepsy, or death carries them away a little later by such diseases as meningitis or consumption.

"Alcoholism is one of the most terrible plagues to the individual health, the existence of the home and the prosperity of the nation."

17. **The Power of Suggestion and Vital Magnetism, by Ralph St. J Perry, M. D., in Medical Brief.** The celerity with which a suggestion can become effective in peristaltic affairs I have occasionally demonstrated in very susceptible subjects by giving very strong suggestions of acute diarrhea, and the subject has barely had time to go through the preliminaries which civilization and twentieth century society require. How lasting these suggestions can be made is being demonstrated all over our land by practitioners who use hypnotism in their practice every day.

Neuralgic pains (G. A, of Tennessee,) are easily conquered by suggestion. I have cured so many headaches, toothaches, stomachaches, backaches, intercostal neuralgias, etc., that I long ago lost track of their number; and all done by the mere "laying on of the hands," accompanied by some suggestions covering the symptoms of the patient.

18. **Corsets.** "The curious fact concerning this abominable fashion" (of corsets) says Mlle. Tylicka, M. D. "is that women of fashion seem not to know that the stethodesmon of girdlet of the ancient Greeks is much more beautiful and becoming."

The agitation against woman's most dearly beloved article of dress, corsets, which has been going on in this country for some time, is now being taken up in France. Such an eminent authority as Dr. Brouardel, the Dean of the Paris Faculty of Medicine, says: "I believe we are on the eve of a reaction regarding the use of corsets. They are very ugly. The wearing of corsets has gone to such an extreme that our women are losing the ability to become mothers. In the interests of the race we must condemn the corset. If we do not want the French nation to die out, we must put a stop to this article of dress. I understand that American women are becoming similarly affected, probably from the same cause.

"It is astounding that an artistic people like the French should have ever taken to the corset. It is the most unhealthy garment that was ever worn. Nearly all diseases of women are traceable to it. Kidneys, liver and heart are all affected by it.

"Women have flushed faces because of it; women look deathly pale because of it; women have actually died during the operation of tight lacing. The nervous system of woman is frequently ruined by the corset.

"Woman has ever been the slave of fashion. Hence I believe an effective remedy against the corset would be to make its non-use fashionable.

"The natural form of woman is very beautiful; the corset form of woman is an abomination. We should all join in a crusade against corsets."

Mrs. Scott Siddons, famous for her fine dresses, gained her health and became two shades fairer, by leaving off her corsets.

19. **The Light Cure.** Dr. P. Garnault, a French physician, recently reported to the Academie des Sciences a number of definite cures of rheumatism and catarrh. A lamp of fifty candle-power, provided with a silvered parabolic reflector, was applied to eight cases of muscular or articular rheumatism of average gravity, and of several years' standing, and in all these cases a marked and apparently permanent improvement was obtained at the end of three to twelve operations. Chronic catarrh of the nose was also treated with success by the application of light accompanied by vibratory massage, and in twelve cases of deafness the application of light alone brought about good results."

The above gives too feeble a light for the best healing. I would not recommend the enormous candle power that is sometimes adopted. 4000 candle power is generally considered equal to sunlight, and we recommend that for general use, although 1200 candle power is sufficient for some delicate cases. An adjustable rheostat enables the operator to grade the amount of light just as he may desire.

20. **Scientific Ignorance Concerning Electricity.** The following I quote from the Electrical Review of New York. It will be seen that it flies right in the face of nature itself, in which, as we have seen, every force in the known world is a fluid and every fluid an entity.

"For convenience of expression the word electricity has been used as if it were the name of a veritable entity. In fact there is no such thing as electricity; it is a condition.

"To define this condition of matter and ether that is commonly called 'electricity,' is not yet perfectly possible, though a true nature of electricity is far better understood, than that of so simple and every day a phenomenon as gravity. We know enough about it to say that electricity is certainly not a substance, and, for the present, perhaps it is safer to let our definite assertions stop with a statement that it is a state in which a body and its surroundings may be brought by suitable work done upon it."

21. **Consumption and Other Diseases.** This table is made up from a variety of the commoner diseases from which a majority of the population of this country suffer. The particular figures cited were statistically arranged in the census year 1889-90.

Scarlet fever	5,969
Measles	9,256
Whooping cough	8,432
Malarial fever	18,594
Cancer and tumor	20,984
Enteric fever	27,058
Diphtheria and croup	41,677
Pneumonia	76,496
Consumption	102,190

In the War of the Rebellion 349,944 men died in battle of wounds, disease and accidents and in Confederate prisons in a period of four years. Taking the foregoing annual average of deaths from consumption the figures in the same period of time would aggregate 408,796, over 50,000 more deaths than the total mortality from all causes in the whole civil war.

Out of sixteen different diseases in nine European countries where statistics were taken from 10,000 deaths, the mortality record due to consumption ranged from 950 to 1,960 out of the 10,000 separate cases.

22. **An Instructive Letter.** The following letter is from Mr. H. L Lewis, of Oallen, Australia, a wide-awake, enterprising young man, who feels confident from what he has already done of being able to cure leprosy by Chromopathy:

TREATMENT OF DISEASE BY SUN AND COLOR

To the Editor:

Sir,—Thanks for the paragraph contained in your issue of 24th June noting the fact that at Philadelphia a hospital built on the lines of one in London is about to be erected for the treatment of consumption. It is strange indeed that none of our colonial men of the faculty have as yet done anything towards the same end. The hospital mentioned will treat consumption by what is commonly known as chromopathy or light and color treatment. At the present moment there are numbers of patients being cured of the dread disease at Dr. Babbitt's Institution, Los Angeles, California, all by action of sun and color. Since the year 1876 this wonderful savant, Dr. Babbitt, has worked hard to perfect a system of treatment to combat the terrible scourge to humanity. He has fought against hordes of medicos to give to the world the results of his discoveries, and now at last he is coming out triumphant by seeing the treatment largely acknowledged. Finsen claims to have discovered a cure for lupus. Babbitt practised the treatment before Finsen had qualified. Babbitt has proved that colors are severally thermal and electrical, and that under the sun's rays some colors are animating, while others have the opposite effect. Dr. Draper has established the fact that statuvolism, coupled with solarism, cures many diseases medicine could not reach. Allopaths are beginning to see that local treatment has more foundation in fact than theory, and that hypnotism is not a matter of fancy and fad, but fact based on the principle of reason. In certain lunatic asylums on the continent of Europe progressive medical men are treating patients by color ray, the melancholy by thermal ray, the violent by electrical. Solarism will cure the most hideous of birth-marks, completely obliterating all signs, leaving nothing but the pure natural color nature intended should be there. The sun's rays will cauterize a vein or artery so as to almost stop the bleeding. Oh, that the world would learn more of God's healer, the sun. Housekeepers close the windows or shut down the blinds because the sun may have a tendency to spoil the furniture. Cover your furniture, if you have to do it, with straw, but let in the sunlight. If you are afraid of the sun spoiling the furniture put it in the cellar, but have the sun where the pure sun can shine, and especially through anything which will create a violet or blue ray. Sickness cannot remain—it cannot stalk in, as all bacteria are destroyed by these

rays. In my studies of bacteriology I have found no bacillus can hold life under violet rays. Even mosquitoes are destroyed under blue glass (mazarine). Flies are killed, ants also.

The usefulness of light in treating disease is all important. Where there is sun there is thought, stature; where there is none there is weakness, smallness of stature, cretinism, imbecility. Where woman lives in the sun obstetric cases are painless; where she habitually lives in the shade she often dies of exhaustion. The mustiness of dark corners and rooms is proverbial. Watch the action of the blackfellow when he is tired and wishes to recuperate—he lies down in the sun; the white man goes in the shade. How many hundreds of our young women are passing quietly away suffering from anaemia. A purple lens in the concentration of the sun's rays would even cure them. I have seen cases of smallpox and scarlatina cured by nought but the purple ray; chronic constipation completely cured by common filtered water which had been placed under an amber lens submitted to the action of the sun's rays. Why is there so much sickness among the underground workers? Why are so many of them stunted and deformed? what sun do they get? I have been a student of this subject since 1880. If any of your readers desire information within my power to give I will gladly render the information through your columns. I know some of our medicos will cry out "Quackery, quack, quack;" but 'tis truth. It is only by the avenue of the so-called quack that religion and medicine have found the liberalism of to-day, and only by the bold front of men who say that which they know that the public are enlightened on subjects they have not studied personally.

23. THE SOLAR GYMNASIUM.

Before any Gymnasiums (I prefer the English Form to the word gymnasia) were constructed it had been estimated that by the time the four years college course at Yale was completed, one quarter of the students had their physical systems so exhausted as to be incapacitated for the real duties of life. A great change for the better has occurred since the introduction of gymnasiums.

But gymnasiums as now constructed, develop mainly the muscular and vascular system, and reach but very feebly the nervous and mental energies which give so much life to the muscles and blood themselves. Mere athletes are known to be short lived and are rarely skilled in power of mind. Plato speaks of the athletes who contended at the Olympian games as "a sluggish set of men in dubious health and short lived." Dr Winship of Massachusetts could lift 3000 pounds, but he died at the age of 42. Some famous oarsmen as well as athletes trained

in our finest college gymnasiums have died still younger. Multitudes of students in spite of their system of exercise are listless in their studies and sluggish in their mental action. You may say that rowing, ball playing, cycling, running, etc., may bring the young into contact with the air and sunshine, and should be sufficient. But however useful this practice may be in certain directions, they are not sufficient from the fact that the clothing which is worn absorbs and interferes with the chemical power of the sunlight and prevents it from getting to the body. And yet this sunlight is the most vitalizing power in the whole world and is so searching and refined as to kindle the nervous and mental forces, as well as the bodily organs. To prove this I will give some facts.

In the *Philosophy of Cure* I have shown by numerous facts many of the nations who go in the sun and air in a nude condition, are from 2 to 4 times as strong as those who wear clothing. I have given in my works, many marvelous cures, supposed to be impossible, made by throwing the light on the nude body. So much for the physical up-building.

Now for the mental and nervous culture. In the deep valleys of the Alps and other mountainous regions, where the full sunlight never comes, the people are apt to become Cretins, i e. idiots, afflicted with fearful scrofula and goitres, and have scarcely the power of articulate speech.

In Egypt and Arabia where the people go nearly nude or with a single thin white garment, boys at the age of twelve will frequently speak several languages and in schools established there, the English and American teachers admit that their students learn languages, mathematics, etc., with twice the rapidity of Europeans.

Educational authorities in India where many of the pupils go almost without clothing, admit that they go through with the usual course of study two years sooner than the same course is taken in Europe.

A whole range of nervous diseases which entirely thwart the drug doctors, are easily cured by the forces of light and color concentrated upon the bare body. Cures made by sun force are far more enduring, on account of thus reaching the nerves, than by coarser agencies, for the nerves and their mental relations are master principles of the human system.

What then is to be the great system of Human culture which is to revolutionize all gymnastic methods?

The following will give my leading conceptions of the matter, which I shall be glad to modify when I learn of some better details:

There should be a neat building, the eastern, southern and western sides of which should be roofed with strong ribbed glass which shall slope toward the centre of the building, from the three directions. This should be ribbed so as to be slightly obscuring to the light, to prevent too burning a character of the sunlight which is thus transmitted. It should be remembered, however that sunlight coming through glass does not blister or burn like the cruder out-of-door light. Underneath this should be the ladders, poles and other gymnastic apparatus in connection with which the students should exercise in a nearly nude condition, having perhaps only a loin cloth on. A teacher should train them in the true methods of standing, walking, and sitting, and guide them in their progress from the lighter to the more severe gymnastics. After sufficient exercise in the softened sunlight, each student is expected to take a brief wash or plunge in a pool of somewhat warmed water. Over this pool is a large sheet of blue glass which will so modify the character of the water that it will tend to make the skin as soft as silk and will act as an astringent to close the pores of those who have been sweating from their exercise. It will heal also red eruptions which many people are troubled with. A small stream of pure water is to be kept flowing into the pool and another out of it, so that the water may be kept pure.

If it could be afforded, it would be well to have separate apartments so that the two sexes could both exercise at the same time—otherwise they would have to take separate hours. It would be important to have lockers for the students' clothes and some places where sun baths in thermolumes, etc., could be taken.

If this pool should be made no larger than from 10 feet wide to 30 or 40 feet long, it would answer for teaching swimming, an accomplishment which every boy and girl should understand. The water in one end should be somewhat shallow for the small children and increase in depth to the other end. Of course a larger pool would be desirable in case there is room, and money to construct it. The person or persons who will furnish money to pioneer this cause will become historical, from having started a great revolutionizing process for human development, a process which should be used in all colleges, all seminaries and all leading schools of the world, including even the public schools. One or two seasons of practice in such a gymnasium would give a permanently increased mental and physical power, and nearly, if not quite, do away with the curse of female diseases which are so prevalent.

The foregoing plan is an improvement on the famous Grecian Gymnasiums which were enclosures formed by a colonnade on the outside and an open sky for nude exercise on the inside, with baths of

different temperatures. The word *gymnasium* means *naked exercise* (gumnos naked). With the scientific appliances of the present day combined with the best features of the Grecian and Roman systems of exercise, I believe the human race can attain to the greatest power it has ever yet reached.

In our fine public schools in cities the tops of the buildings could be used for this purpose, and judging from my experience, I feel sure that children thus drilled and sunned need never be sick. True education is the development of the whole being, physical, mental and spiritual.

Among the features of this solar gymnasium it would be well to have smaller apartments or solaria in which thermolumes or other scientific solar instruments could be used by those who would like a private bath and some special attention, and who would be willing to pay something extra for the same.

24.—THE VOICE OF SCIENTISTS

The ordinary scientist dwells so much among the coarser elements of nature that he finds it difficult to grasp the refinements of Chromopathy and the Higher Sciences generally, but they are now making a progress in this direction which is quite encouraging. I have room for only a few expressions which I quote as an encouragement to the workers in this cause.

From **Mr. C. A. Simpson,** *of Boston, March 22, 1893*

"E. D. Babbitt, M. D.,

" My Dear Sir.—Twenty years ago I pursued my chemical researches at the Royal University of Berlin. While in Berlin I was elected a member of the Deutsche Chemische Gesellschaft, numbering among its members the greatest chemists of Europe. Yet I will say that the nearest approach to the principles you advance was in the department of spectrum analysis. Physicists and chemists entered the borderland of Chromo Chemistry but apparently without recognizing the vast importance of many of the facts ascertained, and the inductions and deductions to be made therefrom. . . I have been greatly interested and instructed by reading your books. Truly the methods and forces you advocate for diseased conditions are the best and most efficient."

From the erudite **J. C. Hoffman,** *of Chicago, April 25th, 1901*

" Mr. Parker, F. T. S. of Boston, assured me that you are the one only lens through which " Color " sent her secrets to mankind, and Mr. Leadbeater (London), said complimentary things of your occult knowledge, for it seems that you published a correct image of the atom, its ultima thule, years before our Theosophical Society was born, and here I have looked across the ocean for what twenty-five years ago you gave to the public in our country! What a calamity to me. . . I am a graduate of several colleges inclusive of Rush, Chicago; also one at Wurzberg, Germany, and one at Vienna, Austria. Everywhere they taught me everything but healing. I was made a doctor of medicine (Doctor sed non doctus!). But I had studied and paid to become a healer of disease. They taught me to *treat* but not to *cure*."

From the late **Prof. R. F. Humiston** *eminent as a Chemist and a Professor in Medical Colleges for twenty-five years.*

"I find I am becoming very much interested in therapeutic chromology from reading your inestimable book (**Principles of Light and Color**) on the subject."

24. **The Color of Wall Paper.**—All things radiate their forces upon persons or objects near them. The different colors with which the walls are tinted with a brush, or of the paper placed thereon, will effect very decidedly all senstive persons occupying such rooms. Nervous families are greatly benefited by walls with bluish, or lilac, or violet tints; those of dormant blood with a tendency to melancholy, should have pink, or reddish, or red orange colors; those with a tendency to paralysis and who wish a quickening and cheering influence over their nerves should have yellowish, or buff, or yellow-orange colors.

Some remarkable experiments corroborative of these principles, have been tried in hospitals, in which the colors of the walls as well as of the window glass have been tested. Dr. Ponza, director of the Lunatic Asylum at Alessandria, Italy, placed his patients in several rooms properly colored. One of them affected with morbid taciturnity after a three hours' stay in a red chamber became cheerful; another a maniac, who refused all food, asked for some breakfast after having stayed twenty-four hours in the same red chamber. In a blue chamber a highly excited mad man with a strait waist-coat on, was made much calmer after being kept there all day. A patient was made to pass the night in a violet chamber; on the following day he begged Dr. Ponza to send him home because he felt himself cured. He proved to be cured and he remained well. This shows that color forces can act in both darkness and light.

The author has been engaged by his philanthropic friend Mr. E. E. Pray, who is at the head of the famous Campbell Wall Paper Company, of Hackensack, N. J., to give directions and hints not only for the beauty of color effects, but for their adaptability to the temperaments of the persons dwelling in their midst.

25. **The Falsehoods of some Sensational Papers.**—It is undignified to notice every falsehood of a wreckless newspaper, but a nonsensical item, purporting to be the teaching of the author, is going into the papers all over the United States and is injuring not only the cause, but the noble William Smith College now building in Geneva, with which institution he is expected to be connected. An occasional correspon-

dent of the *New York World*, a Mr. Clapp, of Geneva, reported among several other falsehoods, that Dr. Babbitt declares that sex may be prenatally determined by color rays of light. Nothing of the kind was ever said. The *World* published the article and added some new falsehoods. By no possibility could the *World* be made to correct its slanders and has thus placed itself among the debased newspaper ranks.

HUMAN CULTURE AND CURE

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