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TORONTO

THE INTUITIVE BASIS OF KNOWLEDGE

AN EPISTEMOLOGICAL INQUIRY

BY

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PREFACE

I YIELD to the request of my friend Mrs. Duddington that I should write such words of introduction as are needful to the English version of Professor Lossky's work. Yet, in relieving her of that task, I am depriving the reader of what would have been to him far more useful. For she has an intimate acquaintance with the modes of philosophical reflexion that have become prevalent in her native land and could have delineated the intellectual environment in the midst of which her former teacher's thought has taken shape and reached its present outlook. I am, however, thus afforded the opportunity of congratulating Mrs. Duddington upon the completion of an arduous and difficult undertaking. This is the first Russian philosophical book that has been translated into English. The translator had, therefore, no precedent to follow in the attempt to give a rendering of the original, which should be as faithful to the sense and as close to the author's mode of expression as was consistent with lucidity and intelligibility. Moreover, Russian philosophical writers of the present day are labouring under a disadvantage similar to that under which the philosophical writers of Germany laboured in Kant's time,—the disadvantage, namely, of having to a large extent to coin their technical terms as they go along. As a consequence, shades of meaning for which we have

definite forms of expression must often be gathered rather from the context than the actual phraseology, and it is no easy matter to decide in such cases how far one is entitled to depart from a literal rendering. Professor Lossky is fortunate in having secured for his book a translator who, in addition to her other qualifications, possesses a wide knowledge of English philosophical writings, and who is herself an earnest worker in the fields of philosophy. That the translation, which was made from a copy of the text specially revised by the author, has been executed with conscientious care and with a high measure of success will, I believe, be generally acknowledged.

The substance of the book first saw the light in a series of articles in the *Voprosi Philosophii* for the years 1904 and 1905. These were subsequently republished in a more elaborate form and with many additions in a volume entitled *Obosnovanie Intuitivisma*. A German translation appeared in 1908.[1] It is, I am sure, superfluous for me to assure the author that his work will meet with cordial recognition and welcome from English students of philosophy. Professor Lossky is by no means a stranger to us. We are already acquainted with his contribution to the volume on *Logic* in *The Encyclopaedia of the Philosophical Sciences*, edited by Sir Henry Jones (London: Macmillan, 1913), and Mrs. Duddington has herself translated an interesting essay of his (*Proceedings of the Aristotelian Society*, N.S. vol. xiv. 1914, pp. 126-151), in which the contentions of two or three of the following chapters are concisely epitomised and re-stated. Here, however, an attempt is made to lay the founda-

[1] *Die Grundlegung des Intuitivismus: eine Propädeutische Erkenntnistheorie.* Von Dr. Nikolaj Losskij. Uebersetzt von Johann Strauch. (Halle A. S. Verlag von Max Niemeyer.)

tions of a theory of knowledge by a detailed consideration of its various issues; and even for those who are unable to accept all its conclusions the book will prove a stimulating and enlightening one, full of quiet reflectiveness and acute analysis. It will, I hope, speedily win for itself a place in English philosophical literature.

Hitherto, unfortunately, little has been known in this country of Russian speculation. Yet as far back as the sixteenth century the scholastic metaphysic had in Russia its students and representatives, particularly in the theological seminaries and academies. And when the universities one after another came into being—the first to be opened was the University of Moscow in 1755—philosophy began to be studied as an independent branch of learning. At the present day all the universities have their philosophical professors and lecturers, many of whom are well known in Germany, if not in England, as men who have contributed to the advance of their science. Naturally, at the end of the eighteenth and the beginning of the nineteenth centuries, the Kantian philosophy found its way from Königsberg to the centres of culture in Russia, and with it apparently Locke's *Essay* managed to secure a certain amount of attention. But it is explicable that to the mystical Russian temperament the writings of Schelling and Hegel would make a more direct appeal, and that the bold constructions of these thinkers met with eager acceptance in the schools of Petrograd and Moscow. Professor Lossky himself refers to the predominant influence exerted by their modes of thought, and singles out Solovyov as the leader of the movement. Prior, however, to Solovyov, there had been a number of teachers and literary men—

Galicz, Dawydow, Bjelinsky and Strachow among them—who had succeeded more or less in familiarising those of their countrymen interested in philosophy with the post-Kantian forms of idealism. Then, again, somewhat later, the doctrines of the English empiricists and of the French positivists found adherents, and gave rise to a considerable amount of intellectual activity. The writings of Roberty, for instance, most of which also appeared in French, had not an inconsiderable circulation both in France and in England. Professor Lossky draws special attention (p. 216 *sqq.*) to a rationalistic movement that, in contrast to the movement which emanated from Schelling and Hegel, took its rise from the thought of Leibniz. I suspect that the influence of Leibniz dates back to the middle of the eighteenth century, and began to be felt in Russia owing to the importation of the treatises of Wolff and his followers, which were for a time used as text-books. Be that as it may, it is instructive to note that in Russia, as in England, there is now a growing school of philosophical inquirers who are seeking to discover a mode of reconciling to some extent the individualism of Leibniz with a spiritual monism more or less of the Hegelian type.

Our author disclaims any intention of entering, in the volume before us, upon the territory of metaphysical controversy. He insists, and I think rightly, that a theory of knowledge is not called upon to take its stand upon a specific metaphysical conception of the world, but should on the contrary be regarded as a branch of philosophical investigation which is preliminary both to metaphysics and to those departments of philosophy which have to do with the more concrete aspects of experience. The business of

epistemology, as he conceives it, is confined to determining the conditions which render knowledge possible and to an examination of the elements and relations which knowledge is found to involve. But it is not easy, under present conditions, even with the best intentions, to keep rigidly within these limits; and, at more than one of the crucial stages of his journey, Professor Lossky takes us into his confidence and unburdens his soul of the metaphysical secrets that lie concealed there, and which will, I hope, some day be fully revealed and unfolded in another book. For instance, in the concluding chapter, after having urged that there is in truth no antithesis between the universal and the individual, that the true universal is, in fact, according to the phraseology which has come into vogue amongst us, the 'concrete universal,' he proceeds to give his sanction to the doctrine that a complete unity of the world is intelligible only if the world be thought of as grounded in an Absolute Reason wherein all its aspects are coordinated and teleologically related to one another. And, in another chapter, he hints at the necessity of a transformation of our ordinary notions of time and space so radical (pp. 272-5) that it would probably satisfy Mr. Bradley's requirement for a philosophy of the Absolute,—namely, that space and time, *in the character which they exhibit*, must be denied either to have, or to belong to, reality. Professor Lossky has, it is true, his own quarrel with post-Kantian idealism; but, in regard to the larger and more fundamental issues, he would appear to be substantially in accord with that form of it which, for example, Sir Henry Jones has been developing in some recent publications. At the same time, no countenance is given to the view

that finite subjects are exclusively 'connexions of content' within the Absolute. The content known belongs, it is consistently maintained, to the objective side of knowledge, while the mental life of the finite individual consists *inter alia* of acts of knowing, which are always psychical states of a subject and bear the character of events,—that is to say, are temporal occurrences, each of which comes to pass at the moment in which there is a specific awareness.

In the course of the work many questions of logical and epistemological theory are opened up, and on all of them what the author has to say deserves and will repay attention. But the book has, as a whole, a distinct aim and one very definite problem, the various sides of which present themselves in turn for consideration. It may, perhaps, be of some assistance to the reader if I try to sketch in as concise a way as I can the nature of the problem, and to indicate the direction in which the author looks for its solution.

The first Part is mainly critical and is designed to bring into view the full significance of the inquiry. By ordinary common-sense intelligence it is taken for granted that in and through knowledge we become acquainted with the facts and events of the world as they actually are. The tendency of almost all the great historical systems of philosophy has been, however, to cast discredit upon this belief, and to lead, when consistently followed out, to what seems to be a well-founded doubt as to whether our ordinary knowledge can be said to be knowledge of the real world at all. Now, Professor Lossky thinks he can trace back this tendency to a common assumption which, strange to say, is to be discerned underlying the most divergent streams of philosophical reflexion,—

an assumption adopted in each case almost unconsciously and certainly without critical scrutiny. Briefly this assumption may be said to be that knowledge, or more accurately the content known, is a product or a construction, a resultant, brought about by the interaction of real factors that perform their part, so to speak, behind the scenes. Most clearly, perhaps, the assumption can be detected in the empirical procedure of Locke. For Locke makes no secret of the fact of taking for granted that in external perception the content known, the 'idea,' has come about through a causal action exerted by some material entity upon the subject, and can, therefore, be no more than an image or a copy of the real thing,—an image or copy lying within the limits of the mind that is aware of it. Professor Lossky has little trouble in showing,—what, indeed, has been very often shown,—that from Locke's premisses the scepticism of Hume follows as an inevitable consequence, because if 'ideas' are the only objects immediately apprehended, the existence of their supposed archetypes can, at the best, be no more than hypothetical. But the assumption that the content known is in some sense a product was in truth no less characteristic of that mode of regarding knowledge which is to be met with in the rationalistic systems of the pre-Kantian period. Even Leibniz, who on metaphysical grounds had discarded the notion of causal interaction between the mind and things, was still compelled to fall back upon the conception of 'representation' by which to indicate the relation between the content of knowledge and the real world, without being able in the smallest measure to justify the contention that the former was representative *of* the latter. And

finally, in the critical philosophy, while it is manifestly Kant's aim to break down the divorce which his predecessors had instituted between the mind and things, while he was anxious beyond all else to describe experience only in terms implying equally mind and its objects, yet, when sensibility and thought were viewed by him as two totally disparate functions, there was introduced *ab initio* the assumption that the known object can be no other than a compound composed of elements which these faculties respectively furnish and which in the act of knowing must somehow be combined and united. Hence has arisen the doctrine, so familiar in reflexion since Kant's time, of thought as an instrument by which the crude data of sense are worked up into the form of knowledge, the outcome of such work, the object known, being regarded as a kind of intermediary, a *tertium quid*, interposed between the act of cognising and trans-subjective fact. By the very terms in which the problem is stated we are debarred from convincing ourselves that by means of the instrument allotted to us we ever have in the results we reach what is entitled to be called objective truth.

It is, then, not without reason that Professor Lossky claims the right of being allowed to conduct an epistemological inquiry unfettered by any metaphysical presupposition as to the position occupied by the knowing mind in the realm of reality. The kind of relation that holds between knowing and the known and the extent to which it affords the possibility of the ideal of knowledge being realised,—these are the questions which it is the very business of epistemology, if it has any *raison d'être* at all, primarily to attempt to answer. But no answer can ever be obtained by

trying to get behind the process of knowing and to observe the manner of its coming to be. Not the genesis but the nature of knowledge is what here concerns us. And there is only one method known to man by which he can hope to determine the nature of anything,—that, namely, of carefully scrutinising its features and of thus determining their significance and mode of connexion in that which is being examined.

Accordingly, the principal task upon which Professor Lossky is engaged in the second Part of his work may be delineated as that of inspecting knowledge as it presents itself in the experience of a thinking being, of analysing it from the point of view not of an external spectator but of the thinking being whose knowledge it is said to be. That the task has not been undertaken in vain the six instructive chapters in which the fruits of his labour are laid before the reader bear ample testimony. He finds, at the outset, that every cognitive act involves three factors,—the conscious subject or self, a content or a 'what' of which the conscious subject is aware, and a relation, which he figuratively denotes as the relation of 'having,' between the first of these factors and the second. He finds, again, that two distinct species of 'having' require to be distinguished. Some contents are immediately experienced as modes or manifestations of myself,—*e.g.* feelings of pleasure and pain, emotional conditions of joy or sorrow, acts of wishing or desiring,—while others,—*e.g.* the sun in the sky, the table in front of me, the white paper on which I am writing,—are immediately experienced as other than myself, as foreign to me. The former are characterised as 'belonging to me,' as 'mine,' as 'inner states'; the latter as 'given to me,' as 'not mine,' as 'external.'

And, on the strength of immediate experience alone, no one would dream of asserting that the table was a part of his own mental life, or that an act of desire, experienced by him, was a component of some external thing. He finds, further, that the distinction between 'inner' and 'outer,' or between 'internal' and 'external' by no means coincides with the distinction between 'subjective' and 'objective.' My own act of desiring to catch a train may become, so our author thinks he has made out, as much an object of my apprehension as the train I succeed in catching; it will then stand over against me as something I cannot undo, and compel me to admit its presence as an objective fact. Professor Lossky would, as I understand him, use the consideration just referred to as a means of advancing to his main thesis. When I am directly aware of my own state of mind as the object of my awareness, there can be no doubt of its actual presence in my act of awareness. In this case, at any rate, there can be no question of a *tertium quid*; the object of my awareness is not a 'presentation,' or an 'idea,' of the state of mind, it is the state of mind itself. But the relation of knower to known is, as a relation, precisely similar,—so the argument runs,—when the object is a so-called external object Apart from extraneous theoretical grounds, no one would entertain for a moment the thought that, in perceiving a table, the object of which he is aware is not the physical table but a 'mental image' or 'symbol' thereof. It would be agreed that the object is as immediately and directly known in the one case as in the other. Professor Lossky contends that a searching analysis of the entire situation so far confirms the common-sense view. And he believes that

one reason why philosophers have been induced to reject it has been that they have failed to see that what is transcendent in respect to the knowing subject as an existent being need not be transcendent in respect to that subject's knowledge. We speak, familiarly, either of an inner or of an outer object as being 'in consciousness,' when there is knowledge or consciousness of it, and, if the phrase be understood in the way in which it is intended to be understood, both inner and outer objects may be said to be 'in consciousness' (or to be 'immanent' objects), and in precisely the same sense.

The meaning of the title given to the present volume will be now apparent. Knowledge has an 'intuitive basis' because a real object in order to be known must itself be present 'in consciousness' and be immediately or intuitively experienced, after the manner in which philosophers have usually supposed only 'inner states' and 'presentations' can be immediately or intuitively experienced. But the error must be avoided of taking the phrase 'in consciousness' to be equivalent to the phrase 'in the mind,' in the sense of being part of the mind's structure. And further. Although intuitive awareness is a necessary condition of knowledge, it does not follow that it is in itself sufficient to constitute knowledge. Simply to 'have' something in consciousness, simply to be aware of, or to intuit, something, is not to know that 'something.' Neither in the case of an inner nor in the case of an outer object does intuition or immediate awareness enable us to determine *what* it is of which there is awareness. Knowledge emerges only when, in addition, there is brought to bear upon the immediately given content an active process on

the part of the subject,—a process of discriminating the elements or features of the 'given,' of comparing them with one another, and of thus discerning their relations and interconnexions. What at first appears as confused, chaotic, formless, gradually assumes, as this process of discriminating proceeds, clearness, distinctness, definiteness; instead of a vague, blurred, amorphous mass the conscious subject comes to be aware of a whole of distinguishable parts and characteristics, resembling and differing from one another, and resembling and differing from the parts and characteristics of other objects. Generally, then, knowing may be defined as a process of differentiating the elements and features of the real world by means of comparison.

I hail with satisfaction the emphasis here laid upon the function of discriminating and comparing. It is a recognition of what seems to me to be fundamental in the development of cognitive apprehension; and for the last twenty years I have been trying, in season and out of season, to make its importance manifest, as also its far-reaching consequences for the theory of knowledge. My only quarrel with Professor Lossky in this respect is that he does not carry the principle of explanation, which he uses with such effect in the sphere to which he restricts it, far enough, and is, in consequence, precluded from reaping the full fruits of his work. For, unless I misunderstand him, he wishes to draw a radical distinction between 'experience' and 'knowledge,' and holds that there can be 'immediate experience' or 'consciousness' of a given object prior to the exercise of any discriminative activity. Although this view is widely current, I believe it to be wrong, and have sought, on various occasions, to come to close quarters

with it, and to show that it is destitute of justification. I cannot, of course, enter upon that discussion here. Suffice it to say, that, so far as I can see, not even the crudest, vaguest consciousness of a content can be accounted for, either psychologically or epistemologically, without calling to our aid in the exposition the notion of a discriminative activity which is in essence identical with the more elaborate activity which Professor Lossky describes as 'knowing.' I can discover no ground for supposing that discrimination can only begin to operate when abstract ideas of relation have already been formed and are used in the process. On the contrary, I should contend that there is no way of explaining the origin of the ideas of relation, which the act of judging, as ordinarily understood, involves, except by viewing them as themselves the outcome of discriminative activity. In other words, we have got, I think, to recognise that, while identical throughout in nature, discrimination may exhibit the most varying grades of perfection, and that in its rudimentary forms it may well be as relatively crude as are then the results of its work.

I am quite aware that the difference of view just alluded to is a difference that strikes deep, and probably Professor Lossky will at once disown me as in any sense a disciple of his. For what I have been saying virtually amounts to a confession that we are parting company over the matter of intuition, and upon that he is evidently disposed to lay great weight. Nevertheless, I would commend as of exceptional interest and value his treatment of discrimination as it is manifested in what seem to me to be the comparatively higher stages of apprehension. Beginning with that grade of knowing exemplified in those judgments

which language still preserves and in which the assertion extends merely to the recognising of some sense-quality as being now present,—the so-called impersonal judgments,—he shows how the individual, confronted with the objectively real world, singles out from what appears as a dim dark background some aspect or feature which he has managed to contrast with the rest. Then, as the discriminative process progresses, the vague objective environment becomes further and further differentiated,—what at first had been denoted as A is seen to involve B, and AB in its turn is found to involve C, etc., so that roughly it is possible to trace the way in which from primitive qualitative judgments (as they might perhaps be called) advance is made to the concrete judgments (as, I think, we might name them) of ordinary perceptive experience. He shows how in these the start is made from a certain portion of the environment, already to some extent differentiated, and how each act of discrimination results in distinguishing in that portion some further mark or characteristic, which is determined as a mark or characteristic of the reality in question. We are thus led to realise that, just because the essence of knowing consists in discriminating and comparing, it is inevitable that knowledge should come to expression in the form of the judgment. Following still the same clue, he indicates how, from successive acts of discriminating directed upon one and the same object, notions or concepts come into being, and how finally those abstract judgments are rendered possible by which the world of fact is represented as having its appearances determined by general laws. All this, of course, is the mere outline of a long story, which Professor Lossky would

be the first to acknowledge requires to be worked out in detail; but the principle that should guide the more detailed work has, at least, been clearly enunciated. Moreover, many long-standing difficulties cease to appear as such from the vantage ground which is thus attained. For example, the old antithesis between analytic and synthetic judgments can be at once dismissed, for it becomes obvious that every judgment must be from one point of view analytic and from another synthetic. If the subject is taken to include that in it which is still undifferentiated, the judgment may be said to be analytic in character,—that is to say, the predicate is obtained, or may be, from an analysis of the hitherto unknown reality. If, on the other hand, the subject be taken to include only its differentiated elements, the judgment will be synthetic in character,—that is to say, it results from ascribing to the subject a mark or characteristic which no analysis of the former has yielded. The analysis is performed by the thinking mind; the synthetic connexion between the differentiated part of the subject and the predicate is 'given' in the reality about which the judgment is made. So that while analysis may be said to be the subjective aspect of knowledge, its objective aspect (the 'given') is always a synthetic connexion. The Kantian theory of the function of thought in knowledge would thus require to be completely remodelled.

In the further course of his inquiry Professor Lossky handles a number of well-worn topics and rarely does so without throwing fresh light upon them. I would draw the reader's attention, in particular, to the suggestive discussion (p. 291 *sqq.*) of the way in which advance is made to the apprehension of

the higher universals and of specific individuals. With much plausibility it is argued that in ordinary experience what most readily lends itself to clear discrimination is a universal of a medium degree of generality, while the universals of widest range and the individuality of either a thing or a person in all its uniqueness need for their discernment discriminative power of unusual strength and subtlety. A significant truth is here brought to our notice. Knowledge starts from that which in strictness can be described as neither individual nor general. It is only by gradually breaking up, or differentiating, the composite and indeterminate mass of presented fact that the human mind attains to a recognition on the one hand of generalities and on the other hand of particular individuals. The development, that is to say, proceeds along parallel lines; and the one would be impossible without the other. In view of the recent revival in our midst of an atomism which takes for granted, as the old atomism of Hume took for granted, a primitive awareness of isolated particulars, Professor Lossky's argument in this reference is both effective and opportune.

I have touched only on the central position of the book. There are certain points of detail on which I find myself in disagreement with the author, and I have alluded to one issue where the difference of view seems to concern the central position itself. But this does not in the least prevent a sincere recognition on my part of the value of Professor Lossky's work,—work rendered equally noteworthy by width of philosophic knowledge and by power of philosophic thinking.

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PART I

THE PROBLEM OF KNOWLEDGE IN MODERN PHILOSOPHY

INTRODUCTION

FAUST'S thirst for an infinite fulness of life glows in the heart of every man who has not been too severely handled by Fate, or too much confined to the lower levels of spiritual existence. Who of us has not felt a longing to live at one and the same time in his own country, stirred by all the interests of his native land, and also in Paris, London, or Switzerland, in a circle of different interests and different people, and yet of his own kindred? At this very moment, perhaps, a great singer is singing in Moscow; in Paris a paper by a distinguished scientist is being discussed; in Germany gifted leaders of immense political parties are advocating ideas that vitally concern the social life of all nations; in Italy, in that land

> "Where, under azure skies, sweet breezes blow,
> Where modest myrtle and proud laurel grow,"

somewhere, it may be, in Venice, a flotilla of gondolas is gathered round a group of picturesque musicians whose serenades blend harmoniously with the exquisite moonlight night; in the Caucasus,—

> "The Terek rages, wild and foaming,
> 'Midst the rugged mountain heights;
> Like the storm-tossed sea its weeping
> Streams in showers of splashing tears."

And how grievous it is to think that all this is living and moving without me, that I cannot mingle with this rich wealth of life. I should attain to an altogether higher degree of contentment if I could be so identified with the world that every other self would be my self also. But all these desires are frustrated by the pitiable limitations of individual existence which fetter me to an insignificant portion of matter, —my body,—confine me to a stifling room and offer me only a narrow circle of activity. And yet, although my self cannot expand and be identified with other selves, I have a means of escaping, to some extent at least, from the limits of my individuality. That means of escape is to be found in knowledge. I am speaking, of course, not of the knowledge of such bookworms as Wagner in *Faust*, against which the words of Mephistopheles were aimed,—

> "He who would study organic existence,
> First drives out the soul with rigid persistence;
> Then the parts in his hand he may hold and class,
> But the spiritual link is lost, alas!" [1]

I am speaking of the knowledge possessed, for example, by the poet who penetrates to the deepest recesses of the inner life of the world and sees into the inmost heart of every living being. Let us not be told that the poets attain to such knowledge only in the sphere of the individual human life. Art with like boldness makes its way to the depths of human personality, to the world which is composed of the combined work of many human selves, and to the world which precedes the spiritual life of man. Tolstoy with equal ease paints the inner life of Anna Karenina and the collective soul of the crowd. Böcklin introduces us

[1] Goethe's *Faust*, Pt. I. Scene iv., English translation by B. Taylor.

with equal completeness to his own inner world, when he paints himself in the celebrated portrait with the skeleton, and to the mood of Nature in spring, the gloomy spirit of the mountain ravine, the silence of the forest, the life of the rocky shore lashed by the furious breakers.

If we be told that there is not to be found a knowledge which is apprehensive of the real world, that knowledge has merely a symbolic character, and that we do not know the thing itself but only its effect upon us,—if we be told that the world we know is merely the world of our own presentations, of phenomena, which come into play in accordance with the laws of our understanding,—we are utterly dissatisfied with such knowledge; we feel stifled within the narrow sphere of the self, we want to plunge into the boundless sea of reality as it exists apart from us. It is only when we have become in some way convinced that such an aspiration is self-contradictory and unrealisable that we relinquish it and resign ourselves to a more or less sceptical attitude. Yet the ideal of knowledge is firmly rooted in the inmost recesses of the human heart, and it is with sadness that we renounce it.

> "In each soul is born the pleasure
> Of yearning onward, upward and away,
> When o'er our heads, lost in the vaulted azure,
> The lark sends down his flickering lay,—
> When o'er crags and piny highlands
> The poising eagle slowly soars,
> And over plains and lakes and islands
> The crane sails by to other shores."[1]

The theories current at the present day with regard to the relation between the knowing subject

[1] Goethe's *Faust*, Pt. I. Scene ii., English trans. by B. Taylor.

and the known object lend, however, no countenance to this ideal of knowledge. Most epistemologists are inclined to maintain that immediate experience consists entirely of the individual mental states of the knowing subject. But if in immediate experience we are concerned merely with our own states of consciousness, it follows that in whatever direction we turn we can never be freed from our own self or transcend the limitations of our own personal experience. No doubt all sorts of edifices may be reared upon a basis of this sort; attempts may even be made to prove that by a series of inferences thought can carry us beyond the limits of the self and arrive at a knowledge of the external world or of some aspects of it. But, in truth, the starting-point in question must inevitably lead to subjective idealism and to a destructive scepticism in our interpretation of the external world.

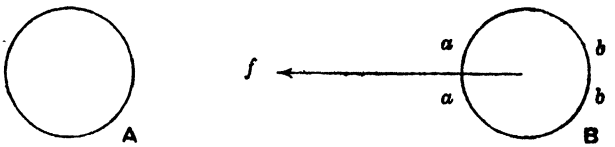
To one who is convinced that knowledge does penetrate to the essence of things, the question inevitably presents itself why philosophy, during the many centuries of its history, has not only failed to find a justification for that belief but has fostered a tendency to subjective idealism which is making its way into the special sciences and even into popular speculation. The only answer which will seem to him feasible is that philosophy must have followed a wrong route, and have become entangled in errors, and that since the influence of these errors has been so widespread, they must have been occasioned by conditions of extraordinary generality which are operative in every human consciousness. The founders of the different philosophical systems were men of exceptionally logical minds; their keen intellects easily detected and disposed of contra-

dictions in the most complicated of arguments. The fact that even they failed to track the errors which in the last resort lead to subjective idealism is sufficient proof that those errors have been exceptionally well concealed, that they lie not among the explicit assertions, but among the instinctively conceived assumptions, the unconsciously adopted premisses, of philosophy. The best way, therefore, to rid ourselves of them is to analyse carefully the points of departure of the more important systems of thought. We shall, then, discover their unrecognised implications and bring into the light of day the hidden supports of such philosophical reflection.

I must explain what I mean by the unconsciously assumed premisses of philosophy. In every one of its concrete manifestations the world is infinitely complex —if not in an absolute sense, at any rate in relation to human powers. Our thoughts about the world, if they concern any concrete fact, are likewise put together out of a vast number of elements. But only a narrow strip of this complexity is fully illuminated by the light of knowledge ; all the rest is shrouded in the darkness of what is thought dimly, though necessarily, or rather of what is felt. The special sciences have in most cases to do with concrete reality and, therefore, their assertions are as a rule essentially complicated and denote a great deal that is not clearly stated and has not yet been elaborated by the activity of thought. Take, as a case in point, one of the most general of scientific laws—the law of gravitation. It asserts that any two bodies are attracted to one another with a force proportional to the product of their masses and in inverse ratio to the square of the distance between them. The only

feature of this law which in physics is firmly established is the thought of the possible or actual approach towards one another of two bodies in accordance with the force mentioned. Yet over and above this thought there is inevitably implied a number of other conceptions which have never been scientifically demonstrated. For instance, the nature of the coming together of the two bodies is sure to be in some way pictured by us; *e.g.*, it may be taken to be immediate attraction at a distance. At first we are not in the least aware that this is only a hypothesis which is in no wise required by Newton's law—and a highly questionable hypothesis. It could be replaced by many other hypotheses. "At the present day," says O. Hvolson, in his *Elements of Physics*, "the conviction that *actio in distans* ought not to be admitted in any department of physical science has become quite general. But how it is to be banished from the law of universal gravitation still remains an unsolved problem in spite of the numerous attempts of scientists to explain gravitation mechanically. The main point about all the explanations is that they postulate the existence of a special universal medium, the effects of which condition the accelerations expressed by the formula. Without going into these speculations—no one of which has yet been proved—I shall content myself with a few remarks. We know that in the presence of the body *A* (see diagram) the body *B* is moved by a force *f* in the direction of *A*. Such a force can be thought of in two ways; either as a *pull* which is exerted on *B* from the side *aa* (*actio in distans* would be a case of such a pulling), or as *pressure* affecting *B* from the side *bb*. Attempts have been made to account for such pressure through

the fact of the presence of the body *A*. It has been assumed, *e.g.*, that the particles of the universal medium, as they move, strike a body on every side. The presence of the body *A* partly protects, so to



say, the body *B* from the impact of particles that come from the left, and the excess of pressure on the other side thus appears to be the cause of the force *f*." [1]

The gravitation of masses may, then, be due not to the mutual attraction of those masses but to their being pushed towards one another by pressure from other bodies. Or, as is more probable, the true cause may be neither attraction nor pressure but quite a different mode of interaction, the nature of which is still unknown to us. Important though they may be for our general conception of the world, these theories of interaction between masses need not in any way affect the formulation of Newton's law or the deductions made from that law by physics. They merely throw a different light upon it. A physicist is not obliged to concern himself with these theories; but he certainly ought to know which of his conceptions about physical phenomena are unproven—either through lack of the means of proving them or because they are beyond the scope of his science. Every proposition of physics or of any other special science involves conceptions the significance of which falls outside the boundaries of

[1] O. Hvolson, *Kurs Phyziki*, vol. i. p. 185.

any special science and forms the subject-matter of the fundamental philosophical disciplines—ontology and epistemology. Thus, though the investigation of repulsion and attraction certainly does, to a large extent, belong to physics, there are several of the more general conceptions implied in the law of gravitation, which call for philosophical inquiry. Take one instance. In speaking of the gravitation of masses we conceive of the attraction, the impacts, the movements, as though they did not exist by themselves but inhered in something. In the language of philosophy we regard these phenomena as attributes of certain substances. It is obvious that the conception of substance and attribute enters into almost every item of knowledge, either in an abstract or in a concrete form. When we say " the hall door creaks " we regard the creaking as a process, or as an attribute, and refer it to a bearer—the door. We use the conception of substance and attribute at every step, but we do so unconsciously; and when our attention is drawn to the conception, we imagine it to be so simple and unambiguous as to stand in no need of discussion. Our conception of substance and the theories instinctively implied in it seem to us to be essentially valid for all time. As a matter of fact, however, the truth is otherwise. When philosophy comes to deal with the question, it frames theories which differ from one another even more than the interpretation of gravitation as attraction and the interpretation of it as pressure. Consider, for example, the difference between the views of substance, taken by Leibniz, Hume, and Kant respectively.

Newton's law has other implications no less important than the idea of substance—for instance, the

idea of causality. This idea too involves theories that have never been reflected upon by a mind untrained in philosophy. It too appears to be simple and not to stand in need of any special investigation. And yet it is sufficient to compare the theories of causality propounded by Leibniz, Hume, and Kant respectively in order to feel at once that the firm ground of naïve theorising gives way under our feet and that a bottomless abyss of unsolved problems suddenly opens out before us.

Another group of ideas still more general in character than those already mentioned may be referred to. Whatever statement we may make we regard it as a part of our knowledge, and judge of it as such. The valuation we put upon it contains a number of extremely diverse and, in most cases, unreflectively assumed theories. For instance, we regard knowledge as an activity of consciousness which copies reality; we take it to involve an interrelation between the self and the not-self, the knowing subject and the known object. Yet the possible theories as to the nature of knowledge, of the self and the not-self and of their interrelation in knowledge, differ radically, and each of them throws a light of its own on the act of knowing. The followers of Descartes regard the knowledge of the processes of motion, for example, as a transcendent knowledge which copies in our minds the real relations between the particles of matter existing outside of our minds, or, indeed, outside of any mind. A Kantian takes such knowledge to be an immanent knowledge, consisting of judgments the elements of which are combined according to the necessary laws of the understanding; it does not, in his view, lead us beyond our own

presentations and it has no relation to an external world as a world of things in themselves.

Every change in our view of causality or of substance reflects itself in innumerable portions of our knowledge, since most judgments involve the idea of substance and attribute or that of causal relation. Nor is that all. The whole sum of our knowledge is influenced by the theories we may hold with regard to the nature of knowledge, whether those theories be philosophical or merely instinctive. If we are obsessed by an erroneous idea of knowledge as such, it will make itself felt, if only in a potential way, in every particular act of knowing. This is bound to be so. If a mistake is made in a particular calculation it will vitiate the results of all other combinations in so far as they are based upon the calculation in question.

These considerations lead to disheartening, and, at first sight, even to sceptical, results. Every proposition of physics, chemistry, physiology, etc., rests upon unconsciously assumed premisses, and, therefore, in order to attain philosophical knowledge, we must ascertain what these premisses are and scrutinise the vague and dimly recognised ideas of substance, of causality, of the nature of knowledge, etc. How is this to be done? The first answer that suggests itself is that we must continue the pursuit of the special sciences, —physics, chemistry, etc.,—which give us information about the properties of particular substances, then compare the information thus received, and from it deduce the nature of substance, causality, etc. In order to attain a theory of knowledge it would seem especially necessary to pursue the study of psychology, physiology and anatomy. This was, in fact,

the course philosophy followed for centuries. But in our day, after the work of Kant and his successors, it has become obvious that this line of procedure will never enable us to construct an epistemological theory freed from dogmatic assumptions—freed, that is, from assumptions that have not been critically examined.

If, in working out a theory of knowledge, we fall back on some other theory, it means that we are making use of epistemological conceptions, such as those of self and not-self, of their interaction and so on, which we have simply adopted, because they happened to be there, without having satisfied ourselves of their legitimacy. This mode of laying the foundations of a theory of knowledge runs counter to the requirements of logical method. Remarkable examples of such illogical procedure may be found in the philosophy of Locke. In discussing the cognitive value of such sensations as cold, hot, etc., Locke speaks of the action of the external world upon the body, of the change that results in the movement of the "animal spirits," and, on the ground of these considerations, he decides that sensations are subjective in character. And finally, at the end of his inquiry into the nature of knowledge, he comes to the conclusion that the existence of an external world cannot be proved. Thus, he first makes use of various theories of the external world as objectively real, and then, on the ground of these very theories he comes to sceptical conclusions with regard to the validity of knowledge, and affirms that the existence of an external world cannot be logically established.

We must, then, either admit that the attempt to work out a philosophical conception of the world is

a hopeless one, or have recourse to a very different method, and construct our philosophical theories, and above all a theory of knowledge, without falling back on presuppositions, *i.e.* without using as premisses certain propositions of the special sciences. In other words, a theory of knowledge must begin with an analysis of the experiences actually taking place at any given moment. A thinker who wishes to perform this analysis without reverting to some ready-made theory has no right in any way even to define knowledge; he has no right, *e.g.*, to approach his inquiry with the idea that "knowledge is a reproduction in thought of reality," etc. Still less ought he to start with preconceived notions of the self and the not-self, of the inner and the outer world, of their interaction, etc. The results achieved by the special sciences in their investigation of the world as a whole may, of course, be made use of in the analysis, but only as materials for a theory of knowledge and not as its starting point. A *critical* method of this kind is so difficult and so unique that even its great founder, Kant, was not able to carry it through consistently. In working out his theory of knowledge he did not avoid making dogmatic assumptions, for he was building upon the foundation laid by the empiricism and rationalism of the preceding ages. These two systems were full of assumptions that had never been subjected to the thoroughgoing criticism which the study of the history of philosophy has now rendered possible.

A thinker who is to avoid the rocks upon which, as we shall attempt to show later, the philosophy of Kant was wrecked, must start by scrutinising the philosophical systems of the past, and laying bare their

presuppositions—*i.e.* the assumptions on which they are based but which are not explicitly stated, as well as those assumptions which, though explicitly stated, have not been compared with other possible and contrary assumptions, and are in this sense dogmatic. Such is the course I propose to follow in this book, and I shall begin by examining the systems of pre-Kantian empiricism and rationalism. Since, as philosophy develops, the assumptions on which it proceeds are not increased but diminished, an attempt can then be made to give a first sketch of what I call the intuitional theory of knowledge immediately after our discussion of empiricism and rationalism. To support this intuitional position I shall proceed to inquire into the assumptions made by the Kantian philosophy. Some account of the intuitional theory must, however, precede a critical examination of Kant's philosophy for the following reason. Until a theory of knowledge freed from the assumptions of the pre-Kantian philosophy has been formulated, one is compelled to employ such terms as "fact," "experience," "perception," etc., in the indefinite sense in which they were used in all the dogmatic systems of thought. But a loose and inaccurate use of these terms makes a discussion of so complex a system as that of Kant extremely difficult. Before proceeding to deal with the Kantian system, it will, therefore, be desirable to determine more precisely the significance of the terms by means of which knowledge is to be interpreted.

CHAPTER I

THE DOGMATIC ASSUMPTIONS OF PRE-KANTIAN EMPIRICISM

I PROPOSE to consider the empirical theory as presented chiefly in the highly developed systems of Locke, Berkeley, and Hume. In systems less developed there is so much confusion, contradiction and obscurity, that it would only be possible to reach a clear understanding of them at the end and not at the beginning of our inquiry. And indeed there is no necessity to trace the historical development of the views in question. We are not attempting a study of the history for its own sake, but for the sake of finding, by means of an examination of actual and possible philosophical theories, a way of returning to the lost ideals of living knowledge.

Empiricism seeks to ground the whole of knowledge upon the basis of what is called experience. But in the early stages of philosophical investigation the terms "experience" and "fact" were used with extreme indefiniteness. And the development of the empirical theory consisted largely in introducing changes into the meaning of these terms. The answer which first suggests itself to the question as to the nature of experience is that it consists of the perceptions mediated by the external organs of sense,

i.e. of visual, auditory, and other data. But since these perceptions inform us only of the so-called corporeal world, and since other materials of knowledge are, to begin with, overlooked—for a reason which will be discussed later—it is not difficult to see why, in the early stages of philosophising, all that is thought to be knowable is taken to consist of corporeal things and their reactions. This, for instance, was the view of the founder of English empiricism, Francis Bacon. A conception so one-sided could not long persist in philosophical reflection. The later empiricists were forced to recognise that the actual material of knowledge is not limited to visual, auditory, and other presentations. Some facts can be apprehended without the help of eyes, ears, or touch. If I think of the philosophy of Leibniz and compare it with that of Aristotle, finding points of resemblance between them, I am engaging in various activities, such as remembering, comparing, analysing, observing agreement or contradiction between ideas. Yet to know these states of consciousness there is no need to touch them or to look at them; they are evidently known in some more immediate way. These two kinds of knowledge were already noted by Locke; the one he called "sensation" and the other "reflection." He called them also outer and inner sense, for the one, in his view, gave us knowledge of the external world and the other of the activities of our own minds.[1]

What knowledge, then, of the external world can be obtained by means of perception? What is the nature of the experience in which there is given to me the blue sky, the sea sparkling in the sunshine, the green spreading oak? Before we begin to philosophise and

[1] Locke's *Essay*, Bk. ii. ch. i. 4.

to express our thoughts in an abstract form, we unconsciously tend towards naïve realism, *i.e.* to the conviction that this "something" which stands over against us and can be seen, touched, etc., is a part of the external world *as it is in itself*. A theory of knowledge must either justify this instinctive conviction by disclosing the conditions which render it possible, or overthrow it and prove that the world as it is in itself cannot enter into the sphere of the knowing subject's consciousness. At the outset the following question must be settled. There is no doubt that things are experienced owing to the fact that they enter into a certain *relation* to me, the knowing subject. But what is the nature of this relation? The subject's knowledge of an object is a fact that differs profoundly from all other facts—from chemical and physical changes, physiological processes, and so on. It is, therefore, to be expected that it will contain elements and relations which are nowhere to be met with among the other aspects of the world. An accurate description of them will involve new conceptions different from the conceptions of physics, physiology, etc. The naïve realist, who believes that things as they are enter into the subject's consciousness, assumes, without being aware of doing so, that a quite peculiar specific relation holds between the subject and the object. Yet, when he comes to theorise about knowledge he turns out to be fatally incapable of formulating his conviction in abstract terms, and pursues a course which must lead him in the end to forsake his realism. This is due to the inertness of the human mind, which finds it difficult to grasp what is new, and strives at all costs to satisfy the promptings of curiosity by means of the

least possible number of well-worn and familiar conceptions.

When men approach the problem of truth—when they take up the epistemological inquiry—they already possess a number of habitual, deeply rooted ideas about the world, especially ideas about the material world, which subsequently play an important part in natural science. Such, for instance, is the idea of a thing and of properties *belonging* to it (*e.g.*, the green colour belonging to this birch leaf, hardness to this piece of quartz, etc.), and such also is the idea of the *causal action* of one thing upon another.

When the naïve realist—or indeed anyone untrained in epistemological inquiry—comes to deal with the fundamental problem of epistemology,—namely, with the relation between the knowing subject and the object known,—he usually stumbles hopelessly upon a wrong track. He imagines, that is to say, that empirical knowledge is due to the *causal action* of the object upon the subject (first on the body and then on the mental life of the subject). Hence, the conclusion is drawn that in experience the knowing subject is dealing not with the external object *as it is in itself*, but with a more or less exact *image* of it which is in the subject's mind and is therefore *a mental state of the subject*. Thus, the point of view of naïve realism comes to be relinquished.

Another misconception which proves fatal to naïve realism is the wrong use, often made even in epistemology, of the idea of a thing and its properties. The rock I see, the table I touch, etc., are in my consciousness. I am conscious, and these things are what I am conscious of. What, then, is the relation between the conscious subject and that of which he is conscious?

At first sight it seems indisputable that the relation is one of *belonging to*, in the same sense in which a thing's qualities, or the processes taking place in it, belong to that thing—*i.e.* in the present case, in the sense in which a subject's feelings and desires belong to him. Hence the conviction that the perceived thing is not a part of the external reality as it is itself, but simply *a subjective image* of it, a presentation consisting entirely of *mental states* of the knowing *individual*. This conviction, unfortunately, is supported by certain empirical arguments taken from physiology (change in perception is regarded as correlative with change in the organs of sense and with the destruction of certain parts of the central nervous systems, etc.). To the unwary these arguments seem sufficiently conclusive, and thus the belief that all contents of consciousness are subjective eventually becomes a kind of fixed idea. Yet it is evident that in pursuing this line of thought a theory of knowledge is unable to account for the objective significance of knowledge, and becomes involved in insuperable difficulties.

The assumptions which are so disastrous to epistemology may be briefly expressed under three heads:

A. The self and the not-self are sharply separated from one another.

B. Experience is the result of the *causal* action of the not-self upon the self.

C. All contents of consciousness are *subjective mental states* of the knowing individual.

These assumptions are not only involved in current popular notions of the processes of knowing, but they also lie at the basis of the pre-Kantian systems of philosophy. Locke begins his *Essay concerning the Human Understanding* by asking the question as to

the origin of our ideas. As a result of his criticism of the theory of innate ideas he arrives at the conclusion that there is nothing innate in the mind, and that the mental life begins under the influence of experience, by which he understands precisely the *action* of the external world upon the self.

Without having previously settled the question as to the nature of knowledge, Locke plunges into numerous details concerning the action of the not-self upon the self. He asserts, for instance, that "all sensation being produced in us only by the different degrees and modes of motion in our animal spirits variously agitated by external objects," even the absence or the disappearance of some properties in the objects may be the source of a new positive idea, for "the abatement of any former motion must as necessarily produce a new sensation as the variation or increase of it, and so introduce a new idea which depends only on a different motion of the animal spirits in that organ."[1]

But Locke is not consistent in his view of sensation. In spite of his sceptical reflections he is still convinced that at any rate such qualities of the object as extension, figure, number and movement *enter*, as it were, into our consciousness *immediately* from the external world owing to the fact that "some singly imperceptible bodies must come from the objects to the eye, and thereby convey to the brain some motion which produces these ideas which we have of them in us."[2]

On the whole, however, Locke wended his way along a road which was destined to terminate in the scepticism of Hume. Having satisfied himself that all the

[1] Locke's *Essay*, Bk. ii. ch. viii. 4. [2] *Ibid.* Bk. ii. ch. viii. 12.

materials of knowledge consist of immediately experienced activities of our own minds and of sensations which are likewise our mental states, Locke—or one of his successors—was logically driven to admit that we have no data which can furnish us with knowledge of the external world, no means of transcending the boundaries of our own self, of our own subjective states. This result could only have been avoided had Locke, in his analysis of the perceptions of the so-called external world, discovered elements of a different order from sensory elements. He did not, it is true, completely overlook the non-sensory elements, and we must now consider his account of their origin and of their value for knowledge.

We, at the present day, resting upon the work of philosophers and psychologists both before and after Kant, can, without difficulty, lay our finger on the non-sensuous elements of knowledge. Every perception is composed of a number of sensations which form a unity; the consciousness of unity is not itself a sensation and cannot be explained by the activity of any organ of sense simply because unity of sensations is only possible where the already existing separate sensations are transcended and put into relation with one another. Moreover, in the case of external perception, we also recognise the reason why sensations are apprehended as forming a unity—namely, we see clearly that this is due to the fact that the sensations have a common source, a common bearer—that which in philosophy is called substance. Now, the idea of substance certainly does not arise in consciousness as a result of the activity of any one organ of sense, for it too only has significance with reference to all the sensations taken together. Finally, another non-sensuous

element in knowledge evinces itself as of great epistemological importance. When we perceive a series of events such as a gust of raging wind and the fall of a tree broken thereby, we are aware not only of the sensations of cold, etc., from the wind, and of the visual and auditory sensations from the falling tree, but we are clearly conscious also of there being between these events a specially intimate connection, closer and deeper than that of mere sequence or co-existence in time. We seem to be immediately aware of some energy being expended, of some *force being exerted, which produces or actively creates a new event.* This element of perception—the apprehension, namely, of force, of causal connection,—is found in conjunction with various sensations, but it is distinct from them all. Some psychologists hold, it is true, that the experience of activity is nothing but a complex of motor sensations. There is no need to criticise this contention at present, for it has no bearing on the objections that we have here to urge against the empirical theory. The only thing we need insist upon in this connection is that the idea of causal relation implies not simply an awareness of a succession in time, but also an awareness of one event actively producing another.

Now, Locke did not ignore these elements of perception, but his psychological and epistemological analysis was not sufficiently penetrative to render his account of them coherent. Of some of them he is inclined at times to say that they arise like all other ideas through the activity of the senses, and he therefore supposes that they are no more difficult to explain than is the sensation (for example) of the colour red. At the beginning of his work, Locke goes so far as to maintain

that even the ideas of existence and of unity do not require any special discussion. "Existence and unity are two other ideas," he writes, "that are suggested to the understanding by every object without and every idea within. When ideas are in our minds, we consider them as being actually there, as well as we consider things to be actually without us;—which is, that they exist, or have existence. And whatever we can consider as one thing, whether a real being or idea, suggests to the understanding the idea of unity."[1]

Yet if experience be, as Locke asserts it to be, simply a subjective response of the mind to the influence of an external world that is foreign to it, a perplexing, and indeed an insoluble, problem is presented by the phrases "we consider things to be actually without us" and "whatever we can consider as one thing." Of this problem Locke is oblivious, although at the end of his work he discerns the difficulty so far as knowledge of the external world is concerned,—a matter I shall refer to later on. He treats in the same manner the notions of force and of cause. "In the notice that our senses take of the constant vicissitude of things, we cannot but observe," he writes, "that several particular qualities and substances begin to exist; and that they receive this their existence from the due application and operation of some other being. From this observation we get our ideas of *cause* and *effect*."[2]

The passages quoted show, then, that Locke had been for the most part unaware of the problems I have indicated, which were clearly raised by Hume, the last representative of pre-Kantian empiricism.

[1] Locke's *Essay*, Bk. ii. ch. vii. 7.
[2] *Ibid.* Bk. ii. ch. xxvi. 1.

An exception is to be discerned in Locke's treatment of the idea of substance, the origin of which, he recognised, does need further inquiry. But, blinded as he was by the assumption that a gulf intervenes between the self and the not-self, and that the states of consciousness are merely subjective responses of the mind to influences from without, it did not even occur to him that the apprehension of substance might have as its content a more objective element of knowledge than sensation. On the contrary, he maintained that separate disconnected sensations are the primary contents of the mental life,[1] and that only later, owing to the mental activity which compares the original data, and owing also to their coexistence and succession in the mind, is there built up, over and above these, *a still more subjective layer* of ideas, such, for example, as the idea of substance. Let us look at his own words. "The mind being, as I have declared, furnished with a great number of the simple ideas, conveyed in by the senses as they are found in exterior things, or by reflection on its own operations, takes notice, also, that a certain number of these simple ideas go constantly together; which, *being presumed* to belong to one thing, and words being suited to common apprehensions, and made use of for quick dispatch, are called, so united in one subject, by one name; which, by inadvertency, we are apt afterward to talk of and consider as one simple idea, which indeed is a complication of many ideas together: because, as I have said, *not imagining how these simple ideas can subsist by themselves, we accustom ourselves to suppose some substratum* wherein they do subsist, and from which

[1] *Ibid.* Bk. ii. ch. xii. 1; ch. xxv. 1 9.

they do result, which therefore we call substance. So that if anyone will examine himself concerning his notion of pure substance in general, he will find he has no idea of it at all, but only a *supposition* of he knows not what support of such qualities which are capable of producing simple ideas in us; which qualities are commonly called 'accidents.'" [1]

The naïveté of this explanation is conspicuous enough. It assumes the very thing that has to be explained. Locke ought, in accordance with the principles of empiricism, to have indicated the actual experiences which make up the content of the idea of substance. Instead of that he speaks of "inadvertency," of "accustoming ourselves to suppose some substratum," etc., forgetting that even careless thinking must take its start from some real fact.

Locke was followed by a greater thinker—Hume, who dealt with the same problems with more consistency, although in a manner similar to that of Locke. Like Locke, he supposed that the actual material of knowledge consists entirely of subjective mental states—sensations primarily—and that the connection between them is merely temporal. Thus, in the first instance, the sounds produced by a bell are no more connected with the visual image of the bell than are the sounds of the sexton's voice. But in time, if we repeatedly experience together the sounds of the bell and its visual image, a close association is established between these sensations, and the appearance of one of them will be accompanied by the expectation of the other; and if that other sensation does follow, it will be experienced as, under the circumstances, habitual. According to Hume, then, substance is simply the

[1] Locke's *Essay*, Bk. ii. ch. xxiii. 1, 2. The italics are mine.

habitual coexistence or grouping of certain impressions. He was well aware, however, that the difference between simple coexistence in time and substantive coexistence must be accounted for, and that it must be explained through the help of some actual experience. The experiences which, according to Hume, must be added to the consciousness of temporal coexistence, in order to transform it into the consciousness of substantive coexistence, are *a mode of feeling engendered by custom* and *the tendency of anticipation arising therefrom.*

In a similar way Hume explained the idea of causality. He supposed the causal connection to be simply a form of the succession of events in time; it is, namely, the succession which, owing to frequent repetition, has become so habitual that the appearance of one member of the succession leads us immediately to expect the other. According to Hume, then, the succession of two such events as a stone striking a glass and the appearance of cracks in the glass does not essentially differ from such a succession of events as my opening a book and a distant peal of thunder which happens to follow my action. The difference between the first and the second pair of events is simply that the first is accompanied by a mode of feeling and a tendency of anticipation, whilst in the second these feelings are absent.[1]

Empiricists, then, take the experience of causality, substance, etc., to be *still more subjective in character* than the experience of sensations. It is, so to speak, a second layer or a second storey of subjectivity constructed in our consciousness over the first storey—that of the sensations.

[1] Hume's *Inquiry*, vii. Part ii.

Let it for a moment be granted that *all the materials* from which we try to derive a knowledge of the external world are really *subjective*, that they belong to me in the same sense as the feelings of satisfaction or dissatisfaction, desires, efforts of attention, belong to me. Is it possible, in that case, to obtain empirically an *adequate* knowledge of the world, *i.e.* to form a picture of the external world, which, though made up of our mental states, will nevertheless contain actual properties, facts and processes of that world? If the doctrine of the subjectivity of the knowing subject's experiences is strictly adhered to, and the principles of empiricism are worked out consistently, the answer to that question becomes at once clear. *In such a case not only could the properties of the external world not be known, but its very existence could not be proved or indeed even suspected.* In other words, we should never in any way be able to transcend the boundaries of our own mental life. We should be forced to observe and to investigate solely our own states, and to acknowledge only ourselves as existing—*i.e.* to adopt the standpoint of solipsism. But of course such ruthless consistency could only be the result of prolonged philosophical labour. It was only gradually that the empiricists arrived at these sceptical conclusions as step by step they narrowed down the sphere of knowledge. And the final destructive results were only formulated by the last representative of the school—by Hume.

The thought that we can only know our own ideas had, however, already been reached by Locke. "Since the mind in all its thoughts and reasonings hath no immediate object before it but its own ideas, which it alone does and can contemplate, it is evident

that our knowledge is only conversant about them," [1] he writes; and in the opinion of Berkeley, the very term existence in reference to the things of the external world means simply "to be perceived" ("*esse* is *percipi*").[2] But Locke was very far from concluding that, therefore, nothing could be known as to the connection or correspondence between the processes of knowing taking place in the mind and the things of the external world. Although he denied the possibility of an adequate knowledge of the external world—of a knowledge, *i.e.*, which would reproduce reality as it is independent of the process of knowing, he admitted a certain *conformity* between knowledge and real things, a certain correspondence between the two. And in so far as a kind of parallelism subsists between knowledge and external things, he calls knowledge real.[3]

Locke's explanation of the correspondence is an explanation which naturally occurs to any one who reflects upon the problem for the first time. "The simple ideas, which . . . the mind, as has been shown, can by no means make to itself, must necessarily be the product of things operating on the mind, in a natural way, and producing therein those perceptions which by the Wisdom and Will of our Maker, they are ordained and adapted to. From whence it follows, that simple ideas are not fictions of our fancies, but the natural and regular productions of things without us, really operating upon us; and so carry with them all the conformity which is intended; or which our state requires; for they represent to us things,

[1] *Essay*, Bk. iv. ch. i. 1.
[2] Berkeley, *Principles*, § 3.
[3] Locke, *Essay*, Bk. iv. ch. iv. ff.

under those appearances which they are fitted to produce in us: whereby we are enabled to distinguish the sorts of particular substances, to discern the states they are in, and so to take them for our necessities, and apply them to our uses. Thus the idea of whiteness, or bitterness, as it is in the mind, exactly answering that power which is in any body to produce it there, has all the real conformity it can or ought to have, with things without us. And this conformity between our simple ideas and the existence of things is sufficient for real knowledge."[1]

But, surely, the question at once presents itself—How does Locke know that the idea of white or bitter as it is in the mind exactly corresponds to the power of things which produces this idea? If sensations are subjective, and the force which produces them does not enter into consciousness, it must be admitted, if we are to be true to fact, that we have no means of knowing whether these forces correspond to sensations or whether, indeed, such forces exist at all.

Berkeley did not fall into so crude an error. He would not admit any conformity between sensations, at any rate, and an external world. He says that perceptions of material things cannot be copies of real things, be it only because every percept is a complex of ideas and an idea can resemble nothing but an idea.[2]

Finally, Hume—the most consistent of the empiricists—no longer speaks either of a *correspondence* or of a *want of correspondence* between our ideas and the external world; if he does make any conjecture on the subject he is inclined to the second alternative.[3] He thinks the existence of an external world cannot

[1] Locke, *Essay*, Bk. iv. ch. iv. 4.
[2] Berkeley, *Principles*, § 8.
[3] Hume, *Inquiry*, xii.

be proved, and takes, therefore, but little interest in the relation of the processes of knowing to the supposed external world. He emphatically asserts that we know nothing except our impressions and ideas.

The meaning of these different views as to the relation between knowledge and the object known will become clearer in the light of the following considerations. Every theory of knowledge—from the most unphilosophical ideas to the most complicated systems—contains in some form or another the assertion that there subsists a certain definite relation between knowledge and the known object. The relation in question is taken to be a relation of correspondence (a kind of parallelism), of agreement or resemblance in various degrees, from complete identity (adequate knowledge) down to the vague conformity of which Locke speaks. Identity of knowledge and the object known is only possible if the known object in all the completeness of its reality is present in the process of knowing, if it is *immanent* in that process. If, on the other hand, knowledge and the known object are isolated from one another, knowledge can only correspond to the known object in the sense that in knowledge a more or less perfect *copy* is formed of the known object. In that case, knowledge is not immanent but *transcendent* in character, and refers to something which lies beyond itself. But if knowledge be a copy of an original which is external to the process of knowing, experience certainly does not provide us with any criterion for determining the degree of correspondence between the copy and the original. Indeed, in that case, there are no conclusive grounds for affirming such a correspondence at all. Consistently carried out,

empiricism was, therefore, compelled in the end to relinquish the discussion of the question as to the relation of knowledge to the external world, and Hume did relinquish that discussion. In defining knowledge, Hume and even his predecessors had in view not the relation of knowledge to objects external to the human mind, but rather the inner peculiarities of the cognitive process which characterise knowledge on its subjective and immanent side. "Knowledge," says Locke, "seems to me to be nothing but the perception of the connection of, and agreement or disagreement and repugnancy of, any of our ideas." [1]

But in spite of these sceptical conclusions, the empiricists had not altogether given up the thought that the known object may be so present in the act of knowing as to be represented therein as it is in itself. Adequate knowledge was impossible with respect to the outer world, but it was not impossible with respect to the inner world. All we can know consists of our own ideas, but in order to know our own ideas there is no need to copy them: they are given to us immediately, as they are in themselves, and are known by direct intuition. "It is the first act of the mind, when it has any sentiments or ideas at all, to perceive its ideas; and so far as it perceives them, to know each what it is, and thereby also to perceive their difference, and that one is not another. This is so absolutely necessary, that without it there could be no knowledge, no reasoning, no imagination, no distinct thoughts at all. By this the mind clearly and infallibly perceives each idea to agree with itself, and to be what it is; and all distinct ideas to disagree, *i.e.*, the one not to be the other: and this it does

[1] *Essay*, Bk. iv. ch. i. 2.

without pains, labour, or deduction; but at first view, by its natural power of perception and distinction." [1]

So far, then, as the content and the relations of our ideas, such as the resemblance or difference between them, are concerned, our knowledge of them is perfectly adequate. But if impressions are merely the subjective reactions of the mind to influences from without, then, however adequately each impression may be known, there can be no knowledge of their causal connection. And yet it is precisely this connection that is of supreme importance to science. When muriatic acid is added to an alkaline solution which is blue from the presence of litmus, and it is observed that the blue liquid turns to a rose colour and begins to react differently, all these changes, we are to suppose, are given as a series of various sensations which are perfectly knowable so far as the resemblance and difference between them are concerned. This, however, is not what is of interest in regard to the chemical reactions. We study the latter in order to discover the laws of the connection between the phenomena in question, the general rules of the necessary sequence of the events. Now, according to Hume, this aim can never be realised. Contemplate our impressions as carefully as we will, we can never arrive at any trustworthy general rules of their mode of sequence. And in studying chemical reactions we are really concerned with subjective impressions which do not produce one another, and are utterly disconnected except as regards the order of their appearance in time.[2] If any two events have often been experienced together,

[1] *Ibid.* Bk. iv. ch. i. 4. [2] Hume, *Inquiry*, Section vii. Part II.

from force of habit we begin to imagine that there exists a particularly close connection between them, and we lay down a general rule asserting the supposed necessity of a certain kind of sequence of impressions for the future. But obviously our habit carries with it no guarantee of the truth of the belief; the next day may convince us that all the laws of physics, chemistry, etc., are invalid. The complex of impressions designated by the terms oxygen and hydrogen may then be followed by the complex of impressions called " iron " and not by the complex called " water." What has occurred nine hundred and ninety-nine times in our laboratories may not occur for the thousandth time. If every general statement about facts be merely a belief founded on habit, the theoretical sciences based on facts, such as physics, chemistry, physiology, sociology, etc., are unreliable from the philosophical —though not, of course, from the practical—point of view. Only the concrete sciences such as history and geography, limited to a mere description of individual facts (impressions) as such, can be taken to be perfectly trustworthy from the point of view of philosophy.

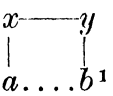
It is true that Hume took mathematics to be a valid science in the strict philosophical sense of the term. He supposed mathematics to consist of analytical propositions (such propositions, for example, as " the whole is greater than its part "), and to be concerned with the relations of equality, etc., that hold between ideas. Propositions of this kind " are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe." [1]

[1] Hume, *Inquiry*, Section iv. Part I.

The assumptions made by empiricism that the self and the not-self are isolated from one another and that experience is the result of the action of the external world upon the self inevitably lead to the conclusion not only that the objective connection between the events of the external world cannot be proved, but that even the existence of such a world cannot be proved. It is impossible, Hume contends, to say with certainty whether the perceptions of the senses be produced by external objects resembling them. "Here experience is and must be entirely silent. The mind has never anything present to it but the perceptions, and cannot possibly reach any experience of their connection with objects. The supposition of such a connection is, therefore, without any foundation in reasoning."[1] For, indeed, "by what argument can it be proved that the perceptions of the mind must be caused by external objects, entirely different from them though resembling them (if that be possible), and could not arise either from the energy of the mind itself or . . . from some other cause still more unknown to us?"[2] Hume's scepticism is the logical consequence of the fundamental principles of the empirical philosophy. It has already been pointed out that if we are to remain within the limits of what is actually experienced and are at the same time to admit that all the materials of knowledge are subjective, we cannot in the end escape from the pitfall of solipsism. But it may be thought that such a result is not inevitable, and that, under the leadership of Hume, empiricism laid down its arms too soon. It may be contended that although the processes and qualities of the

[1] *Ibid.* Section xii. Part I. [2] *Ibid.*

external world do not enter into our consciousness as they are in themselves, yet by investigating the order of sensations we can arrive at the corresponding *order* of the external stimuli, even though their nature should remain completely unknown to us. According to this view, which somewhat reminds one of Locke's theory of the " conformity " of knowledge to reality, the relation between the processes within and without the mind would take the following form. In the external world there exist events x and y, causally connected, so that the event x actually produces the event y. Besides this, the event x acting upon the knowing subject produces in the latter a sensation a. Thus, although x cannot enter the knowing subject's consciousness, the sensation which represents it serves as a signal which indicates the presence of x. In the same way, the event y produces a sensation b, and thus gives another signal. If the appearance of the signal sensation a is often followed by the signal sensation b, we have a right to surmise that a certain unknown x corresponding to the signal a is the cause of some unknown y corresponding to the signal b. Schematically the relation might be expressed thus :



From this scheme it is clear that there is no causal connection between the sensations a and b. The hypothetical causal connection between the corresponding events x and y is known in so indirect a manner that the only indication of its existence is the constant *temporal sequence* observable in the *signals*

[1] The straight line indicates causal connection and the dotted line merely temporal sequence.

which represent the actual events. Such knowledge is obviously unreliable, and cannot be called knowledge of the laws of phenomena. Moreover, thinkers who take this view of knowledge maintain that one and the same event may be brought about by different causes. The sensation *a* which may have been produced in me to-day by the cause *x* may to-morrow be produced in me by the cause *z*, that, after the manner of *x*, produces in the external world an event *y*. Thus, to-morrow I shall again experience the sequence of sensations *ab* and imagine that they correspond as before to the external events *x* and *y*. The investigation of the external world is rendered, under these circumstances, still more difficult by the fact that the self continually changes, both on its mental and, especially, on its bodily side—and the thinkers in question take sensation to be a result of the interaction between the *body* and the external world. So that the *x* and *y* which to-day produce in me the sensations *a* and *b* may to-morrow give rise to entirely different sensations. Hence, the conclusion is inevitable that, on such a basis, not one of the general laws of physics, chemistry, etc., can be relied upon. Any one of them may the next day be disproved by experience, and no one of them expresses more than a customary sequence of sensations, and consequently Hume was perfectly right.

The attempts of popular philosophising to retain the initial assumptions of Hume's philosophy whilst avoiding his scepticism finally break down when once it is realised that if the original data of knowledge are subjective, it is utterly impossible to prove the existence of an external world, much less any causal connection in it. Indeed, one may go further

and urge that *in that case not even the thought of the existence of an external world could ever have arisen in any human mind.* Be serious with the doctrines that all the data of knowledge are merely *my subjective states* in the same sense in which *my feeling of satisfaction* is a state of myself, that the activity of thought does not create its materials, but merely recombines them, and it will at once become evident that the thought of the existence of an external world could never have occurred to us at all, so that it is meaningless to talk about proving that thought to be true. This conclusion is incontrovertible, but unfortunately it does not ordinarily appear to be so. It follows with strict logical necessity if the assumption be granted that all the materials of knowledge are mental states of the individual. That assumption is made often enough, but its meaning is not clearly realised, and the conclusion that follows from it is not, therefore, felt to be necessary. Thus, an adherent of the old empirical school will be prone to argue that, in spite of what has been here said to the contrary, there may be grounds for surmising that an external world exists, or that, in other words, the existence of an external world may be established indirectly, by means of inference. Let us consider some of the arguments used in defence of this position and show that they one and all contain a *petitio principii.*

In order to avoid the scepticism of Hume, modern adherents of the old empirical theory appeal not unfrequently to the law of causality. They maintain that every event must have a cause, and that since we cannot discover the cause of certain events—for example, of sensations—within ourselves, we must seek for it outside of our own minds, *i.e.*, we are compelled

to postulate the existence of an external world. As against this contention it must be observed that the law of causality amounts *ex hypothesi* merely to the conviction that any given event necessarily follows upon a complex of certain other events. Accordingly, when I come across a new event I feel convinced that it must have a cause, and I begin to look for that cause, to make investigations for the purpose of finding it. But the law of causality does not tell me *where* I must look for it, nor does it tell me that my search must needs be successful. If the material of knowledge consisted entirely of my subjective states, I should naturally be compelled to look among those states for the cause of the new event. My search might, however, be entirely fruitless, and this is all the more probable since my mental life is extremely complex, and many elements of it remain for a long time unnoticed by me. I might, therefore, be obliged to postpone the inquiry, or, in view of the present state of my knowledge, to give it up completely. And if I had no data whatever for forming the idea of an external world, I could not possibly arrive at the conclusion that the cause I am in search of is *external* to me.[1]

Again, it is sometimes argued that the existence of an external world may be inferred in the following manner. All that I can be aware of consists of my own mental states, among which is the idea of my body and the idea of other bodies that resemble mine. My experience as a whole has taught me that certain tones of my voice, certain expressions of my face, etc., are accompanied by certain inner states

[1] The impossibility of deducing the knowledge of an external world from the law of causality is discussed in Rehmke's essay, *Unsere Gewissheit von der Aussenwelt*, 1894.

of myself, such as joy, grief, etc. When I find similar changes in my ideas of other bodies, and observe that they are not accompanied by my joy, my grief, etc., I suppose that the changes correspond with *somebody else's* joy, grief, etc., and in this way am led to recognise the existence of minds other than my own. In other words, by means of *analogy* I infer the existence of the world of the not-self, as at any rate a world peopled by other human minds. And when once this idea of the not-self is formed, I may go further and admit also the presence of elements other than human selves in that world.

This is a poor argument, but it is worth while to consider it somewhat in detail, for it contains the thought, frequently met with in various connections, that the existence of other minds than our own can be inferred by analogy. It must not be forgotten that, according to the empiricists, inference by analogy—as indeed all inference—does not create new materials of knowledge, but only re-combines the data in a new way, *i.e.*, transfers a fact from one context to another, analogous to the first. Thus, we observe the properties of our planet, the earth—its magnitude (A_1), its atmosphere (B_1), its movement round the sun and round its own axis, its positions with respect to the sun, giving rise to day and night, summer and winter, which are not accompanied by excessive fluctuations of temperature (C_1 and D_1), and so on; and in connection with all these characteristics we find upon it organic life (F_1). We observe other planets and discover that Mars does not differ much from the earth in magnitude (A_2), that it also has an atmosphere (B_2), that its movements round the sun and round its own axis must also bring about day

and night, summer and winter, that its temperature will not be subject to excessive fluctuations (C_2, D_2), and so on; and although, when observing Mars through the telescope, we do not detect any organic life there, we think its existence likely on the ground of the resemblance between Mars and the earth—*i.e.*, we argue from analogy. The notion thus inferred of organic life on Mars is the notion of organic life in general, and not of life exactly similar to that on the earth. In other words, the conclusion of the inference is not any richer in content than the object of our previous experience, and is, indeed, essentially poorer than the concrete ideas of that experience. Schematically the inference might be expressed as follows:

$A_1B_1C_1D_1 \ldots F_1$
$A_2B_2C_2D_2 \ldots F$ (the general idea of organic life).

But the argument from analogy through which we are supposed to gain *for the first time* the knowledge of an external world consisting of other selves has quite a different character. The premisses here are my *subjective* ideas of the states of my body ($A_1B_1C_1D_1$) in connection with the feeling, say, of grief (F_1) and my *subjective* ideas of an analogous body ($A_2B_2C_2D_2$); and the conclusion is that since I experience no grief at the present moment, I infer by analogy that the last-mentioned ideas of bodily states must be accompanied by somebody else's grief—*i.e.*, I arrive at the idea of the existence of other sentient and thinking beings. Schematically this inference may be expressed as follows:

$A_1B_1C_1D_1 \ldots F_1$
$A_2B_2C_2D_2 \ldots F$ + the consciousness of something foreign to me, the consciousness of F as external.

The conclusion contains, on the one hand, a repetition of the feeling F_1, perhaps poorer in content than the original feeling (as was the case with the idea of organic life), and, on the other hand, an entirely new real experience—the awareness of F as external, as foreign to me, in short, the *awareness of the existence of a world of the not-self.* The premisses contained no material for this latter ingredient, and it has, therefore, been introduced into the conclusion illegitimately. Now, this means that we have simply assumed what was in question, for the object of the whole argument was to account for this very factor. Our premisses have suddenly developed, so to speak, a creative power; the conclusion contains an element so new that in the whole range of our *Weltanschauung* no contents can be discovered more heterogeneous than those of the premisses and of the conclusion. We can conceive of no greater antithesis than that between the consciousness of the subjective and the consciousness of the transsubjective, of the self and of the not-self. More readily could the existence of musical sounds be inferred by analogy from the sensation of colour than the existence of an external world be inferred by analogy from subjective data.

My criticism of this supposed inference by analogy may again seem unconvincing. I contend that from the entirely subjective ideas of bodies and the subjective experience of grief as premisses there cannot possibly be deduced an idea of grief as of something external, as belonging to the world of the not-self. The force of my contention will, however, only become apparent if the attempt is seriously made to realise, be it only in imagination, that the ideas of the bodies $A_1B_1C_1D_1$ and $A_2B_2C_2D_2$, which are said to consist of

my sensations, should, in the argument we are considering, be taken to be *subjective exactly in the same sense in which, for instance, my feeling of satisfaction is subjective.* In truth, however, the bodies $A_1B_1C_1D_1$ and $A_2B_2C_2D_2$ are, by those who use the argument, from the first imagined as external, as elements of the outer world, and no absurdity is, therefore, felt when the idea of grief as of something also external is deduced from them. Had all elements of externality really been banished from the premisses it would at once have become apparent that not only could not the existence of an external world in that case ever be proved, but that even the fact of any conjecture as to its existence appearing in human consciousness at all would be inexplicable.

The empirical theory ends, then, in scepticism. Assuming that the self and the not-self are isolated from one another, the empiricists had undertaken to prove that in the self there is contained a copy of the not-self. In other words, they had persuaded themselves from the beginning that their theory of knowledge must be a theory of *transcendent* knowledge, *i.e.* of knowledge which as a real process takes place entirely in the knowing subject, but which refers to processes that are external to the knowing subject. And since no test of the truth of transcendent knowledge can be found in experience, the attempt was bound to end in scepticism. The sceptical result will not, however, save the theory from self-contradiction, for even then it suffers from the inconsistencies involved in its initial assumptions. The result may be briefly expressed as follows : all the materials of knowledge are due to the action upon the knowing subject of something *from without,* and, consequently,

knowledge has no objective validity, but is entirely *immanent* and subjective in character. The contradiction is at once apparent from the fact that all the materials of knowledge are regarded as having been obtained from *without*, and as being *on that account subjective*.[1]

The sceptical results of empiricism, as worked out by Hume, themselves suggest that there must be something radically fallacious at the foundation of this way of thinking. And the surmise seems the more probable when we reflect that the whole theory is based upon assumptions which the empiricists had never examined critically, although they are of vital importance to a theory of knowledge, seeing that they throw threatening obstacles in its path. In the first place, the empiricists were convinced that the self and the not-self are so separated from one another that *no events of the world of the not-self can form part of the knowledge which belongs to the self*. Following upon this, they were compelled, in the second place, necessarily to hold that all the knowing subject's states of consciousness are his own personal subjective mental states. In the third place, they took experience, which they regarded as the only source of knowledge, to be a result of the *causal action of the external world upon the self*, —a causal action which produced in the latter subjective states. In the fourth place, they were obliged to assume that if knowledge did reproduce reality it could only be as containing *copies* of the real events, and not as containing the real events themselves.

But the strongest argument against the empirical doctrine is perhaps derived from the fact that Hume

[1] Cf. further treatment in Chapter III.

did not carry his attitude of doubt far enough, and that a consistent development of his theory would lead to a still more radical, though utterly self-destructive, scepticism. In Hume's opinion, the only science that can lay down general laws is the science of mathematics, because mathematics consists exclusively of analytic propositions, and because its propositions concern our thoughts alone and not things of the external world. Concerning the facts of the external world, not a single general law can be established, so that the concrete sciences must consist simply of descriptions of separate facts. Indeed, as we have seen, the very existence of the external world cannot, according to Hume, be proved, for all we know is made up of our own impressions and ideas.

In truth, however, Hume had no right even to assert so much. Kant has shown that not only the theorems but that also many of the axioms of mathematics, such, for example, as that a "straight line is the shortest distance between two points," are synthetic in character. In that case mathematics too must, in accordance with Hume's doctrine, be merely a system of habitual beliefs and not a science. His view of the connection between mental states does not in any way warrant him in affirming that the relation between the idea of a straight line between two points and the idea of this line being the shortest as compared with other lines between those points must be a constant relation. Nor could Hume consistently regard descriptions in the form in which they are generally made as scientific in the strict sense of the term. Every description contains numerous elements that have been deduced from some general proposition and have not been directly perceived.

But if all general statements are mere beliefs, the inferred elements of a description must be beliefs also. Having witnessed a parade, I assert that I have seen several thousand soldiers marching past. Yet what I really perceived were simply several thousand spots of colour, which, in a number of other cases, have been connected with tactile sensations of a human skin, auditory sensations of a human voice, etc. If by the word " man " in the description of the parade be meant the whole complex of these sensations and not merely the visual spots, the limits of immediate perception have already been transcended, and a number of inferences have been drawn from general statements or beliefs. Even those descriptions, then, which Hume allows to be admissible, are not of a nature to make the geography or the history, founded upon them, strictly reliable.

Thus we arrive at a self-destructive scepticism, according to which everything beyond the range of momentary apprehension must be regarded as mere belief. Such a scepticism must obviously throw doubt on its own truth, because, as a theory of knowledge, it purports to consist of general statements, and in this sense must destroy itself. Moreover, in following out its line of thought, empiricism inevitably comes into conflict with the facts of experience—and to do so is less excusable on the part of empiricism than on the part of other theories. If knowledge did consist entirely of subjective material, the existence of an external world could be neither proved nor even suspected by any human mind. But this is in direct contradiction with the fact that everyone is firmly convinced of the existence of the external world, and that the assurance is based upon an

immediate awareness of certain contents of consciousness as being external to the mind in contradistinction to other contents coloured by a feeling of subjectivity. Further, if all relations between the contents of consciousness were merely temporal relations there would be no material for forming the conception of causality in the sense of agency, of active producing. Yet in truth, for all unsophisticated minds, causality means precisely such active producing, and not merely a habitual sequence in time. Finally, the conception of substance, which is, according to Hume, merely the conception of the habitual co-existence of actual and possible impressions, contains in reality an important element, an actual content of consciousness, altogether ignored by him,—namely, the living experience of a *single centre* to which all the co-existing habitual impressions refer and from which they all proceed.

Both the scepticism and the opposition to fact are the necessary consequences of the assumptions that lie at the root of the empirical theory, and, in particular, of the assumption that the self is isolated from the not-self,—an assumption which prejudices from the outset the question as to the possibility of knowledge. Sooner or later philosophy was destined to seek a method of dealing with the problem of knowledge which did not start with the assumptions of empiricism, but which would make those assumptions matters for investigation. Before proceeding, however, to the attempt to exhibit such a method, we must consider the assumptions made by rationalism—the second important line of thought in pre-Kantian philosophy.

CHAPTER II

THE DOGMATIC ASSUMPTIONS OF PRE-KANTIAN RATIONALISM

DESCARTES begins the exposition of his philosophy by showing that every experience, in so far as it refers to the external world, may turn out to be deceptive. A stick submerged in water appears bent, although in truth it is straight; in a dream I see myself walking in a wood, although in reality I am lying in bed; a wounded soldier feels pain in the toes of his foot although the whole leg has been amputated. But these experiences are absolutely trustworthy when regarded as states of myself. The stick may not be bent, I may not be walking in a wood, the leg may be amputated, but there is no doubt whatever that I *perceive* a bent stick, that I *dream* of walking in a wood, that I *feel* pain. Finding that every experience undoubtedly involves states of the knowing subject, Descartes concluded that it consists *entirely* of these states. In referring an experience to our own minds we are merely stating a fact and cannot be mistaken, but in referring it to the external world we take for granted the existence of events external to us and yet similar to those which have taken place within our mind. Such a supposition is a conjecture, an inference, and

may, therefore, be false.[1] In apprehending colours, sounds, etc., we are dealing with states of our own minds which include these qualities, and not with properties of the external world.

Descartes starts, that is to say, with the same assumptions as those with which the empiricists started. He assumes that the self and the not-self are isolated from one another, and that all the contents of the knowing subject's consciousness are merely that subject's own individual mental states. Although, then, Descartes is striving after an adequate knowledge of the outer world, he is forced to take for granted that any knowledge of it must be a *copy* made by the knowing subject of the external reality. In other words, he is compelled to regard knowledge as transcendent.

Spinoza and Leibniz conceive of the relation between the self and the not-self in exactly the same way. According to Spinoza, the human mind is the "idea" (the ideal equivalent) of the human body, and all the states of the mind are no other than ideal equivalents of certain states of the body. The assumptions involved in the pre-Kantian theories of knowledge are found, however, in their clearest form in the philosophy of Leibniz. "The Monads have no windows, through which anything could come in or go out," declares Leibniz. "Accidents cannot separate themselves from substances nor go about outside of them as the 'sensible species' of the Scholastics used to do. Thus neither substance nor accident can come into a Monad from outside." [2] Accordingly, all the cognitive processes of the Monad are its own individual mental states, its accidents. If, nevertheless, a

[1] Descartes, *Principia*, i. 68, 70; *Meditations*, ii.

[2] Leibniz, *Monadology* (Professor Latta's translation), § 7.

Monad can have adequate knowledge of the external world, it can only be because it *copies* a world which is not given to it as it is in itself. And Leibniz in fact says that perception is "an inner state of the Monad representing outer things."[1] He maintains that every soul continually mirrors the universe, and contains in its own being an order corresponding to the order of the universe, so that the universe is multiplied, so to speak, as many times as there are souls.[2]

Leibniz's doctrine is particularly interesting because it reveals the grounds which in the last resort predispose both philosophers and ordinary people to conceive of knowledge in the way we have indicated. These grounds are to be found in the idea of substance, or, more generally, in the idea of a thing and its qualities. This is not the place to analyse and fix the meaning of that idea ; I will only refer to such aspects of it as are unquestionably present in all our thinking. There is no doubt that all human thought is inclined to regard events, processes, etc., not as independent entities, but as properties of certain bearers, as inhering in substances. Thus, the whole world of phenomena falls for us into separate groups of events belonging to different substances. Even phenomenalists conceive of the world in this way. They cannot deny that all phenomena fall into distinct groups, into definite stable unities. They may dispute the existence of a substance "oxygen," but they cannot dispute the existence of a specific unity of actual and possible facts designated by the common name "oxygen," which are different from the facts grouped together under the

[1] *Principles of Nature and of Grace Founded upon Reason*, § 4.
[2] *Reflections Concerning the Doctrine of One Universal Spirit.*

name "hydrogen," etc., and not deducible from them. Now, this circumstance leads us to conceive in a certain definite way of the interaction between substantive groups of phenomena. If all processes are the characteristics or the attributes of different substances, and cannot exist apart from them, it follows that they cannot *pass* from one substantive group to another. If a teacher by ill-treating his pupil arouses brutal instincts in him, that does not mean that a portion of the teacher's cruelty has split away from his soul and been transferred to the soul of the pupil. The pupil's cruelty is *his own* characteristic, which has arisen, no doubt, under the teacher's influence, out of the depths of his own nature. According to Leibniz, even processes of movement are not transferred from one substance to another, but arise independently in each substance. "In the impact of bodies," he writes, "each suffers only through its own elasticity, caused by the motion which is already in it."[1] Leibniz goes, in fact, further still; he denies that change in one substance can be due to the influence of any other substance. All influence is a manifestation of force, and force is an inner property of substance; but since in his view no property can be transferred from one substance to another, no influence of one substance upon another is in any sense possible. Hence, there is no real interaction between substances: they are completely isolated.

Even if we refuse to accompany Leibniz the whole way and stop at the vague popular conception of a relation between substances, the conception will pro-

[1] *New System of the Nature of Substances*, § 18. Latta's translation, p. 317. See also *De ipsa natura*, § 14.

foundly affect our view of knowledge. It inevitably leads to the thought that adequate knowledge has a *transcendent* character, or else, indeed, that adequate knowledge is altogether impossible. For, suppose that the knowing subject is a substance (whether a material or a spiritual substance is here not essential), and that not only his feelings, desires, etc., but even his cognitions are his properties, his attributes, inseparable from him; suppose, too, that he is confronted with a world of other substances possessing attributes also inseparable from them, and that no attribute of one substance can, in any sense, enter into the life of other substances. So soon as the position is clearly grasped, it becomes at once apparent that a theory of knowledge starting with these assumptions must inevitably be involved in insuperable perplexities and contradictions. Take, for instance, the problem of the adequacy of that knowledge which assumes supreme importance in such a theory—the question, namely, whether knowledge of the external world is composed of processes which resemble the processes of the external world. One of three answers is possible,—yes, no, I cannot tell. The first answer leads to difficulties that can only be overcome with the help of highly eccentric suppositions, which cannot be empirically verified, although the fantastic nature of the suppositions makes such verification all the more necessary. The other two answers are self-contradictory.

Suppose that adequate transcendent knowledge is possible. An extremely difficult question then arises: How can *my* cognitive state, which is a part of *me*, be a repetition, an exact copy, of what belongs to other and different substances, of what can not pass from

them to me? If with the help of some far-fetched hypothesis this question is answered, it will forthwith be followed by another, which, on account of its contradictory character, will evince itself as absolutely unanswerable. If my knowledge be my copy of a reality other than myself, how am I to ascertain that the copy resembles the original? To do that I should have to take (*i.e.* in this case, actually experience) both the copy and the original, and, by means of direct comparison, find out that they are alike. But *ex hypothesi* this is precisely what I can never do. The same thing must be said about the contention that the knowledge in question is inadequate: that contention, again, cannot be empirically verified. And, besides, it involves a fatal contradiction. The assertion that there can be no adequate knowledge of the external world, because the properties of external substances cannot enter into the knowing subject, is itself based upon a knowledge which claims to be adequate—the knowledge, namely, that an external world actually exists and is made up of substances whose properties are inseparable from them, etc. And if the cognitive process can be adequate in this respect, why should it not also be adequate in other respects?

Finally, it may be maintained that since it is impossible to compare the states of the knowing substance with the states of the external world, the question of the adequacy of our knowledge cannot be decided one way or the other. But, once more, this answer is not free from self-contradiction. If all the states entering into the cognitive process are merely accidents or properties of the knowing subject, there can be no question of an external world at all, nor of the

adequacy or inadequacy of our knowledge of it. The very circumstance that we are asking the question shows either that the assumptions which lead the sceptic to deny the possibility of knowledge are false, or that his talk about the inadequate character of our knowledge is devoid of intelligible meaning.

The popular view of substance, leading, as it does, to the idea that knowledge is a property of the knowing subject, creates similar difficulties in reference to other epistemological problems. These difficulties are all due to the fact that on this view *knowledge of the external world* and *the external world itself do not coincide;* there is either no relation between them at all or the relation is purely external, and in the latter case the theory of knowledge cannot make its ends meet. But our knowledge of the external world is a fact, and, if the fact evinces itself as inexplicable or as placed in jeopardy, the epistemologist must return upon his initial assumptions and examine them in the light afforded by the analysis of the fact itself.

It will be said, perhaps, that however much we may probe our epistemological presuppositions, the idea of substance is destined to remain in our thinking, and that, therefore, whether we start with or without the assumptions referred to, the idea of substance will, sooner or later, come upon the scene and with it the theories which render the explanation of knowledge difficult or, in fact, self-contradictory. Now, it is no doubt true that there is something in experience which forces us to adhere to the idea of substance. All the same, the actual contents of this idea are far from having been as yet laid bare, as can be seen from the fact that, under the influence of new and

deeper analyses of reality, the conception is gradually becoming transformed by philosophical reflection. If an idea of substance founded upon consideration of processes that are not cognitive in character is dogmatically assumed as the basis of a theory of knowledge it may well prove to be a stumbling-block. If, however, we follow the course prescribed by Kant, if, namely, in accordance with the requirements of logical procedure, we commence with the analysis of the fact of cognition and make, at the beginning of our inquiry, no assumptions of the kind indicated, then, in the course of that inquiry, we may win a new conception of substance which will no longer present difficulties for the theory of knowledge.

To return, however, to the rationalists. The presuppositions with which they had started brought them to an *impasse* before the problems of epistemology. The rationalists were convinced that there is such a thing as adequate transcendent knowledge. But how is such knowledge possible ? If knowledge of the external world is wholly an attribute of the knowing subject conceived as a substance, there can be only two ways of accounting for its origin. Either it arises in the knowing subject under the influence of the substances of the external world that act upon him, or it develops out of the depths of the knowing subject's mental life owing to the mental life's own powers and activity. The independent cognitive activity of this substance may be said to be thought, *i.e.* the manifestation of reason. Thus, in the first case, knowledge is a result of *experience*, and in the second a result of the activity of *reason*. In the first case it is a copy produced, so to speak, by the impact of the external world ; in the second it is

a copy constructed by the knowing substance out of the contents of its own mind.

In their view that experience is caused by the action of the external world upon the self,[1] the rationalists again proceeded upon an assumption similar to that of the empiricists. Yet, it does not follow that they were, therefore, compelled to assign to experience the same value as did the latter. One of the presuppositions made by the rationalists,—namely, their view of the relation of cause and effect,—enabled them to work out a totally different conception of experience. According to the empiricists, cause and effect could conceivably be absolutely unlike, and belong to different orders of reality, so that in knowing our sensations we should not by any means know the nature of the external forces which produce them. The rationalists, on the contrary, maintained that there is an exact correspondence between cause and effect. The relation between them is that of ground and consequent, so that there can be nothing in the effect which was not already contained in the cause. The effect is not a different kind of reality: in it the same elements as those in the cause are present. Accordingly, in holding that experience is caused by the action of the not-self upon the self, the rationalists were in no way committed to the doctrine that experience is entirely subjective in character and can give us no adequate knowledge of the external world. They might have conceded that the external world is, to some extent at least, immanent in experience, and that it is known *immediately*, just as our own mental states are.

But it would be futile to look to the rationalists for

[1] See Descartes, *Meditations*, vi.

the conception of an immediate apprehension of the external world. When a reflective theory of knowledge is preceded by and based upon an unconsciously assumed opposition of the world of the self to the world of the not-self, the tendency always is to regard experience as subjective (after the manner of Hume). Besides, the rationalists no less than the empiricists meant by experience not so much *apprehension as a whole* as *sensation*, *i.e.* the sensuous elements of apprehension, the nature of which easily suggested the thought that the data of experience do not adequately represent the external world. Finally, the metaphysical theories of the rationalists, which determined their view of knowledge, also led them to doubt the trustworthiness of sensuous experience. Under the influence, then, of these various motives, the rationalists arrived at the conclusion that experience consists of the states of the knowing subject and can give no adequate knowledge of an external world. Since their metaphysical views differed, each of them tried to establish this position in a different way. Descartes based it chiefly upon empirical considerations and arguments from physics and physiology, much after the manner of Locke. He refers to optical illusions, dreams, the experience of people who have had their arms or legs amputated, etc.; especially characteristic, in this connection, are his reflections upon the wrong localisation of sensations.[1] He thus seems to contradict the rationalistic doctrine of the relation of cause and effect, and the contradiction remained unresolved, for his doctrine of sensuous knowledge was never thoroughly elaborated.

Spinoza did not regard the human mind as a

[1] *Meditations*, vi.

substance, and his theory of knowledge is accordingly free from one of the most prevalent assumptions which lead to a denial of the immediacy of sensuous knowledge. And, indeed, he saw that sensuous experience must contain *objective* elements. That necessarily follows from the axiom that all the states produced in a body by the influence of some other body follow from the nature of the body affected and of the body affecting it.[1] Consequently, when the human body is acted upon by other bodies, there arises in it a change which contains some elements of the external world and some elements of the human body. But Spinoza did not, on that account, draw the conclusion that sensuous experience can give us adequate knowledge of the external world. Such a product of the interaction of bodies contains objective and subjective elements in an obscure and fragmentary form; the human mind is aware of it as a vague idea which cannot be made clear, as 'a conclusion without the premisses.' Knowledge arising in that way can, according to Spinoza, give us no adequate idea either of the external world or even of the mind of the knowing subject.[2] Thus, Spinoza assigned even less value than Descartes had done to sense-experience.

Leibniz also identified experience with sensuous knowledge, and believed it to be conditioned by the interaction between our body and other bodies and to contain objective elements (it will be remembered that Leibniz denied real interaction between substances, but admitted ideal interaction between them in a certain special sense of the word). "There is a

[1] *Ethics*, ii. Prop. xiii. Axiom i. after Lemma iii.

[2] Spinoza, *Ethics*, *Props.* xiv., xvi., xxv., xxvi., xxviii., xxix.

relation," Leibniz urges, " between these perceptions of colour, heat, and other sensible qualities, and the motions in bodies which correspond to them; while the Cartesians and our author (Locke), in spite of all his penetration, regard the perceptions we have of these qualities as arbitrary, that is to say, as if God had given them to the soul according to His good pleasure, without regard to any essential relation between the perceptions and their objects; an opinion which surprises me, and which seems to me not very worthy of the wisdom of the Author of things who does nothing without harmony and without reason." [1]

Leibniz, however, agreed with Spinoza that sense-experience furnishes only obscure ideas, and that these cannot provide us with an adequate knowledge of the external world. But he assigned the reason of this obscurity to the complex nature of the external world and not to the mingling of subjective and objective elements. " The perceptions of our senses," he insists, " even when clear must necessarily contain some confused feeling; because, since all the bodies in the universe are, so to speak, in unison, our body receives impressions from all other bodies, and, although our senses are in relation with everything, yet it is not possible for our mind to attend to every particular." [2] The sensations of colour and of smell may be taken as instances of such obscure knowledge. " In the perception of colour and smell we have nothing but the perception of figures and of movements, which, however, are so numerous and so

[1] Leibniz, *New Essay on Human Understanding*, Introduction. Latta's trans. p. 375.

[2] *Discours de metaphysique*, § xxxiii.

small that our mind in its present state is incapable of contemplating each of them clearly, and we are, therefore, not aware that our perception consists entirely of the perceptions of very small figures and motions. Thus, in perceiving a green colour composed of blue and yellow particles, we perceive in reality nothing but blue and yellow indistinguishably mixed, but we are not aware of this, and imagine ourselves to be concerned with something altogether new." [1]

Sensuous knowledge, then, is composed of objective elements, but, owing to the complexity of the universe, every sense-perception contains an infinite number of elements. Being finite, we cannot grasp this infinity, cannot attend to all its component parts at once, and we are, therefore, always aware of it as a confused, vaguely apprehended whole. The vagueness is due to the *subjective conditions* of perception, it depends, namely, upon the *stage of the development of the Monad*, upon the degree of its attention, and, in this sense, it may be said that the sensuous experience of each Monad consists of its own subjective states, through which no knowledge of the external world can be obtained.

In consequence of these sceptical views as to experience, the rationalists came inevitably to the conclusion that there are many ideas which could not possibly have been derived from experience. But the list of the ideas in question reflects clearly the indefiniteness and ambiguity attaching to their theories of experience. On the one hand, the list includes all ideas that are absolutely definite, mathematically clear, and distinct: such are the ideas

[1] *Meditationes de Cognitione, Veritate et Ideis*, i.

of identity, unity, extension, number, motion, figure, etc. On the other hand, it includes ideas which are by no means mathematically clear, but the origin of which cannot be accounted for if experience be regarded as a process of interaction between the substance of the self and that of the not-self, and if at the same time it be assumed, in accordance with the empirical and popular philosophy, that cause and effect differ in kind. Such are all ideas of relation, and also ideas referring to the existence of the external world—the ideas of God, of being, of infinity, of substance, accident, cause, energy, and even the ideas of coexistence and succession.

We have seen how the empiricists also refused to allow that the relations involved in the conceptions of substance and of causality can be obtained through the senses, and how they felt it incumbent upon them to explain the origin of these ideas. They supposed that the senses provide us with subjective sensations which coexist with and succeed one another, and that on the ground of such succession and coexistence there is built up, so to speak, a second layer of subjective states—ideas of causality, substance, etc. The rationalists could not accept this explanation. It seemed to them that not even the relations of succession and coexistence could be given by the senses, and that a reference to order in time did not, therefore, prove the empirical origin of the ideas of cause and of substance. Moreover, the rationalists recognised that the meaning of the ideas in question involved more than merely a habitual connection in time, and that the empirical explanation of them necessarily led to scepticism. Accordingly, the only way in which the rationalists could, whilst remaining true to

their initial assumptions, vindicate the possibility of adequate knowledge and explain the origin of non-sensuous ideas was to suppose that all such ideas arose from the inner depths of the mind—that they were innate and supplied us with adequate knowledge.

In the doctrine of innate ideas two different tendencies may be noted, although they are not differentiated with anything like clearness. A number of non-sensuous ideas are said to arise, so to speak, out of the inner experience of the mind: the mind is itself a substance, a being, a unity, etc., and so in knowing itself it can obtain these ideas without the help of outer experience. "Can it be denied that there is much that is innate in our mind," asks Leibniz, "seeing that we are, so to speak, innate to ourselves, and that there are in us being, unity, substance, duration, change, activity, perception, pleasure, and a thousand other objects of our intellectual ideas?"[1]

Some non-sensuous ideas, however, express only the nature of the external world and not the nature of the mind. It will be remembered that the rationalists regarded these also as innate,[2] although the truth or even the possibility of such ideas could not be explained by recourse to the self-knowledge of the soul. But since it was assumed that the first kind of ideas had been explained successfully, the second, being introduced along with them, did not attract special attention, and were equally regarded

[1] *New Essay on Human Understanding*, Preface.

[2] "Ces idées qu'on dit venir de plus d'un sens, comme celle de l'espace, figure, mouvement, nous sont plutôt du sens commun, c'est-à-dire de l'esprit même, car ce sont des idées de l'entendement pur, mais qui ont du rapport à l'extérieur et que les sens font apercevoir; aussi sont elles capables de définitions et de démonstrations" (Leibniz, *Nouv. Ess.* Bk. ii. ch. v.).

as the result of the "innate tendencies, dispositions, habits, or natural potencies" which are called into activity by means of outer experience.

To explain the process of knowing it is necessary to account for the application as well as for the origin of our various ideas. Granted that the rationalists had succeeded in proving the ideas of substance, cause, number, etc., to be derived from reason, it would still remain to be shown how those ideas come to be applied in different cases. But the hypothesis of innate ideas throws no light on the subject, and can only be of help if it be understood in so wide a sense as to become almost fantastical.

The ideas of substance, etc., find concrete application at every step in our experience. Thus, we say "the leaves have become yellow" (substance and attribute), "the glass has been broken by a stone" (causal connection). It might seem as if the rationalists had successfully accounted for such judgments the sensuous features of them are derived from experience and the non-sensuous from the mind itself But let us look at the matter more closely. How does the conjunction of these heterogeneous elements come about? Why do I regard yellowness as an attribute of the leaf and not of the trunk? If sensations had *marks* showing which of them belonged to one and the same group, the question would be simple; but the rationalists were not entitled to assume this. The hypothesis of innate ideas was constructed by them just because they found the empirical data, *i.e.* sensations, to be utterly disconnected, and to have no marks showing which of them belonged together. They were compelled therefore, to do one of two things. They had either t

deny all value to experience and attempt to construct knowledge entirely out of non-sensuous elements, maintaining at the same time that, although the non-sensuous elements form the framework of sensuous knowledge, yet the connection between the two is purely accidental. Or, recognising the high improbability of a theory of that kind, they had to suppose that not only the abstract ideas of substance, causality, etc., were innate to the knowing mind, but also that the separate concrete acts of their application were also innate; in other words, they had to assume that *the whole of knowledge is innate.* But this is only possible if the whole universe is innate to the knowing subject and contained in his mind as a copy, so that as it develops outside of him it likewise develops *immanently* within him. Such a view of knowledge is the necessary consequence of the hypothesis of innate ideas, and was in fact worked out by the last representative of the pre-Kantian rationalism, Leibniz.[1] Leibniz maintained that the world consists of Monads, and that each Monad is a microcosm, *i.e.* an entire universe in miniature.

The theory of innate ideas seeks to account not only for the possibility of adequate transcendent knowledge,

[1] "Je crois même que toutes les pensées et actions de notre âme viennent de son propre fond, sans pouvoir lui être données par les sens, comme vous aller voir dans la suite. Mais à present je mettrai cette recherche à part, et m'accommodant aux expressions reçues puisqu'en effet elles sont bonnes et soutenables et qu'on peut dire dans un certain sens, que les sens externes sont causes en partie de nos pensées, j'examinerai comment on doit dire à mon avis, encore dans le système commun (parlant de l'action des corps sur l'âme, comme *les Copernicians* parlent avec les autres hommes du mouvement de soleil, et avec fondement) qu'il y a des idées et des principes, qui ne vous viennent point des sens, et que nous trouvons en nous sans les former, quoique les sens nous donnent occasion de nous en apercevoir" (Leibniz, *Nouv. Ess.* Bk. i. ch. i.).

but attempts to answer other questions also—for instance, that of the possibility of universal and necessary knowledge. Both rationalists and empiricists supposed that such knowledge was to be found in analytic judgments only. But the empiricists were unable to explain how these judgments could be made with regard to the facts of the external world. In their view, the materials of our knowledge of the external world were disconnected sensations, *S*, *P*, etc., and no analysis could discover any connection between them. The rationalists, on the other hand, could contemplate the processes of knowing from a different standpoint. If complex ideas, such as the ideas of substance, of space, number, etc., are included in the very structure of the mind, and if the elements composing them form an indissoluble unity, the judgments into which these ideas enter must be recognised as necessary: the predicate expresses what is felt to be a necessary component part of the subject (of the innate idea).

Finally, the strongest argument against empiricism —the impossibility of even suspecting the existence of an external world if all the materials of knowledge are subjective—is deprived of its sting as against rationalism. The rationalists can always fall back upon an innate idea of the existence of an external world. It is true, the objection may be raised that in empirical knowledge we are concerned not with an abstract idea of the existence of an external world, but with objects, with things which stand over against us as something necessary and foreign to our mind. Yet, according to the rationalists, this would appear to be impossible. For, in their view, knowledge is entirely made up of the mental states of the knowing

subject, of the subject's own attributes; experience furnishes us with subjective sensations, and the innate ideas form a system of the necessary thoughts of the individual. However such materials may be combined, they could never give rise to concrete objects that would stand over against us in experience as the not-self. Descartes' philosophy was, indeed, able to offer no solution of this problem—a problem of the utmost difficulty—but it too can be solved, at any rate in a purely formal way, by rationalists, if they give the widest possible meaning to the theory of innate ideas, and maintain that all knowledge is innate. It would then have to be supposed that in all cases of interrelation between the self and the not-self the knowing subject evolves out of the depths of his own mind not merely thoughts but *objectified thoughts*, *i.e.* states which copy exactly the whole of external reality. And this is precisely what Leibniz meant by his doctrine of the Monads as microcosms—a doctrine which duplicates the universe, or rather multiplies it by a number equal to the number of independent Monads.

Although this hypothesis manages to attain its immediate object and to show the possibility of transcendent knowledge with a universal and necessary significance, it cannot be pronounced satisfactory. It takes far too much for granted, and at the same time it can obviously never be tested; it is proof against criticism simply because its assumptions cannot, from the nature of the case, be empirically verified: on its own showing the copy which is in the subject and the original which is external to the subject cannot be put side by side and compared by any human consciousness. And yet the demand for empirical

verification is not in this case a trifling methodological obstacle. It is forced upon us by the contradictory and insoluble character of the problem which confronts the rationalistic theories of knowledge. Both in science and in practical life we determine at every step the relation between a given a and some x, and this can only be done if the x be not absolutely unknown. It is essential that we should know the relation of x to a third thing, b, which is definitely connected with a. But the rationalists have quite a different problem before them. Their object is to construct a theory of *transcendent* knowledge, *i.e.* to explain the relation between a (the cognitive process in the self) and an absolutely unknown x (the world outside the cognitive process). The contention that not only is knowledge innate, but that the hypothesis of its being innate is innate also, does not render that hypothesis any the more convincing. The contention merely frees it from too crude a contradiction, and at best simply shows that owing to an innate tendency we are compelled to make the hypothesis; it in no way guarantees its truth.

The inconsistent problem which is thus raised by rationalism leads in the end to an inconsistent result which may be expressed as follows: adequate *transcendent* knowledge is composed exclusively of materials which arise from *within* the knowing mind, *i.e.* are immanent in it as regards both content and origin. This formula directly contradicts the final result reached by empiricism, namely, that as all the materials of knowledge are due to the action upon the knowing subject of influences from without (that is to say, are transcendent in origin), knowledge has no transcendent validity, but is throughout sub-

jective and immanent in character. Though diametrically opposed, these two formulae have one thing in common: their inconsistent character is due to the conflict between the conceptions of immanence and of transcendence—a conflict which necessarily follows from the supposition that subject and object are isolated from one another. It should be noted, also, that the views of rationalists and empiricists completely coincide in yet another important respect. They both assume that the mind can know its own feelings and ideas with perfect adequacy, as they are in themselves, and that the mind reaches such knowledge "without pains, labour, or deduction; but at first view, by its natural power of perception and distinction." [1] Here by the word 'perception' is meant neither the influence of an idea or a feeling upon the mind, nor knowledge by means of symbols or copies, but real apprehension,—apprehension in which the known object, as it is in itself, enters the consciousness of the knowing subject. Here, then, the known object *is* immanent in the process of knowing. There is no impassable gulf between subject and object; in the process of knowing the two form one whole, and, therefore, the question as to the transcendent validity of knowledge has here no meaning. At the same time, all difficulties and contradictions disappear—at any rate, so far as the solution of this particular problem is concerned,—and with them disappear likewise the differences between the rationalistic and the empirical theories of knowledge.

Thus, the inner contradictions of rationalism and empiricism, the opposition between them and

[1] Locke's *Essay*, Bk. iv. ch. i. 4.

their agreement upon a fundamental point, definitely indicate the direction which epistemology must follow if it is to avoid the old difficulties. Speaking quite generally, the direction is this. In its explanation of our knowledge of an external world epistemology must abandon the contradictory conception that knowledge is transcendent either in origin or in significance. In other words, it must relinquish the assumption made by both rationalists and empiricists that subject and object are isolated from one another, that the object lies outside the boundaries of knowledge, and that what can be known of it is either its effect or its copy innate in the subject. The new theory of knowledge must destroy the barriers thus erected between subject and object, recognise their fundamental unity, and in this manner bring about their reconciliation. Beginning with Kant, philosophy has entered upon this new course. Still, there are different ways of recognising the unity of subject and object, and, since there is no reason to suppose that Kant selected the best way, the other ways too must be considered.

The possible modes of conceiving the unity of subject and object may be said to be three in number. First, the subject may be resolved into the object. Secondly, the object may be included in the subject. Thirdly, the subject and object may be reconciled not by *subordinating* one to the other but by *coordinating* them, by maintaining, *i.e.* that although each retains its independence in respect of the other, they yet form an indissoluble unity. The first alternative evinces itself as impossible, for it conceals a self-destructive contradiction: if there is no subject there can be no knowledge. There remain, then,

the second and the third possibilities. The second subordinates the object to the subject, or rather to the process of knowing, and regards the object as brought into being by the very process of knowing, and as having no existence apart from that process. This view was worked out by Kant, and various modifications of it introduced by his successors have occupied a foremost place in the philosophy of the nineteenth century. Finally, the third possible view, described in the present work as the intuitional theory, is being gradually evolved out of the critical philosophy, and has indeed been formulated, though not as yet in a perfectly clear manner, by some philosophers of the Kantian school. This theory is *freer from assumptions* than the critical theory of Kant, and could only have come into being after the critical philosophy had, during the course of a century, exhaustively brought to light the contradictions that inevitably follow from the presuppositions of rationalism and empiricism. It will be easier to discover the presence of the presuppositions in the critical philosophy itself after we have made a preliminary acquaintance with the intuitional theory, and I pass now to state some of the first and more fundamental principles of this way of conceiving knowledge.

CHAPTER III

A FIRST SKETCH OF THE FUNDAMENTAL PRINCIPLES OF THE INTUITIONAL THEORY OF KNOWLEDGE

I

Relation of the Object known to Knowledge

A THEORY of knowledge must be free from assumptions. At any rate it must in our day be free from the assumptions made by the pre-Kantian philosophy. It must start with an analysis of the facts, and it has no right to offer at the outset any definition of knowledge, nor, indeed, to indicate any characteristics of knowledge, except those which are directly apparent in the actual contents of experience, and help us to decide which facts are to form the subject-matter of our inquiry. A thinker who sets out *ab initio* to investigate the relation between the self and the not-self by which knowledge is brought about, or the 'influence' of the external world upon the sensibility of the knowing subject, or, worse still, upon his sense organs, will certainly not be dealing with facts but with theories. He professes to know already that there exist important conditions of knowledge—the self and the not-self—and a certain relation between them (the influence of the not-self upon the self). Or, again, a thinker who proposes to study

the process of copying or symbolising reality—or the process that leads to the formation of universal and necessary judgments, and so on—already knows what knowledge is, conceives of it in a certain way, and seeks to justify his conception rather than directly to investigate the facts.

The objection might be pressed that unless knowledge be in some way defined it will be impossible to discover which facts require to be investigated, and that we shall thus run the risk of analysing the wrong facts and of working out a theory of processes that have nothing to do with knowledge. But to a certain extent every investigator who starts upon an independent inquiry into facts is exposed to a similar objection. In the course of his investigation he arrives at new definitions and divisions, and at the same time changes the meaning of the old terms. In the present work, however, I shall be dealing with a group of facts so familiar that there will be little danger of mistaking them, and the probability is that the interpretation of knowledge here developed will include all the facts dealt with by other theories as well as not a few very simple facts usually omitted.

I propose to submit to analysis not only such complex experiences as the formulation of Newton's law or of mathematical theorems and axioms, but also experiences of the kind indicated by the phrases, 'it is light,' 'I am hurt,' etc.—in short, all experiences in so far as they can be investigated, studied, observed, and described. In other words, all the facts investigated by science and met with in the various spheres of life will form the subject-matter of our epistemological inquiry in so far as they imply processes of judging, observing, and so on. The number of facts episte-

mology has to deal with is thus extremely large: to say the least, it equals the number of all the facts of which we are aware, for every such fact is not merely an existent but also a known fact.

One common feature may be said to characterise each fact of this huge collection. All knowledge is knowledge of something, that is to say, every experience described by the word 'knowledge' clearly refers to something which may be called an object known. Hence arises a question of the utmost importance: Is the object known external to knowledge or does it enter into the constitution of knowledge? In the former case knowledge is transcendent, in the latter immanent in character. It has been shown already that a theory of transcendent knowledge cannot escape from self-contradiction. If the object known does not form part of knowledge the problem must, indeed, be pronounced hopeless, and all further investigation would have to be abandoned. This danger, however, does not really threaten epistemology. The critical philosophy and the phenomenalistic theories that prevailed in the philosophy of the nineteenth century, and penetrated even into the domain of the exact sciences, have profoundly altered our conceptions and estimates of the real world. They have so perfected our modes of observing and analysing the processes of knowing that there is no longer any need to show the presence in knowledge of the object known by means of any indirect considerations, such as those with which we were occupied in the two preceding chapters. All that is required is to make our contention clear with the help of a few examples, *i.e.* to show directly the presence in knowledge of the object known.

When I say 'it is light,' 'it is noisy,' 'I am in pain, these assertions refer to the noise, the light, the pain which unquestionably form part of my knowledge and are not external to it: *i.e.* I mean *the* noise, *the* pain, etc., which are actually present within the range of my consciousness. In asserting that iron gets rusty in water, or that muriatic acid added to a solution of silver nitrate forms chlorate of silver, we are again concerned with objects which are actually present in the process of knowing: the transparent, tasteless liquid, the burning liquid, the smoking liquid with a pungent smell, the brown, dust-like sediment on the metal, the white flakes of the chlorate of silver, etc., are present in consciousness, and form its contents, to which our acts of affirming or denying refer. The contents of consciousness are, to use Hume's terminology, in some cases vivid (percepts) and in other cases faint (memory-images). Yet, this does not alter the essential fact that it is to these contents that our assertions refer, and that, apart from them, they become meaningless combinations of words. The truth of what I am urging is admitted even by nominalistic writers, who seem at first sight to be entirely opposed to the view here advanced. Although the nominalists maintain that all general knowledge is simply a combination of certain words, they at the same time recognise that these words imply the presence—at any rate in a potential form—of singular judgments, the contents of which are percepts; and that if universal judgments are severed from percepts they cease to constitute knowledge and become, indeed, meaningless combinations of words. No doubt a simple truth such as $2 \times 2 = 4$ recurs so often that as a rule it is no longer realised in consciousness and

is completely replaced by words. But so soon as we begin to think about it and to contemplate it as a truth, we realise it in its full extent; and it then becomes at once apparent that the object apprehended —the double repetition and the positing of one, one, one, one—is actually given in one and the same experience. Contents which are thus objective and yet immanent in consciousness may be discovered in all other scientific truths—*e.g.* in the fundamental laws of chemistry, as, for instance, the law of multiple proportions, etc.

When knowledge refers to the objects of so-called inner perception, the presence of the object apprehended in consciousness is still clearer and more indisputable. Suppose I say 'I am angry,' or I assert that the argument 'whatever lengthens the pendulum retards its movement; heat lengthens the pendulum, therefore heat retards its movement,' is a deduction according to the first figure of the syllogism, there is no doubt that the objects of knowledge, 'anger' and 'deductive inference,' are actually experienced in the process of knowing. Even before the time of Kant, philosophers had recognised this to be the case, or rather, had regarded the matter as self-evident, and did not, therefore, even discuss it. Now, this was a grave mistake of method. The problem of knowledge and of the conditions and the possibility of truth is so difficult that the cases where adequate knowledge is beyond question obtained ought to be of special interest to epistemology. Observation of the processes of so-called inner perception shows that they are characterised by the *presence of the object* in knowledge, and that if they were not thus characterised *we could have no knowledge whatsoever of*

our mental activities. Moreover, the structure of such knowledge is entirely determined by this condition, and, so soon as this is realised, it becomes at once apparent that our perceptions of the so-called external world must possess the same character and that here too the object apprehended must be immanent in the knowing process.

This first position of the intuitional theory in no way conflicts with the view of knowledge that became current in the nineteenth century under the influence of the critical philosophy. The critical philosophy had, likewise, disputed the possibility of transcendent knowledge, and insisted on the presence in the knowing process of the object known. Speaking generally, the difference between the critical and the intuitional theories is less apparent in their first principles than in the deductions drawn from them. I shall return to this difference later on.

A second question now arises. If the object of knowledge is immanent in the knowing process, the structure of knowledge may be conceived in one of two ways. On the one hand, it may be maintained that the object apprehended not only enters into the knowing process, but forms the whole of it. On the other hand, it may be urged that knowledge is composed of the object apprehended plus some process other than the object; in other words, that knowledge is always more complex than its object. So soon as an attempt is made to grasp the meaning of the first view, it is seen at once to be untenable. It would imply that light, noise, anger, pain are the same as the knowledge of the light, the noise, the anger, the pain. But that is impossible, simply because knowing is a process that refers to an object,

and there could be no such reference if the object known were identical with the knowledge of it. Such a reference is only possible if the object known is either outside the process of knowing or if it lies within that process as a part of it. The first alternative has already been shown to be untenable; there is left, therefore, only the second.

Evidently, in some cases knowledge may itself become the object known, but this circumstance in no way contradicts my contention. Knowledge of knowledge likewise consists not solely of its object, but is more complex than its object. The knowledge that the series of judgments, 'whatever lengthens the pendulum retards its movements,' etc., is a syllogism of the first figure, is composed of its object —viz. the series of judgments—plus a cognitive process owing to which that series is recognised to be a deductive inference.

The result obtained thus far is, however, too indefinite to be satisfactory. It must be shown in what precisely the greater complexity of knowledge, as compared with the object known, consists. To put the matter more concretely: what must be added to such contents of consciousness as light, noise, anger, pain, in order that they may become knowledge? Undoubtedly the knowledge that 'it is light' is only possible when the experience of light has been *compared* with the experience of darkness and *distinguished* from it as well as from other contiguous experiences. The same may be said about the experiences of pain, anger, inference, etc. The assertion that 'this is a syllogism of the first figure' can only be made if the process of inference in question has been *singled out* from other experiences,—emotions, organic sensations,

etc.,—*distinguished* from inductive reasoning and recognised as *similar to* deductive inferences of the first figure.

The thought that a process of comparing enters into every act of knowledge meets with wide acceptance. If some psychologists and epistemologists dwell but little on the part played by the comparing activity in the genesis of knowledge, it is not because they consider it unimportant. Rather is it because they take it to be so self-evident, and hasten to pass on to what is less obvious. Thus the empiricists were occupied with the way in which knowledge arises through the influence of the external world upon the organs of sense; they discussed the correspondence or the lack of correspondence between ideas and the external world, and tried to construe from sensations that succeed and replace one another such experiences as the awareness of substance, causality, etc. But evidently they could not fail to see that all these materials of the mental life will not yield knowledge until comparison has been brought to bear upon them. Locke was well aware of the fact and he maintained that there can be no knowledge without discrimination.[1] The rationalists were primarily concerned to prove that necessary truth cannot be obtained from experience, to establish the existence of innate ideas, and so on. But they, too, did not, by any means, overlook the necessity, for knowledge, of discrimination. Leibniz fully agreed with Locke that 'without comparison there is no knowledge'; and he did not dwell on the part played by comparison in the process of knowing simply because he was engrossed with other problems, and was anxious to

[1] Locke's *Essay*, Bk. ii. ch. xi. § i.

show that the necessity of comparison for knowledge in no way excludes innate ideas.[1] Finally, the adherents of the critical philosophy have been doing their utmost to construct the known object by means of the forms of sense and the categories of the understanding. Yet they, also, admit that there can be no knowledge unless sensations, forms, and categories are distinguished from one another. Kant was constantly insisting that knowledge is a synthesis of the manifold. In the section on the "Deduction of the Pure Notions of the Understanding," he speaks of the conditions under which the manifold is represented *as such*. "Every presentation," he writes, "contains something manifold which could not be presented as such unless the mind distinguished the time in the succession of one impression after another; for, as contained in one moment, each presentation can never be anything else than absolute unity. In order, then, that out of this manifold there should be unity of intuition (as, for instance, in the presentation of space), it is necessary first to run through the manifold and then to hold it together. This synthesis of apprehension must also itself be carried out *a priori*, that is, with reference to presentations which are not empirical." [2] Further on, after the section on "Reproduction in Imagination," Kant speaks of the necessity of identifying with one another thoughts that occupy different moments of time. "Without our being conscious that what we are now thinking is the same as what we

[1] Leibniz, *Nouveaux Essais*, Bk. ii. ch. xi

[2] *Kritik der reinen Vernunft*, A 99. Max Müller's trans. p. 82. The references to the *Kritik* here and in subsequent chapters are to the original paging, A denoting the first edition and B the second.

thought a moment before, all reproduction in the series of presentations would be in vain. Each presentation would, in its present state, be a new one, and in no wise belong to the act by which it was to be produced by degrees."[1] Hence it is clear why, at the beginning of the "Deduction," Kant looks upon knowledge as forming a whole of presentations connected and compared with each other.[2]

The contention that knowledge is an experience compared with other experiences would, then, be granted by all these schools of thought. A difference would only manifest itself in regard to the question as to the transcendent character of the object apprehended. I contend that the experience which is being compared *is* the object apprehended, but according to the rationalists this experience is a *copy* of the object, and according to the empiricists (of the type of Locke) it is a *symbol* which serves in the mind as a substitute for the object.

It should be noted that, whatever view they may take of the real object, these philosophical thinkers are compelled to admit that the object apprehended, *as it is in consciousness*, must be an experience compared with other experiences, and must lie within the process of comparing itself. Suppose, *e.g.* we affirm that 'every event has a cause.' From the point of view of the rationalists the object apprehended is in this case a relation which is external to the process of knowing. But in consciousness there must be a copy of this relation, viz. an innate idea, and this copy must be *recognised, i.e.* distinguished, from other experiences—from the idea of substance, of spatial relations, etc.

[1] *Kritik der reinen Vernunft*, A 103; Max Müller, p. 85.

[2] *Ibid.* A 97; Max Müller, p. 81.

The originals thus remain for ever outside the process of knowing, and only the 'copies' are known—that is to say, in point of fact, there is knowledge only in the intuitional sense of the term. According to the empiricists, when the assertion is made, 'every event has a cause,' the object referred to is a relation between events which is represented in consciousness by its symbol, namely, by a habitual sequence of sensations. Yet, for the act of knowing to take place, the symbol must be recognised, or, in other words, distinguished from other symbols—from the unusual sequence of sensations, from substantiality, etc. Transcendent relations remain, according to this doctrine, for ever unknown, and in reality we know only symbols, only our own ideas. In other words, empiricists would be still more prepared than rationalists to subscribe to the statement that knowledge is an experience compared with other experiences. It is no wonder, therefore, that in the nineteenth century the thinkers inclined to empiricism, such as Bain, Spencer, and Mach, take the act of comparing to be of primary importance for cognition. Finally, according to the Kantians, when we affirm the presence of a causal connection, the object known is not external to the process of knowing; it is nearer to it, indeed, than the intuitional theory takes it to be; for in the Kantian view the object is itself knowledge, it is itself a cognitive process (a synthesis according to the category of causality). Still, without doubt, every Kantian would agree that the judgment 'this is a case of causal connection' can only be made if the causal synthesis is not merely present but also distinguished from syntheses according to the categories of substance,

reciprocity, etc., and that in this act of comparing and judging the causal synthesis itself serves as the object known.

If knowledge be, then, an experience compared with other experiences, and if the object apprehended be the experience that is being compared, it follows that the object is known as it is in itself. What is present in knowledge is not a copy, symbol, or appearance of the thing that is to be known, but the thing *as it really exists*. A number of important consequences can at once be drawn, but their epistemological significance cannot be fully estimated until a misunderstanding which may arise from the above definition of knowledge has been removed. Knowing is always taken to be an activity of the self. But when the object present in knowledge is the world of the not-self, how can the latter be given to the knowing subject as it exists in reality?

II

Self and Not-Self

Before discussing the question as to the relation between the self and the not-self in the process of knowing the meaning of these terms must be more exactly determined. No ready-made conceptions of self and not-self ought to be used by a theory of knowledge which is to be free from dogmatic assumptions.

The method to be pursued has been indicated at the beginning of this chapter. Knowledge we have taken to be an experience compared with other experiences; the next thing is to compare the various kinds of processes, events, things, etc., with one another, and to discover the fundamental distinction

between them on the basis of which the world as a whole is divided into the world of the self and the world of the not-self.

Contents of experience may differ from one another in one of three ways. Firstly, the difference may be *qualitative*—as, for example, the difference between red and green. Secondly, it may be *quantitative*—*e.g.* the difference between the beginning and the end of the vibratory motions of a tuning-fork. Thirdly, processes or things may differ not in themselves but *in relation* to other processes, events, or things; as, for instance, the difference between the north and the south poles of a magnet. The self and the not-self differ fundamentally from one another, and the distinction between them, whether consciously or unconsciously, affects our behaviour throughout. It is not likely, therefore, that the difference between the processes of the self and the processes of the not-self will turn out to be merely quantitative, or to be determinable by their relation to some other processes. Rather is it to be expected that there exists some qualitative mark which is experienced immediately, and which gives to the two spheres in question their specific colouring. This mark is probably as simple and as undefinable as redness or greenness. Since it must attach to all processes of the self in contradistinction to processes of the not-self, we may be certain that it will be disentangled with difficulty from the contents of the experiences, and will not be capable of being designated by any special term, although the knowledge that the world consists of the self and the not-self is due primarily to the presence of such a mark. When we succeed in finding it, we will express the difference in question by the words

'the consciousness of belonging to me,' on the one hand, and 'the consciousness of being given to me,' on the other, or the consciousness of subjectivity and the consciousness of externality. Experiences which may be thus characterised we will call respectively experiences that are 'mine' and experiences that are 'given to me.' It is not difficult to see that such a difference between experiences really does exist. Suppose that there is before me a high white wall which stands out sharply against the blue sky, and that, as I look at it, I try to remember at which exhibition of pictures I have seen an Italian landscape representing the contrast between the blue of the sky and the white of the houses. There is no doubt that the *efforts to remember* will be toned by a feeling quite different from that which tones the perception of the wall. The wall is experienced as something foreign to me, forced upon me from without, while the efforts to remember are clearly felt to be intimately connected with me.[1] Apart from any theories or from any scientific investigation of the matter, and guided only by the mark which immediately characterises the facts in question, I regard one experience as 'mine' and refer the other to the world of the not-self, which is foreign to me. On the strength of immediate feeling it has certainly never occurred to anyone that the white wall is part of himself or that the efforts of remembering belong to the blue sky. It is true, a subjective idealist would

[1] This question I have dealt with more fully in my book *The Fundamental Principles of Psychology from the Point of View of Voluntarism*, ch. i. Professor Lipps in his treatise *Das Selbstbewusstsein* also lays great stress on the difference of the consciousness of 'mine' and 'given to me.' William James hints at it too in his *Principles of Psychology*, vol. i., in the chapter on "The Consciousness of Self."

maintain that the wall is merely his subjective perception. But this contention is the result of theorising, and it leads to irresolvable contradictions in dealing with the question of our knowledge of the external world. Moreover, even subjective idealists start with the ordinary conviction that the world of the not-self is a fact, and distinguish the self from the not-self with the help of the feelings just indicated: it is only later that, through means of *indirect* considerations, they try to bring the outer world within the sphere of the self.

It is impossible to deny that there is this difference between the contents of experience. Yet it may be contended that the difference indicated is not the *first* criterion for distinguishing the self from the not-self, that it is derivative and comparatively unimportant, the ultimate criterion being quantitative or relational. The erroneousness of this contention will become apparent later on, when it is shown that the other alleged criteria presuppose, implicitly or explicitly, the presence of a qualitative distinction and that these criteria involve a conception of the self which is liable to mislead. This question can only be satisfactorily dealt with when the various changes in the conceptions of the self and the not-self that follow from the consistent application of our criterion have been made clear. At present I will assume that our criterion is correct.

To the world of the not-self belong, then, according to our criterion, in the first place all the contents of so-called external perception in so far as they include sensations, spatial relations, movements, 'given' syntheses,[1] and so on. All organic sensations—hunger,

[1] For instance, the unity of tones in a melody, or the unity of the qualities of a stone.

thirst, muscular exhaustion, shivering, headache, pain in the heart, shooting in the ear, etc.—have likewise clearly the character of being 'given to me'; the bodily life, therefore, either wholly or in part, belongs to the world of the not-self. Not only so; contents of memory may often be clearly felt to be 'given to me.' Thus, in the instance cited above, the efforts to remember are no doubt coloured by the consciousness of 'belonging to me,' but the results of the act of remembering, *e.g.* the floating up in memory of the picture we have seen before, the appearance in the field of consciousness of the name of the painter, etc., are typical examples of experiences 'given to me.' Desires, again, that have their source in bodily states—*e.g.* a longing to have a drink of water when very thirsty, to sit down when very tired, to lie down, to have a smoke, etc., may become, so to speak, completely detached from the group of 'my' experiences, and be felt as something distinct from and independent of me—*i.e.* as something 'given.' The same character attaches to those desires that are called 'fixed ideas.' It is very likely that mental states of this kind are a product of the bodily life, that is to say, of the activity of the higher nerve centres, and belong to the sphere of the not-self in the same sense as do hunger and thirst. This is all the more probable since the states indicated are comparatively rudimentary experiences.

It is noteworthy that the contents of the opposite pole of experience,—of those complex states, namely, which are apparently most remote from the bodily life,—have also the character of 'givenness' and must, therefore, be referred to the world of the not-self. Such, for instance, are the lightning flashes of com-

plicated thoughts in the process of artistic or scientific creative work, when a tangle of elaborate, although undifferentiated, ideas suddenly appears in the field of consciousness as if 'coming from above'—as having, *i.e.* a 'given' character. Such, again, are the complicated aesthetic experiences of contemplating a beautiful landscape, picture, etc., when the self is lost in a sea of 'given' harmonious relations. Such, also, are the experiences of religious ecstasy and devotional communion with the divine. Such, once more, are the experiences which form part of the moral and social life. The 'given' and the compelling character of the moral and customary laws of conduct is so pronounced that language, poetry, and philosophy equally bear witness to it. This aspect of moral experience is well brought out in Professor Petrazhitsky's work on *The Motives of Human Actions*. "The appropriate motor excitations and impulses," he says, "have a special mystically authoritative character. They are distinct from and opposed to our other emotional impulses, appetites, desires, and strivings, as though of higher authority. They seem to proceed from an unknown mysterious source, distinct from our ordinary self, and thus possess a mystical aureole, inspiring a feeling akin to fear. Human language, poetry, mythology, religion, systems of metaphysical philosophy ... reflect these characteristic features of the ethical emotions, and, translating them into conceptual language, suggest in explanation of them that by the side of our self there is present in such cases another being; some voice addresses us and speaks to us (conscience, conscientia, Gewissen, the voice of conscience, the command of conscience, the sting of conscience, etc.;

the 'demon' of Socrates, the metaphysical 'Ego' of Kant). This voice seems to proceed from a nature higher than ours; the religious Psyche of different peoples ascribes it to the gods, the monotheistic religions to God, metaphysical philosophy creates metaphysical personifications of it ('nature,' 'reason,' 'will,' conceived as metaphysical entities; 'objective spirit,' etc.). Sceptical minds inclined to positivism, that wish to steer clear of all mystical conceptions, nevertheless personify it too as 'the spirit of the nation,' 'the general will' (expressions used by many modern writers on law and ethics), 'the instinct of the race,' etc.—the race and the general will being conceived as possessing a higher authority and as transcending the individual and his will." [1]

Events or occurrences coloured by the consciousness of 'being given to me,' and belonging therefore to the world of the not-self, are so numerous that it may well be asked whether anything is left for the world of the self. In my book on *Voluntarism*, all mental processes have been considered from the point of view of the distinction between 'my' experiences and experiences 'given to me,' and the conclusion is reached that, out of all the processes that enter the sphere of any individual human consciousness, *only the experiences of a medium degree of complexity belong to that individual's self, while the simplest and the more complicated belong to the sphere of the not-self.* Experiences coloured by the feeling of 'belonging to me' are often submerged by a mass of given elements, and can only be detected by means of careful analysis. Yet such analysis shows that *all* human experience contains elements or aspects coloured by the conscious-

[1] Petrazhitsky, *'O motivah tchelovetcheskch postupkov*, p. 8.

ness of ' belonging to me.' It might at first sight be thought that according to our criterion perceptions must belong wholly to the world of the not-self; but that is not the case. The perception of a tree, in so far as its content consists of sensations, spatial relations, etc., belongs of course to the world of the not-self. But this perception also includes the process of fixing attention, of now widening, now limiting, its scope (*e.g.* I may look now at the tree as a whole, then at the top of it only). This process is also an experience, and one undoubtedly coloured by a feeling of ' belonging to me.' *That which is perceived* is the world of the not-self, but the *perceiving* is unquestionably a part of the self. In the case of a perception of an extremely complex thing, not only the processes of attending but also the unity of the parts may be ' mine ' and not ' given.' Suppose I am looking at a vast Gothic cathedral, and try to contemplate all the parts of it, adding them on to one another in order to embrace the whole of it in thought. Then the parts of the cathedral will belong to the world of the not-self, but the examining, remembering, reproducing them and constructing one whole out of them will belong to the sphere of the self. Experiences coloured by the feeling of ' belonging to me ' are still more numerous in such activities as remembering, imagining, thinking, etc. The most typical instances of ' my ' experiences, freed from foreign admixture, are afforded by certain kinds of desire; such, for example, are the ambitious, egoistical desires. Yet in this case also the self is very closely connected with the not-self. When some ' wit ' whose ambition it is to be the centre of the society hastens to prepare an ' impromptu ' remark and then waits

two or three minutes for a favourable opportunity to make it, the desire to attract attention and the seeking for a witty phrase will be experienced as 'my' mental state. But the emotions of expectation, impatience, etc., that accompany it may contain many 'given' elements (sensations of a flushing of the cheeks, or of catching one's breath, etc.), and even the utterance of the witticism prepared beforehand and several times rehearsed to himself may happen, as it were, automatically, *i.e.* it will have a shade of 'givenness' about it.[1]

It is not surprising, then, that psychologists still chiefly investigate the states 'given to me,' *i.e.* the world of the not-self, and that one of the most accurate of observers, William James, should go the length of maintaining that subjective states are very likely not immediately experienced by us. "It is difficult for me to detect," he writes, "in the activity (of the self) any purely spiritual element at all. Whenever my introspective glance succeeds in turning round quickly enough to catch one of these manifestations of spontaneity in the act, all it can ever feel distinctly is some bodily process, for the most part taking place within the head." . . . "It would follow that our entire feeling of spiritual activity, or what commonly passes by that name, is really a feeling of bodily activities whose exact nature is by most men overlooked."[2]

[1] The distinction between 'my' states and 'given' states is worked out in detail in my book on *Voluntarism*,—in ch. i. (all 'my' states are of the type of conative actions), ch. iv. (all 'my' states form a system of activities in which each member refers to another as means to an end), and chs. vii. and ix. The changes that follow in the conception of self when all mental states are considered from the point of view of either being 'given' or 'belonging to me,' are described in ch. v. (the self is the unity of conations).

[2] William James, *Principles of Psychology*, 2nd ed. vol. i. pp. 300-302.

If we make use of our intuitional criterion, the spheres of the self and of the not-self will have to be demarcated from one another differently than they have hitherto been by philosophers. Both rationalists and subjective idealists (*e.g.* Hume and Mill) thought that *all* experiences present in an individual consciousness belonged *entirely* to that particular self, the world of the not-self being absolutely cut off from the self. The subjective idealists were not in a position to draw any dividing line between the self and the not-self: *all that the subject experiences is his self.* Of the not-self he either knows nothing (Hume and Mill) or arrives at a knowledge of it by means of duplicating certain experiences of the self. For instance, in the opinion of Descartes, when I perceive a ball, there arises in my mind the *idea* of the ball, while the real ball exists outside of my mind. According to Locke, when I see a red colour, the colour is in my mind, but in the external world there is something which produces this sensation. The naïve realist approaches nearer the intuitional point of view, for he regards a part of his experience as belonging to the world of the not-self; but the dividing line between the self and the not-self is not clearly drawn by him, and in many cases he simply does not ask himself the question,—which features must be referred to each of the two spheres respectively, and in what sense?[1] Finally, from the standpoint of the intuitional theory, all the experiences of an individual consciousness must, on the basis of a clearly defined criterion, be sharply divided into two classes, so that the contents of the not-self

[1] Cf. R. Seydel, 'Der sogenannte naïve Realismus,' *Vierteljahrsschrift für wiss. Philos.* xv. 1891, p. 1 *sqq.*

may thus be separated out. Much less will then remain for the self than is usually supposed; even memories and images of phantasy belong to the not-self in so far as they contain 'given' elements. Since the world of the not-self is marked off from that of the self by thus dividing all experiences into two groups, there is no need for the knowing mind *to construct* the external world, and, in order to do so, to duplicate experiences. When I perceive a ball I am not concerned with the idea of the ball in my mind, whilst the real ball or some unknown x which produces the idea in me remains external to me: *the ball which forms the content of my perception is actually a part of the world of the not-self.*

Thus our knowledge of the outer world in no way differs from our knowledge of the inner world, in so far as immediacy is concerned. A process in my mind ('my' process, *e.g.* an effort to remember) not merely happens, but becomes known if I attend to it and distinguish it from other experiences by means of comparison. In exactly the same way, a process external to my mind (a 'given' process, *e.g.* the rapid flow of the water in a brook) not merely happens, but becomes a known event if I distinguish it from other events. *The world of the not-self is known no less immediately than the world of the self.* Such difference as there is consists simply in this,—that in the case of knowledge of the inner world both the object apprehended and the process of comparing are within the self, while in the case of knowledge of the external world the object is external to the self but the process of comparing is within the self. That is to say, in knowledge of the external world the object is *transcendent in relation to the knowing subject, but immanent in the*

process of knowing. Cognition of the external world is, then, a process one side of which takes place in the world of the not-self (the material of knowledge) and the other in the world of the self (the activity of attending and comparing).

Such a conception of knowledge naturally necessitates the rejection of the old idea of the self as an absolute substance, and implies a complete unity of the self and the not-self, similar to the unity which subsists amongst the different mental processes within the self. Owing to this unity, the life of the external world is given to the knowing subject no less immediately than the processes of his own inner life. For the sake of brevity, I shall speak of this immediate awareness of the external world as *intuition* or *contemplation*.[1]

What has so far been said about intuition will inevitably cause some perplexity. It may be asked whether this is not an extreme form of naïve realism compelling us to relinquish the doctrine of the subjectivity of sensations and to assume their externality to the body? I reply that the intuitional theory certainly does reject the notion that sensations are subjective, and takes them to be external to the mind. But it retains all that is valuable and scientifically established in the doctrine of the subjectivity of sensations—the physiological theory of the dependence of sensations upon the sense organs and the nervous system, the physical theory of the causes of visual and auditory sensations, etc.—and abandons

[1] In former editions I used to describe intuition as 'mystical perception,' but in view of the misunderstandings to which the word 'mystical' has given rise, I prefer now to employ the term 'contemplation.'

only the unwarranted exaggerations of the doctrine in question. Furthermore, our theory introduces the distinction—important from the point of view of the knowing subject—between *two spheres of externality*, and is thus enabled to solve many difficulties in the theory of knowledge.

All the arguments in favour of the subjectivity of sensations amount, in short, to this—that it is self-contradictory to ascribe contents of sensation to things external to the human body, and that sensations alter in connection with changes in the human body. But these arguments merely prove that the content of sensations is not a process taking place in the object (the smell is not in the lily of the valley). Where, then, does it take place, *i.e.* in which group of events must it be included ? On the basis of the intuitional criterion we can at once answer that the content of sensation certainly does not belong to the sphere of the self : all sensations have clearly the character of being 'given' to me. They form part of the world of the not-self, although they do not belong to the object. Since they depend upon changes in the group of experiences which is called the body, and since any attempt to conceive of them as external to the body leads to contradiction, the conclusion must be drawn that sensation is a process which takes place within the body of the knowing subject. Sensations, therefore, belong to the world of the not-self, but in relation to the knowing subject they form part of the intra-bodily and not of the extra-bodily external world. Each of the opposed theories—of the subjectivity of sensations and of their extra-bodily externality (naïve realism)—are seen, then, to be partly true and partly false. Those who refer sensations to the

external world are right in doing so; but equally right are those who affirm that sensations are not the properties of perceived extra-organic objects.

III

The Nature of External Perception

The distinction we have so far constituted between the self and the not-self and between intra-organic and extra-organic externality will be of help in dealing with the problem of external perception. Perception of the external world may be said to contain,—first, subjective processes; secondly, processes in the external world within the body; and thirdly, processes in the external world outside the body. According to the view prevalent in many schools of philosophy, a view which has met with wide acceptance, external perception is entirely composed of the processes of the first category; according to naïve realism it consists—entirely, perhaps—of the processes of the third category; and from the point of view of the intuitional theory it includes processes of all three kinds. Suppose I am looking at a lime-tree in flower and see the wind tear off a large branch of it, which falls and breaks a lilac bush. In so far as this perception requires 'my' attention, discrimination, and so forth, and includes feelings of ('my') satisfaction or dissatisfaction,[1] it contains processes of the first category. The smell of the lime-tree flowers, the colour of the tree, the noise of the fall, are processes in the external intra-organic

[1] As to feelings of 'my' satisfaction and of satisfaction 'given' to me, see my book on *Voluntarism*, ch. vi.

world. The presence of a single centre (or substance) which conditions events so various as colours, sounds, smells, etc., its externality to my body (its 'projection'), the relations between different substantive centres (between branches, leaves, flowers, etc.), the activity of the whole in the process of falling (the causal connection between the fall and the breaking of the lilac bush), and, speaking generally, all that is apprehended as external and cannot be considered as a process within my body,—these are elements in the extra-organic world, form, that is to say, parts of the object as it exists in itself, external to my self and to my body.

Since transcendent knowledge is impossible, it must be assumed that perceptions which bear witness to the existence of the external world actually contain elements of that world. Yet, it might be contended that all such elements belong to the second category, *i.e.* to the intra-organic experiences. In other words, it might be admitted that the knowing mind can perceive the external world, but yet only in so far as the latter consists of processes closely connected with the self, namely, processes within the body. A partial concession like this would be quite in accordance with modern psycho-physics and in keeping with the general conservatism of science which accepts new conceptions but slowly, surrendering ground only step by step. But in the present instance no purpose would be served by a partial concession which would merely lead to new difficulties and contradictions. So far as the principle is concerned, the greatest concession has already been made when it has been admitted that the self is able to apprehend the world of the not-self no less immediately than the world

of the self. Once this is granted, the question as to whether the world of the not-self is intra-organic or extra-organic becomes of secondary importance. It is for psycho-physics and metaphysics, and not for epistemology, to decide whether a particular element of perception belongs to the body or is external to it. If certain elements of perception, such as the presence of an object outside the body (its 'projection' without), its substantiality, causal relations (*i.e.* the relation of activity given in perception) and the like, cannot, on investigation, be shown to depend upon states of the body, it would be absurd to include them within the group of intra-organic experiences. "*Within the body*" *can mean nothing else than the connection of an experience with some part of that spatial and 'material' object which is called the body.* If, for example, nerves or brain centres can be found the excitation of which would be the necessary and sufficient conditions for the apprehension of the unity between the parts of an object or of the objective ('given') activity, these elements of perception would likewise have to be pronounced no less intra-organic than smell or taste. But until physiology has proved that such is really the case no reason can be offered for not regarding them as external to the body. This negative argument has the support of positive science, which has at all times manifested a tendency towards realism and has never consented to regard the contents of perception as entirely subjective. In the opinion of Wundt the history of science shows that positive research has always been unconsciously guided by the following rule: "*All objects of perception must be regarded as real objects in so far as their properties do not prove*

them to be purely subjective."[1] The truth of Wundt's contention is, I think, quite indisputable. Intra-corporeality is determined by a positive characteristic, namely, dependence upon the body, while externality to the body is determined by the negative characteristic of the absence of such dependence. Hence, every 'given' content of perception must be regarded as external to the body, until it has been proved to depend upon the body.

The elements of subjectivity and of externality—intra- and extra-organic—are most intimately interconnected in every perception; and, for this reason, when we observe that some part of the perception depends upon the body, we are inclined to regard other parts of that perception as also intra-organic. Yet, we have no right to do this. Every particular element of perception must be separately traced to a bodily source before it can be pronounced to be intra-organic. In the case of a visual object, its externality to the body (its 'projection'), its substantiality and activity, are given together with its colour. The bodily source of the colour has been discovered, but it does not by any means follow that a bodily source of the other elements either has been or must be discovered. The perceptions of space, time, and movement are certainly more intimately connected than these with the body of the knowing subject, but they cannot be said to be entirely intra-organic. They are complex, and it may well be that some aspects of them depend upon the bodily states

[1] Wundt, 'Uber naiven und kritischen Realismus,' *Philosophische Studien*, xii. p. 332. But it should be noted that I differ from Wundt in so far as he takes the words 'real' and 'subjective,' to mean respectively 'external to the body' and 'intra-bodily.'

of the knowing subject (the determination of size, *e.g.* is conditioned by the activity of the muscles of the eye), whilst their other and more important aspects (*e.g.* the relations of interaction involved in space, time, and movement) belong to the external world as it is in itself, apart from the body. It is not without reason that physical science ascribes the superior significance it does to these aspects of perceptions and that it is almost exclusively concerned with movement and temporal and spatial relations. Indeed, one may go further and venture to doubt whether even colours, sounds, and sensations in general do altogether depend upon the body.[1] This is, in fact, suggested by some forms of abnormal perception in clairvoyants and hysterical subjects. But I repeat, an exact division between the extra-organic and the intra-organic must be the work of experimental psycho-physics in conjunction with metaphysics. So complex and important a problem cannot be settled by crude arguments which at once decide in favour of all experiences being internal—such, for example, as the contention that the shutting of the eyes, and the stopping of the ears, and anaesthesia of the skin remove all extra-organic objects from the field of consciousness. For, in the first place, the object does not disappear altogether from consciousness: we are still conscious of *something* external to the body; and, in the second place, the object thus detached from the knowing subject's body becomes less interesting; it no longer attracts attention nor does it offer a sufficient number of *habitual* starting-

[1] Upon theories of the objective existence of sense-qualities, see the interesting observations of H. Schwarz: *Die Umwälzung der Wahrnehmungshypothesen durch die mechanische Methode*, Leipzig, 1895.

points for the activity of discriminating and comparing to be directed upon it. This in itself is sufficient to account for the fact that the object, even though given to consciousness, is less known in detail.

IV

General Characteristics of the Intuitional Theory

The line of reflection I have been following may fairly enough be described as a *mystical* tendency of thought. Philosophical mysticism, which has hitherto generally possessed a religious tinge, has always insisted that there is no impassable gulf between God and the human soul; that there are, at any rate, moments of perfect union between the human and the divine—moments of ecstasy when man feels and experiences God no less immediately than his own self. The intuitional theory of knowledge is characterised by a kindred thought—the thought, namely, that the world of the not-self (the whole of that world, including God, if God exists,) is known no less immediately than the world of the self. Many consequences follow from this thought, and among them certain notions which have hitherto been exclusively characteristic of the different forms of mysticism. These will be referred to later, but only incidentally, for the discussion of them belongs to ontology and not to the theory of knowledge.

At the end of the nineteenth century there appeared several schools of philosophy which defended the thesis that the self and the not-self are known with the same degree of immediacy. But these systems cannot be described as mystical, for their ontological

basis was sharply differentiated from that of the mystics. The world they took to be real was the meagre world of Kantian positivism, consisting of sensations, the forms of space and time, and the categories. According to our theory, on the other hand, the world which is immediately known is the living world in all the inexhaustible fulness of its creative powers—the world which has been deeply felt by poets in aesthetic contemplation and which is still comparatively speaking but little familiar to science.

From the point of view of the intuitional theory, knowledge is never transcendent. But this does not mean that it is therefore limited to the sphere of the individual subject's life. What is immanent in the process of knowledge may be transcendent in reference to the self. The nature of such transcendency will be discussed more fully in one of our later chapters.

The intuitional theory is an *empirical* theory. All empiricism is based upon the thought that objects can be known only in so far as they are experienced by the knowing subject. Only that which is actually present to consciousness is regarded by empiricists as the material of knowledge. The knowing subject cannot *create* knowledge of an external object by any power of his own intellect or of his innate faculties. He must *obtain* the material from the object itself, though obviously this material must be more or less elaborated before it can become knowledge. No doubt, *individualistic empiricism* (*i.e.* empiricism based upon the assumption that the self is isolated from the not-self) lays down the doctrine that knowledge consists of the *effects* of the object upon the subject; but in doing so it does not relinquish the fundamental principle of the empirical method. That principle is,

indeed, involved in the line of argument which finally brought the old empirical theory to scepticism. It was argued that because the external world is known in experience through its effects upon the knowing subject, the subject experiences not the external world but his impressions of it; hence there is no knowledge of the external world, but only of subjective ideas or impressions. Mystical, in contradistinction to individualistic, empiricism maintains that the external world is apprehended in experience as it is in itself and not merely in its effects on the self. Accordingly, the sphere of experience must be conceived as wider than it is generally taken to be, or rather, much must be consistently recognised as experience which has hitherto been inconsistently regarded as not experience. This leads to differences so fundamental between mystical and individualistic empiricism that the former ought to be designated by a special name, and I have chosen for it the name intuitionalism.

These differences must now be considered more closely. Theories of knowledge that take experience to be a result of the action of the external world upon the self maintain that the experience of the external world can be *sensuous* only, and that *relations* between things are not given in experience. It is easy to see how this conclusion is obtained. Suppose that certain real entities, x and y, connected by some real intimate tie, for instance, by the relation of causality, substance and attribute, etc., are known only in their effects upon the self (the embodied self), then, x and y affecting the self (or its body) will produce in it the sensations —*i.e.* the sensuous states—a and b; but the relation between x and y, precisely because it is between

x and y, will neither affect the knowing self nor leave the slightest trace upon it. Even if it did affect the self, the result would merely be *another sensation*, and not a relation which always belongs to the sphere of the non-sensuous. Relations even between sensuous elements involve over and above these elements their synthesis or unity—and no psychologist has ever yet discovered the organ of sense which brings about such a unity. Individualistic empiricism was, then, driven to the conclusion that relations are produced by the knowing subject, and have, therefore, no objective value for knowledge. It was compelled to regard as subjective that which is clearly experienced as coming from without, and even, against all empirical principles, *to construe* the simple data of experience and to deduce them from something which, according to the testimony of experience, is not in the least like them. Mystical empiricism has no need thus to construe the world in all its richness and fulness from a few meagre elements of sense-experience. If the world of the not-self is apprehended, not merely through its effects on the subject, but also in itself, in its own inner being, experience must contain non-sensuous as well as sensuous elements, and the relations between things must be given in experience. The opposition between non-sensuous and empirical knowledge turns out to be a prejudice: *what transcends sense does not on that account transcend experience.*

Hence, there is a fundamental difference between the ways in which individualistic and mystical empiricism regard the methods of investigating the laws of nature. According to the former, a law can only be established by means of *repeated observation* of

events, seeing that the relations between events are not given in experience. It would seem, then, as though the relation not apprehended in a separate act of perception were somehow created in the investigator's mind by the repetition of the experience. This view involves contradictions fatal to such theories of induction, as, for instance, the theory of Mill. Mystical empiricism in no way denies the importance of the methodical repetition of experiences, but it puts a different interpretation upon the part played by repetition: it ascribes no creative power to it, since from the intuitional point of view, relations of causality, substance and attribute, etc., are already given in each separate act of perception.[1]

It might perhaps be thought that we are assuming far too much to be given, and that were our theory justifiable, knowledge would be obtained without scarcely any difficulty, and that the mysteries of the world would have been revealed long ago. This criticism will be discussed in the chapter on *Knowledge as Judgment*, in which it will be shown that the pursuit of knowledge is not, even under the conditions we have described, any light undertaking. To recognise that the external world and all the relations of it are given means simply to introduce a condition *apart from which any knowledge of the external world would be altogether impossible.*

Theories which do not allow that the external world is given in the processes of knowing—the critical theory, for instance—have *to construct that world as an object of knowledge.* They, therefore, prejudge the solutions of many problems of metaphysics, and this leads to the erroneous notion that a philosophy which

[1] The subject is discussed more fully in Part ii. ch. ix.

starts with a theory of knowledge must inevitably terminate in idealism, or even in solipsism. But this is in no way true of mystical empiricism. Its theory of knowledge confines itself, as it should do, to the investigation of the processes of knowing. The component parts of this complex process are, in most cases, not knowledge, and some of them *are not even constituents of consciousness.* The question as to their nature remains open, and it is for metaphysics and for the special sciences to answer that question. Such elements of the world as space and time are, so far as their nature is concerned, subject-matter of metaphysics. Epistemology is concerned with them only in so far as their investigation is essential for an explanation of the knowledge of the external world and of the laws of phenomena ; and even that would hardly be necessary were it not for the bad precedent set by certain theories of knowledge which trespass on the domain of metaphysics. These theories are so prevalent that they have to be reckoned with, and hence it is that in the present work the line of procedure has considerably deviated from the straight course. An inquiry into the nature of the self and the not-self, and of the external world within and without the body, falls properly within the scope of metaphysics. Strictly speaking epistemology ought simply to investigate the way in which the objects of knowledge become differentiated, and their relation to the process of knowing, without referring the differentiating activity or its objects either to the self or to the not-self. The result of such a procedure would be an empirical theory of knowledge, and its mystical character would come to light in its metaphysical sequel. But the habit of starting with the

self in the examination of the processes of knowing is still so firmly rooted that to have followed a different course would have involved the risk of being misunderstood. It seemed, therefore, to me preferable to depart from the strict requirements of method in the hope that the reader, in grasping the essence of the intuitional theory, would make for himself the necessary corrections in the plan of the exposition.

The value of every theory of knowledge lies chiefly in its power of guaranteeing the validity of science and of solving some of the fundamental problems of logic. These questions will be dealt with in the second Part of this book. But, meanwhile, I propose to consider the Kantian and post-Kantian systems, in order to show that philosophy in its development has been gradually approaching the intuitional point of view.

CHAPTER IV

THE DOGMATIC ASSUMPTIONS OF KANT'S THEORY OF KNOWLEDGE

THE *Critique of Pure Reason* presupposes the existence of knowledge possessing universal and necessary validity, the possibility of which the whole inquiry is intended to explain. No objection can be taken to this assumption in itself,[1] but it becomes extremely embarrassing in Kant's theory of knowledge when it is combined with other presuppositions which lead to a thorough-going scepticism. Kant is aware of this danger, and, in order to vindicate the possibility of universal and necessary knowledge, and to abide at the same time by his initial assumptions, he has to have recourse to extremely artificial devices. He thus works out an eminently original philosophical system altogether different from any of the systems of his predecessors. But the originality of the system is largely due to the lack of originality in the unconsciously made assumptions on which it rests. It is these assumptions I now propose to discuss.

At the very beginning of the *Introduction* to the *Critique of Pure Reason* Kant takes for granted that empirical knowledge first arises in consequence of the

[1] Cf. Volkelt, *Immanuel Kants Erkenntnisstheorie*, 1879, pp. 193-203.

action of objects on the mind of the knowing subject. "That all our knowledge begins with experience there can be no doubt. For how would it otherwise be possible for the faculty of cognition to be awakened into exercise, did it not take place through means of objects which affect our senses, and which partly of themselves produce presentations, partly induce to activity our capacity of understanding, in order to compare these, to connect or to separate them, and thus to work up the raw material of sense-impressions into a knowledge of objects which is called experience ? " [1] Kant conceives this interaction in exactly the same manner as it was conceived by Descartes or Locke : the self and the not-self, or rather the cognitive process and the objects that condition it are, in his opinion, isolated from one another. He cannot imagine that the properties of a thing which in no way depends upon the knowing subject can wander over into the knowing subject's presentations.[2] " By means of mere relations a thing cannot be known in itself. It may therefore be fairly concluded that, since through the outer sense nothing but mere presentations of relations are given to us, the outer sense can contain in its presentation only the relation of an object to the subject, and not the inner nature which belongs to the object by itself." [3] Accordingly, it is clear that the object of knowledge can be no other than our presentations ' which are wholly

[1] *Kritik* B 1, Max Müller, p. 715. See also *Kritik* A 19 = B 33, A 26 = B 42, A 27 = B 43, A 34-5 = B 51, B 72, B 73, and many other passages. Cf. *Prolegomena*, § 13 (Anm. ii. and iii.), § 32, § 36. Concerning the word ' rühren,' Vaihinger, in his *Commentar zu Kants Kritik der reinen Vernunft*, points out that in Kant's time this word signified in psychological literature much the same as ' reizen ' (vol. i. p. 175).

[2] *Prolegomena*, § 9.

[3] *Kritik*, B 67, Max Müller, p. 732.

within us'[1]—no other than 'our ideas,' as Locke would have put it. As to outer things, "we know nothing save our way of perceiving them, a way which is peculiar to us, and which, whilst not necessarily belonging to every being, must necessarily belong to every human being."[2] In widening the sphere of our sense-experience we know only ourselves,—so Kant, much after the manner of Descartes, maintains. "If we could bring this intuition of ours to the highest degree of clearness, we should not thereby come nearer to the nature of objects in themselves. For in any case we should only know completely our own mode of intuition, *i.e.* our sensibility, and this always under the conditions, originally attaching to the subject, of space and time. What the objects in themselves might be would still never become known to us, through the clearest knowledge of their appearance, which is alone given us."[3] Even the distinction between the essential and the accidental properties of phenomena depend, not upon the things themselves, but upon the organisation of the knowing subject. "In phenomena we commonly distinguish that which essentially pertains to the intuition of them and which holds good generally for every human sensuous faculty from that which belongs to intuition only accidentally, seeing that it is valid not for the relation of sensibility in general, but only for a particular position or organisation of this or that sense organ."[4]

[1] *Kritik.* A 129, Max Müller, p. 105.
[2] *Kritik,* A 42 = B 59, Max Müller, p. 34.
[3] *Kritik,* A 43 = B 60, Max Müller, p. 35.
[4] *Kritik,* A 45 = B 62, Max Müller, p. 36.

This description of the relation between things and the process of cognition in sense-experience reminds one strongly of the conception of experience we have already met with in dealing with rationalistic and empirical writers.[1] But the objection may be urged that these conceptions, so far from constituting an unrecognised assumption of the *Critique of Pure Reason*, are an outcome of Kant's eminently original theory of knowledge. Seeing that Kant's system is still regarded by many as the ideal of *critical* philosophy, the objection is worth considering. It will easily be seen to be unfounded. Kant's predecessors had wrestled with an insoluble problem as to how knowledge can be possible if the self and the not-self are isolated from one another. Kant was well aware that the problem could not be solved by the comparatively simple means at their command, but he gave an answer *to the same question* (though differently formulated, as will be shown later on) by having recourse to constructions artificial in the extreme. The artificiality itself shows that Kant started with the idea that there is a gulf between knowledge and its objects, and did not arrive at that idea as the result of his inquiry. And a detailed examination of the *Critique* entirely confirms this conjecture. Without any investigation of the matter, apparently on the strength of the traditional view alone, Kant was convinced that sense-experience cannot yield universal and necessary knowledge. This followed, in his opinion, from the very nature of experience. Moreover, all the 'data' of experience, *i.e.* sensations passively received from without through our receptivity (*Receptivität, Sinnlichkeit*),

[1] See, *e.g. Kritik*, B 308.

are absolutely disconnected; in Kant's opinion they contain *no relations at all*, not even contingent relations.[1] The relations exhibited in experience are not discovered by the knowing subject, they are created by him: all synthesis is the result of the spontaneity of the knowing subject. "The combination (*conjunctio*) of a manifold," says Kant, "can never come into us through the senses, and cannot, therefore, be already contained in the pure form of sense-intuition. For it is an act of the spontaneity of the faculty of apprehension. And since, in order to distinguish it from sensibility, we must call this faculty understanding, all combination, whether we are conscious of it or not, whether it be a combination of the manifold of intuition or of various concepts, and again, whether the manifold of intuition be sensuous or non-sensuous, is an act of the understanding. This act we shall describe by the general name of *synthesis* in order thereby to make prominent that we cannot represent to ourselves anything as combined in the object without having ourselves previously combined it, and that, of all presentations, *combination* is the only one which cannot be given through objects, but can only

[1] *Kritik*, A 19-20 = B 34. "The effect of an object upon the faculty of apprehending, so far as we are affected by such object, is sensation. . . . In the phenomenon that which corresponds to the sensation I call its *matter*; but that which brings about that the manifold of the phenomenon is directly apprehended as arranged in certain relations, I call the *form* of the phenomenon. Now that in which the sensations can merely become arranged and placed in certain forms cannot itself in its turn be sensation. It is then obviously the matter of all appearance that is alone given to us *a posteriori*; its form, on the other hand, must lie ready for the sensations as a whole in the mind *a priori*, and can consequently be considered in abstraction from all sensation." That this contention is unproven is shown by Vaihinger, *Commentar*, Vol. ii. pp. 69 ff.

be brought to pass by the subject itself, because it is an act of its spontaneity." [1]

These contentions in regard to experience are not conclusions from Kant's system of thought; they lie at the foundation of it. It is just because Kant is convinced that relations are 'not given' that he begins the *Critique* by affirming that knowledge contains elements which are *a priori*, *i.e.* contributed by the mind. But the question is, how does Kant know that what is 'given' in experience must always be *unrelated*? Search through the *Critique of Pure Reason* as diligently as you may, you will nowhere find a proof of this important position, but merely assertions to the effect that it must be true.[2] Now this means that the grounds for the view in question lie hidden among the presuppositions of the Kantian philosophy; they are to be found in the conceptions —used by the empiricists, the rationalists, and by Kant himself at the beginning of the *Critique*—of the relation between the self and things to be known. If experience consists of the action of things upon the mind, and if the mind is a self-contained sub-

[1] *Kritik*, B 129-30, Max Müller, p. 744. The same contention is found in the first edition of the *Critique* in the *Transcendental Deduction of the Pure Notions of the Understanding*, A 98-9, 120, 129-30. See also an interesting footnote, A 120. Volkelt shows that the first metaphysical deduction of space and also of time (*Kritik*, A 23 = B 38, A 30 = B 46) are only valid on the assumption that all synthesis is an act of the knowing subject's spontaneity. Kant himself, however—as is often the case in the *Critique of Pure Reason*—is not clearly aware of what lies at the basis of his inquiry, and therefore does not express himself clearly. See Volkelt, *Kants Erkenntnisstheorie*, pp. 215 *sqq.*

[2] Often these assertions are unsupported by any other considerations; *e.g.* in the passage quoted above: "of all presentations, *combination* is the only one which cannot be given through objects, but can only be brought to pass by the subject itself, because it is an act of its spontaneity" (*Kritik*, B 130, Max Müller, p. 744).

stance (even though it be as such an object of practical faith and not of theoretical knowledge), it is clear that all the experiences of the knowing subject consist entirely of his mental states, and that the relations between them are conditioned by the nature of the subject to a greater degree even than the sensations. According to this conception of experience, the empirical 'data' contain only sensuous and disconnected elements; and since relations are non-sensuous in character, they are supposed to be produced by the knowing subject himself. Hence on the very first page of the *Introduction* Kant puts forward a contention which predetermines the whole course of the inquiry—the contention, namely, that all universal and necessary truths (all necessary relation) can come from no other source than the understanding. Under the influence of this assumption, Kant takes as the central problem of a theory of knowledge the question as to the possibility of synthetic *a priori* judgments. The problem is difficult enough in itself, but Kant's mode of stating it increases the difficulty. He asks how there can be such universal and necessary judgments when all our information about things is obtained solely through sense-affection. By universal and necessary judgments are meant judgments indicating a necessary relation in the object and determining this relation for all past, present, and future objects.

The very statement of the problem sufficiently explains why Kant conceived that there could only be three possible ways of solving it. Knowledge must either be a copy passively received from the action of things upon the mind; or it is a copy

implanted in the mind by God and which, owing to God's goodness, corresponds with external things; or, finally, knowledge has reference not to the things which act upon the knowing subject's mind, but to their effects, to their phenomenal appearances in the mind, which appearances must have a certain regularity because the *form* of their synthesis in the mind is necessarily determined by the nature of the knowing subject.[1] The first alternative is pronounced by Kant to be unsatisfactory because it excludes the possibility of universal and necessary truths, of the existence of which Kant is dogmatically certain. The second alternative he hardly considers at all, and dismisses it as fantastic.[2] He rejects even the modified form of it—the contention, namely, that the logical necessity involved in thought is the necessity of things themselves—and overlooks the element of truth undoubtedly contained in this principle of rationalism, —an element indispensable to all human thinking.[3] Thus he had no choice left but to adopt the third hypothesis.

A consideration of the ideas upon which Kant's theory is founded is sufficient to show that he starts with dogmatic assumptions similar to those made by the empiricists and the rationalists. But the extraordinary originality of Kant's system lies in the *means* whereby he tries to avoid the difficulties which had wrecked the theories of his predecessors. He supposes that the necessary and regular structure of

[1] See, *e.g. Kritik*, B 116-7, and *Prolegomena*, § 36.

[2] Often he does not mention it as a possible solution of the problem. See, for instance, *Kritik*, A 92-3 = B 124-5; *Prolegomena*, § 14.

[3] This matter and the contradictions that follow from Kant's treatment of it are discussed in Volkelt's *Kants Erkenntnisstheorie*, pp. 25-27, 160-203.

nature as it is known to man is a product of the organisation of the human mind; so that it is not nature which through experience dictates her laws to the mind, but the mind itself that imposes those laws upon nature and is therefore able to know them (the Copernican point of view in philosophy).

According to this view, nature as it is in itself remains absolutely inaccessible to human knowledge; but one might have supposed that the human mind, the law-giver of nature as phenomenal, must be knowable to its innermost depths. In Kant's opinion, however, that is not so. The mind knows itself only in so far as it affects its own sensibility, and thus gives rise to the *disconnected passively received data* of inner sense. These form a regular and orderly whole owing again to the *a priori* forms of sense and the synthetic activity of the understanding. Thus we do not know even ourselves as we really are, but only as we *appear* to ourselves to be in accordance with the laws of our cognitive activity.[1]

Knowledge, then, as conceived by Kant may be represented as follows: The world of the not-self is confronted with the world of the self that has a definite inner structure something like a prism (the *a priori* forms of sense and of the understanding). Like a stream of white light, the former is broken up into coloured rays and appears to the self in accordance with the law of the mind's structure. This appearance is knowledge; knowledge consists always of passive 'data' and relations brought about by the activity of

[1] *Kritik*, B 68-9, 153-6. Vaihinger in his *Commentator*, Bd. ii. pp. 125-129, points out the arbitrariness of Kant's assumption that an inner sense is necessary as an intermediary for our knowledge of our own mental life.

the refracting prism itself (*i.e.* of the understanding).[1] For self-knowledge, too, a refracting prism is necessary, and the self, therefore, can likewise be known only as phenomenal. Thus, the self and the not-self, as they really are, remain altogether unknowable. The world we know consists solely of sense-data and of the relations between them that have their source in the understanding. This world is only a presentation, and, in so far as it is known, it involves solely the faculties of sensibility and understanding; its structure is determined by the *relations between these two faculties and not by the relations between the self and the not-self.*

It might seem, then, as though Kant's system could not, after all, be based upon the assumptions made by empiricism and by rationalism as to the relations between the self and the not-self in the process of knowing. Kant's system proves itself to be original precisely in this respect, that the self and the not-self in the rationalistic and empirical sense of the terms disappear altogether, and it is difficult, indeed, even to give expression to his thought by means of the usual terminology. But from what has been said it will be seen how the transformation took place. At the beginning of his inquiry Kant proceeded on the assumptions of empiricism and of rationalism, but he subsequently erected on the same foundations an entirely new edifice, and so reconstructed the

[1] This simile, like all pictorial representations, may lead to misunderstanding. It should be constantly borne in mind that, according to Kant, the phenomenon and the thing in itself are utterly disconnected, so that there can be no question of any parallelism between the two. It must be remembered also that the refracting prism (the organisation of the cognitive activity) is known to us only through its effects (the *a priori* forms) and not as an *independent entity.*

conceptions he was dealing with that the traditional presuppositions can no longer be recognised in the old terms, although they still remain at the basis of his system. The position now assumes the following form. The cognitive process and the things-in-themselves (the appearance and that which appears) are isolated from one another. This position is openly avowed in the *Critique of Pure Reason*, but it is stated as the *conclusion* and not as the *starting-point* of the inquiry. In truth, however, it was present from the first in the traditional assumptions which constitute the hidden background of the *Critique*.

These assumptions evince themselves as fatal for the Kantian theory of knowledge. Not merely do they deprive it of its critical character, they make it impossible of proof and even positively false, since they create for it an insoluble problem. I shall first endeavour to show that Kant's theory is devoid of proof.

Kant seeks to determine the conditions of the universality and necessity involved in knowledge, while he starts with the dogmatic assumption that the data of experience are due to the action of some unknown things on the cognitive faculty. Consequently, he thinks there can be only three hypotheses as to the nature of knowledge. According to two of them, knowledge consists in a correspondence between presentations and objects, while, according to the third, knowledge consists in producing objects in so far as they are phenomenal. The first two hypotheses fail to account for knowledge, and Kant is compelled, therefore, to adopt the third alternative. The latter involves an inference from the presence of the con-

sequent to the presence of the ground, and, according to the teaching of the traditional logic, such inferences can at best lead to a hypothetical conclusion and never to a necessary truth. But Kant's argument is unsound not only from the point of view of the traditional logic but also when looked at from another point of view.[1] In addition to the three hypotheses recognised by him, there is possible a fourth, which Kant overlooked, although it would render universal and necessary truth far more intelligible than the hypothesis actually adopted by him. Suppose, in fact, that knowledge neither *corresponds* to objects nor *produces* them, but *contains* them just as they really are.[2] In that case, as will be shown in Chapter VII., a more satisfactory explanation can be given of the universality and necessity involved in knowledge than the one offered by Kant.

In defence of Kant it is often urged that his system does not rest merely upon an inference from consequent to ground (from experience to the conditions of its possibility), but that he rendered it secure by showing that scientific experience actually contains all the conditions presupposed by his hypo-

[1] Concerning inferences from consequent to ground, see further, Part ii. ch. ix.

[2] It is true that Kant hints at the possibility of such knowledge for a being endowed with an intuitive understanding or the faculty of intellectual perception. But, without further discussion, he declares that man does not possess such a faculty, that human receptivity is always sensuous, and that the human understanding is discursive and not intuitive (see *Kritik*, B 307 *sqq.*). Perhaps one of the reasons why Kant denied intuitive knowledge to man was that he had an exaggerated idea of it—viz. he supposed that an intuitive understanding must be a faculty not merely of intuiting but also of creating the objects intuited—creating them not as phenomena but as things-in-themselves (see *Kritik*, B 72; this conception of intuitive understanding is worked out particularly in the *Kritik der Urteilskraft*). Such a degree of creative power can certainly not be ascribed to the human cognitive activity.

thesis. And, indeed, a thinker of Kant's great acuteness would be certain to offer further confirmation of his philosophical position. In the *Vorrede* to the second edition of the *Critique*, he says: "In this preface I put forward what is advanced in the *Critique*, and which, as a change in the way of thinking, is analogous to the Copernican hypothesis, as a hypothesis only, although in the treatise itself it is proved not hypothetically but apodictically from the nature of our presentations of space and time and from the elementary notions of the understanding." [1] Kant's analysis of experience, however, in no way verifies his hypothesis. In the "Deduction of the Pure Notions of the Understanding," he certainly succeeds in showing that scientific experience contains, as the necessary condition of its possibility, the notions of substance, causality, unity, multiplicity, etc., and that the first and foremost of all its conditions is the unity of apperception. But it does not by any means follow that the necessary elements of experience must needs have their source in the cognitive activity. They could just as well, and indeed far better, fulfil their functions as the conditions of experience if they formed the groundwork of the world itself immediately apprehended in the acts of empirical knowledge. Kant certainly succeeds in showing that unity of consciousness is a necessary condition of experience. Yet, he does not by any means prove it to be a sufficient condition. It is *a priori* clear that the possibility of experience could be more securely accounted for if it could be shown that the individual unity of a thinking mind's consciousness is related to a super-individual cosmical

[1] *Kritik*, B xxii. Note.

unity, which reveals itself in intuition to the individual. It is significant that expositors of Kant and even his orthodox followers often take the transcendental unity of apperception to mean a super-individual synthesis. Nevertheless, the *Critique of Pure Reason* yields no direct support to such an interpretation,[1] and it is only in the *Prolegomena*, in so far as Kant uses there the term 'consciousness in general,' that the possibility of such a view is indicated.[2] Therefore, in what follows I shall regard the transcendental unity of apperception as a synthesis which is not numerically identical in different minds (although it is exactly alike in all human beings), and shall attempt to show that such a synthesis does not in itself enable us to solve the problem of knowledge.

A no less striking impression is produced by the deduction of the pure notions of the understanding and the proof of certain principles, such as the permanence of substance. All that Kant succeeds, however, in showing is that these elements are present in experience and that they are necessary conditions of its possibility. But in order to pass from these unquestionable truths to his own theory he has again to fall back upon the contention that necessary relations must be *a priori*, and that, therefore, all the conditions of experience he has enumerated are notions of the understanding, which are appli-

[1] No doubt Kant would have himself acknowledged that a dependence of the individual upon a cosmical reason would furnish the most secure condition of knowledge, for in the *Dialectic*, in discussing the Ideal of Pure Reason, he constantly maintains that a regulative use of Ideas is necessary for a complete unification of all the syntheses in such fashion *as if* they were coordinated in a higher reason which is feebly copied by our reason.

[2] §§ 20-21.

cable to phenomena only.[1] These considerations in no way confirm Kant's hypothesis, for they are entirely based upon it. Grant that the conditions of the possibility of experience are at the same time the necessary conditions of the possibility of things immediately apprehended in experience, and it will at once become apparent that Kant's hypothesis is not proved, although, no doubt, he is right in the first part of his argument.

The possibility of intuitive knowledge deprives another important contention of Kant's of its value. Kant maintains that the conditions of the possibility of experience cannot themselves be abstracted from experience—for how can we abstract from experience that which is necessary for any, even the most elementary, experience; the conditions of experience must, therefore, be *a priori* conditions. This argument is decisive against the attempt made by Locke, Hume, Mill and other individualistic empiricists to derive from experience the conditions of experience. Thus, Hume imagined that causal relation, substantive unity, and such like elements of scientific experience, are not originally contained in experience, but gradually arise in the human mind as a result of experience. To be more exact, the notion of causality in his view was not even *derived* from experience, but was for the first time *created* by it. Yet it is obvious that causal relation, substantive unity, etc., are conditions of the possibility of all, even the most rudimentary, experience. Hume's position is, then,

[1] For instance, in his proof of the second analogy of experience (in the second edition), Kant writes: "such a notion as carries with it a necessity of synthetical unity can only be a pure notion of the understanding, a notion, which does not lie in perception" (*Kritik*, B 234).

hopelessly contradictory: *he maintains that experience brings about the conditions* of its own possibility. It is clear, however, that this argument does not prove what Kant intends it to prove. It merely shows that those elements of knowledge which make experience possible cannot themselves be derived from experience; but it does not show that they spring from the understanding: they may be *ultimate data of experience.* In other words, this argument is decisive as against individualistic but not as against universalistic empiricism.

In the "Deduction of the Categories" and the "Analytic of Principles" Kant attempts to prove his hypothesis in yet another way. He tries to show that the conditions of the possibility of experience are at the same time the conditions of the possibility of things as phenomenal. He maintains that our presentations become objective, *i.e.* are referred by us to objects, only in so far as they exhibit a necessary synthesis due to the unity of apperception. This argument again yields no direct confirmation of Kant's hypothesis. It has force only for those who assume that there is a gulf between the knowing subject and the known things, and are, therefore, struggling with the insoluble problem as to how 'my' states can appear as 'not mine,' and even assume the character of 'given' things.

As already admitted, all Kant's arguments contain an element of truth. Indeed, his system as a whole is permeated with far-reaching reflexions which have become an integral part of many subsequent systems. Almost in every section of his exhaustive work Kant insists on these truths, and at the same time adds to them his ungrounded constructions. A

close association is thus formed in the reader's mind between the two, and he gets into the habit of thinking that the acceptance of what is true in the philosophy of Kant involves the acceptance of all the specific peculiarities of the Kantian doctrine. This auto-suggestion is not easily dispelled, especially as Kant's involved and sometimes vague arguments are difficult to analyse. Kant discovered the organic connection of the non-sensuous skeleton of experience with the sensuous material of it, and thus proved that necessary truths can be obtained through experience. But it does not follow that all the necessary aspects of 'my' experience have their source in 'my' nature. The explanation rather is that the world as it is in itself is 'given' to me in experience as one whole with all the necessity of its nature.

What particularly appeals to a modern reader trained in natural science is that Kant not merely works out a theory of empirical knowledge, but emphatically declares almost on every page of the *Critique* that human reason must content itself with a knowledge of the objects of possible experience. It is no doubt true that all knowledge must be experimental, but this truth is inextricably interwoven in Kant's system with the erroneous belief that any experience of objects must be sensuous and can give us knowledge of appearance only. That erroneous idea obtains a firm hold on the mind of the reader mainly because in Kant's system it is closely connected with a most fruitful conception which has had a profound influence on the philosophy of the nineteenth century,—the conception, namely, of the impossibility of transcendent knowledge. Once convinced of this truth, the reader begins to imagine that he is bound

to accept it in the specific form given to it by Kant—in the form, *i.e.*, of the contention that the knowing subject's presentations can bear no witness to the being or the qualities of things external to the subject. But the indisputable truth involved in Kant's conception amounts to a much simpler assertion, and an assertion that far less predetermines the course of further reflexion,—the assertion, namely, that knowledge can bear no witness to the being or the qualities of things external to the process of knowing. Kant rightly insists that the knowing subject cannot *by the spontaneity of his own individual thought* copy the world of things-in-themselves (as the rationalists imagined he could). Nevertheless, the knowing subject may be capable of intuitively following in experience the spontaneous activity of things as they are, and thus of infinitely transcending the limits of his own self.

So far I have tried to show that Kant failed to prove the truth of his theory and that there is possible at least one other solution of the problem of knowledge which has not yet been coherently worked out in the history of philosophy. I shall now attempt to show further that Kant's hypothesis is erroneous.

At the outset, one circumstance which throws new light upon the Kantian system should here be noted. Though it cannot be said to be a decisive argument against Kant's view, it certainly occasions doubt as to its truth. Kant's philosophy impoverishes the world;[1] it unconsciously deprives the world of most of its contents. According to Kant, the world we know is appearance. This would matter but little

[1] Of course I am only referring here to the world which Kant takes to be scientifically knowable.

if the word appearance could be taken to mean what Schelling, for instance, meant by it. All the richness and fulness of life, all its diversity and its multiplicity, are easily covered by the concept of appearance in the sense of a living, though inadequate, revelation of some deeper essence. But that is not what Kant means by appearance. In his system a phenomenon is *merely knowledge and nothing more.* One is apt to imagine that the phenomena spoken of in the *Critique of Pure Reason* are the various forms of life which in themselves are not intellectual in character but form the object or the content of knowledge. According to Kant, however, a phenomenon is not only a content of knowledge but is itself an intellectual construction, every part of which simply subserves the function of being an element in knowledge, and which is, *apart from this function, devoid of all meaning.* Indeed, the contents of the world known to us consist, according to Kant, of nothing but sense-data, which would be a meaningless, disorderly, and lifeless mass were they not received into the forms of sense and arranged by the forms of the understanding which transform them into presentations and even into objects of experience. And these forms, in their turn, are lifeless and meaningless apart from their significance for knowledge. Particularly striking in this respect are the categories of substance and of cause. The everyday consciousness understands by them something living and real, something which has *in itself* no specially intellectual significance. By substance we mean the independent individuality, the ultimate core of being, and by causality we mean activity, expenditure of energy. No trace of this living significance is to be found in Kant's treat-

ment. In this view substance and causality are merely the intellectual *rules* of a necessary, simultaneous or successive *synthesis* of sensations—rules by which sensations are built up into presentations with an objective significance. Thus, the syntheses of causality, substance, etc., are purely intellectual constructions and nothing more. The whole world, according to Kant, is a presentation all the elements of which exist merely in order to constitute that presentation. This is an extreme form of intellectualism, according to which the only process we know is *the process of knowing*. The denial of all transcendency is pushed here to its utmost limit, and to the question: What is the nature of the known object? a follower of Kant can either give no answer at all, or he is compelled to say that knowledge can only be knowledge of the cognitive process, since it can in no sense transcend itself and its intellectual elements.

The oppressive poverty of Kant's conception of the world does not strike the reader simply because it is too overwhelming to be realised. If the intuitional view be in fact the true view, and if things as they really exist become, when comparison is brought to bear upon them, presentations and judgments—or, to put it generally, become knowledge—it is no wonder that the followers of Kant do not draw back from the thought that the life of nature in all its richness and fulness is merely our presentation. Unconsciously following the truth, they mean by 'presentation' the world of actual existence. They overlook the fact that consistently with the Kantian doctrine they ought to mean by it something very different. It is, indeed, extremely difficult to conceive of the world as interpreted by Kant. Before all else,

that world is devoid of every activity except the activity of the understanding, which groups sensations together according to definite rules. The waves break against the cliffs of the seashore; the leaves rustle and flutter in the wind; a vulture dashes headlong from the sky and seizes a peacefully cooing dove—but there is not, in truth, the slightest trace of activity present in any of these phenomena. Why, then, do we believe that everything outside of us lives and moves? The answer, that this belief is a result of the anthropomorphic habit of transferring the activities we are familiar with in inner experience to our ideas of external things will not avail a follower of Kant, for according to the Kantian theory, we are not aware of *any of our own activities with the exception of the cognitive syntheses.* The ego as it is in itself may be active in a variety of ways other than that of knowing, but it is not in a position to know that it is. For self-knowledge it is necessary that the life of the self should *affect* the sensibility (the receptivity) of the self, and thus break itself up into a number of lifeless, disconnected, passively received sensuous states. These states then form the matter for the active, but purely intellectual, synthesis of the understanding which transforms them into the idea of the self. "The mind's intuition of itself is not as if it were presented immediately as self-active, but according to the way in which it is internally affected, and consequently as it appears to itself, not as it is."[1] "I cannot determine my own existence as that of a self-active being, but I present to myself only the spontaneity of my thinking, that is to say, of the act of determining, and my existence remains sen-

[1] *Kritik*, B 69, Max Müller, p. 733.

suous only, that is, determinable as the existence of a phenomenon. Yet it is on account of this spontaneity that I call myself an *intelligence*." [1] "I exist as intelligence which is solely conscious of its faculty of combining or synthesising." [2]

Take an instance from the emotional and volitional life. Suppose I experience the desire to play a certain piece of music on the violin, then the desire, arising therefrom, to buy the piece of music, followed by a number of activities, and finally the aesthetic enjoyment of the music. A follower of Kant would have to maintain that all these volitions and feelings consist of sensuous data, which stand in no relation to one another except the relations introduced by the understanding.

Not only does Kant banish from the world all activity except the intellectual synthesising of the data of sense, he also banishes from the world all *inner meaning* and therewith all *inner relation* between its elements. And this, indeed, is inevitable if the world so far as its content is concerned is a congeries of sensuous data. "If I abstract from all conditions of intuition, and confine myself solely to the notion of a thing in general, I can make abstraction from all external relations, and yet there must remain a notion of that which indicates no relation, but merely internal determinations. Hence it seems to follow that in each thing (substance) there is a somewhat which is absolutely internal and which is prior to all external determinations, rendering them possible." [3] "But this necessity, which is grounded

[1] *Kritik*, B 157 Note, Max Müller, p. 761.
[2] *Kritik*, B 158, Max Müller, p. 762.
[3] *Kritik*, A 283 = B 339, Max Müller, p. 230.

upon abstraction alone, does not appertain to things, so far as they are given in intuition with such determinations as express mere relations, without having as their foundation anything internal, simply because they are not things-in-themselves but only phenomena." [1] Our inner life, in so far as it is known to us, has exactly the same lifeless character. "If the complaint 'that we do not see into the inner nature of things' means that we do not comprehend by means of the pure understanding what the things which appear to us may be in themselves, those who make it are altogether unfair and unreasonable." And they are unreasonable because we can only know things by means of the senses, and because "it is not so much as vouchsafed to us to observe our own mind with any other mode of intuition than that of our inner sense." [2]

It is no wonder, then, that Kant affirms matter to be the only substance which we can represent to ourselves. At the same time, he comes very near to the assertion, which indeed he ought to have made, that movement is the only form of change which can be apprehended by us.[3] Strictly speaking, this implies that the categories of substance and of causality are not applicable to inner experience.[4] But since, according to Kant, there can be no experience apart from these categories, the question is forced upon us, how then inner experience is possible at all and how it can find expression in judgments that have an objective significance? It will be shown later that in his inquiry into the objective

[1] *Kritik*, A 284-5 = B 341, Max Müller, p. 231.
[2] *Kritik*, A 277-8 = B 333-4, Max Müller. p. 226.
[3] *Kritik*, B 291-2, B 277-8, B 154. [4] See *Kritik*, A 245-6.

character of judgments, Kant left inner experience almost entirely out of account.

The world of concrete presentations is in the highest degree impoverished by Kant, but the conceptual world is impoverished by him to a yet greater extent. This is less obvious, partly because concepts are, as a rule, but vaguely thought by us, and false theories about them are not, therefore, easily detected. According to Kant, a concept is simply a rule of synthesis. Concepts may be either empirical or pure. Empirical concepts are the rules for the synthesis of certain definite sensuous data, and pure concepts are the rules *for the synthesis of the manifold as such.* Thus, the most important concepts of metaphysics, those which seem to us to express the very essence of the universe, are merely *rules for combining something* and are utterly devoid of content except when applied to sensations. To give another example of the extraordinary poverty of the world as conceived by Kant, let us look at the most important notion we have—an Idea of Reason, not a concept of the understanding, according to Kant, namely, the Idea of God. What enormous wealth of content there is in this idea as present in the intuition of the mystics, of the saints and of religious men ! Philosophers, like Schelling, who are particularly interested in the idea of the Absolute, have a great deal to tell us as to its nature. But the *Critique of Pure Reason* ignores all this wealth of meaning. The idea of the Absolute is not reducible to a rule of synthesis and can hardly be said to be sensuous, whilst according to Kant the world as known contains nothing but sensations and the rules of their combination. In Kant's view the Idea of God, the Ideal of Pure Reason, is nothing

but a rule, or rather a demand (since it cannot be realised), for unconditioned totality in the synthesis of the sensuous data of experience. And of all the Ideas of Reason (the soul, the universe, God) Kant says that "they ought not to be assumed to be real in themselves, but their reality should only be allowed validity as the reality of a schema of the regulative principle of the systematic unity of all knowledge of nature." "If, then, we admit such ideal beings, we do not really enlarge our knowledge beyond the objects of possible experience but only the empirical unity of those objects, by means of that systematical unity of which the Idea furnishes us with the schema, and which, therefore, cannot claim to be a constitutive, but only a regulative principle."[1] This transforming of God into a rule for the synthesis of sensations affords, perhaps, the best illustration of Kant's genius and originality. The most remarkable thing about it is that even in this case Kant is partially right: universal synthesis is one of the innumerable predicates of God, and the main criticism to bring against Kant, in this connection, is that he has terribly impoverished the idea of God.

Finally, let me indicate one more limitation which the *Critique of Pure Reason* introduces into our conception of the world. Kant himself does not refer to it, but, as his commentators have noticed, it necessarily follows from his premisses. If Kant's view of knowledge be correct, it would have to be admitted that the existence of other minds than my own cannot be proved;[2] like the existence of God their existence could be, at best, only a matter of faith.

[1] *Kritik*, A 672-4 = B 701-3, Max Müller, p. 541.

[2] Cf. Volkelt, *Kants Erkenntnisstheorie*, p. 164.

Such a conclusion makes a philosophical system appear ridiculous to the 'plain man'; but to those who are familiar with the history of philosophy it will yield a new stimulus for thought and investigation.

The Kantian world of phenomena is so bereft of content that it cannot supply us with the materials necessary for a satisfactory solution of the fundamental problems of philosophy. Suppose, indeed, that Kant is right, suppose that the world I know is 'my' presentation, that it consist of 'given' matter (sensations) and of 'my' syntheses due to the spontaneity of my thought. How can such a world fall into two spheres—the world of the self and the world of the not-self, the inner and the outer world? All the 'given' material, all sensations, taken as such, are, according to Kant, subjective.[1] This constituent of knowledge, then, obviously does not form part of the external world; and the other constituent (the spontaneity of thought) is the very inner core of the conscious subject. It is next to impossible to extract from such constituents the world of the not-self. Kant's creative genius does not shrink even from this task, but his way of handling it involves contradictions and obscurities which escape notice only because of the ambiguity of the terms *subject* and *object* which he makes use of at every step. The words 'subject' and 'object' may stand for 'the self' and 'the external world' in so far as the latter consists of facts standing over against the former to be known. In that case, 'objective'

[1] The meaning of the term 'subjective' may be differently interpreted, but in any case it is clear that, according to Kant, sensations as such are not apprehended as a part of the external world. See *Kritik*, B 208, A 253-4 = B 309.

means belonging to the external world, proceeding from it, having cognitive value in relation to it. The same terms may have, however, a different meaning. The word 'subject' may denote the self as the bearer of knowledge and the word 'object' may denote the *content of knowledge*, whether forming part of the outer or of the inner world (in that sense the object of knowledge may be, for instance, 'some mineral' or 'my emotion of anger'). In this case, 'objective' means belonging to the content of knowledge, proceeding from it, having cognitive value in relation to it, and 'subjective' means proceeding from the self, and from that sphere of it which has not and ought not to have any feature ascribable to the content of knowledge. Obviously the notions of objectivity in the first and second senses are related to one another as species to genus. To distinguish them, I shall refer to the two species of objectivity included under the genus term as 'the objectivity of inner experience' and 'the objectivity of outer experience.'

An examination of the *Critique of Pure Reason* will show that Kant did not clearly distinguish between these two things, and that instead of investigating the problem of objectivity in general he was mainly concerned with the objectivity of *outer* experience. Moreover, he was guilty of a further confusion. The fact that the character of objectivity attaches both to inner and to outer experience shows that the problem of objectivity cannot be identified with the problem of the externality of some experiences and of the subjectivity of others—with the question, namely, why we are aware of some elements of experience as forming part of the world of the not-self and of others as belonging

to the world of the self. But Kant treats objectivity as if it were equivalent merely to the externality of the objects of outer experience. Into such a confusion it was all the easier to fall because in this reference the distinction between inner and outer experience hardly existed for Kant. The self and the not-self were in themselves, in his view, equally unknowable; both inner and outer experience referred, therefore, to some unknown transcendental X; and Kant overlooked the fact that no one ever refers his inner experience to any object outside his own inner life. He expounded his doctrine of the 'transcendental object' in a way which suggests that he meant by it simply the external object. Confronted in the course of his inquiry with the question as to the conditions of objectivity in general (both of inner and of outer experience), Kant took them to be the conditions of transcendental objectivity. And since transcendental objectivity has much in common with externality, Kant devoted no special attention to the latter. Thus the problem as to the externality of the objects of outer experience remains altogether unsolved, and the important discoveries that Kant made with reference to objectivity are vitiated by much that is artificial. And, naturally, the whole of his procedure is affected by the initial false assumption that the self and the things it knows are isolated from one another. Let us now go into the matter more in detail.

The fact that Kant paid far too little attention to inner experience and was almost exclusively concerned with the objectivity of outer experience is evident from the very examples he uses. Describing the way in which subjective judgments

of perception become objective judgments of experience, he speaks of such judgments as 'the room is warm, sugar sweet, wormwood bitter,' 'the air is elastic,' 'when the sun shines on a stone, it becomes warm,' 'a straight line is the shortest distance between two points,'[1] 'all bodies are divisible,' 'bodies are heavy'; he speaks of the way in which the empirical intuition of a house becomes a perception of the house, of the perception of the freezing of water, of the subjective sequence of the acts of perceiving the parts of a house, and of the necessary objective sequence of the events apprehended in the perception of a boat gliding down a stream; he speaks of judgments which assert a causal connection between the warmth of a room and the fire, between a ball of lead and a depression on the cushion, between the glass and the rising of the water above its horizontal surface.[2] In these cases, he leaves out of account the objectivity of the inner experience, and completely overlooks the fact that every assertion, even such an assertion as that 'wormwood is bitter' or 'the parts of this house follow one another in such and such a manner,' may be objective and become universal and necessary if it is understood as an expression of inner experience. Wormwood is necessarily bitter in relation to a particular sensibility of the knowing subject, the parts of the house necessarily follow one another in the necessary sequence of certain acts (movements of the eyes, etc.) in my perception of the house. It might be imagined that Kant does not refer to this because he takes for granted that the objectivity of inner experience is of the same kind as

[1] *Prolegomena*, §§ 19, 20.

[2] *Kritik*, B 129, B 142, B 162, A 192 = B 237, A 202 = B 247.

the objectivity of outer experience. But such an explanation is improbable. The fact that experiences which are not objective so far as the outer world is concerned may yet give objective knowledge of the inner world is much too important and the consequences that follow from it much too complex to render any mention of it superfluous. On the part of Kant any deliberate omission of it would have been quite inexcusable, for many expressions he uses suggest that the data of inner experience can never lead to objective knowledge. After giving the examples 'the room is warm, sugar sweet, wormwood bitter,' he adds in a footnote: "I concede at once that these examples do not represent such judgments of perception as ever could become judgments of experience, even though a concept of the understanding were superadded, because they refer merely to feeling, which everybody knows to be merely subjective, and which can never be attributed to the object, and consequently never become objective." [1] He opposes as subjective the arbitrary sequence of the perceptions of a house to the objective sequence of the perceived positions of a boat gliding down a stream, and he does not say a word in explanation of all the perplexities involved in such an antithesis.[2] He sometimes directly opposes 'perception in a thinking subject' to objectivity.[3] Not unfrequently he characterises the inner life as an ever-changing flux of internal phenomena, and seems to imply that it could never form the content of objective knowledge.[4]

[1] *Prolegomena*, § 19, Note.

[2] Cf. Karinsky's *Ob istinah samootchevidnih* (*On Self-evident Truths*) §§ 18-20; pp. 110-137.

[3] *E.g. Prolegomena*, § 18.

[4] *Kritik*, A 107, Max Müller, p. 88.

It must, then, be admitted that Kant limits his inquiry to one species only of objectivity, namely, to the objectivity of outer experience. Such a restriction was bound to affect the whole of his investigation by rendering the notion of objectivity needlessly *complicated*. As already pointed out, by the objectivity of knowledge Kant means not simply the relation of knowledge to an object, but its relation to a 'transcendental object,' by which he practically means the same thing as trans-subjective object. Nothing could be said against such an interpretation of objectivity had Kant simply affirmed that we regard a judgment as objective wherever the relation it expresses is referred by us to an object, *i.e.* wherever the relation is experienced as a relation present in the object. It would be granted by everybody that such a judgment must be universal and necessary, "for when a judgment agrees with an object, all judgments concerning the same object must likewise agree among themselves, and thus the objective validity of the judgment of experience signifies nothing else than its necessary universality of application." [1] The unity of the object judged about involves unity of the judgment, "for there would be no reason for the judgments of other men necessarily agreeing with mine, if it were not the unity of the object to which they all refer, and with which they accord; hence they must all agree with one another." [2] In identifying the objectivity of a judgment with its universality and necessity, Kant made an important discovery, the value of which is not affected by his artificial way of presenting it. He saw that a judgment becomes for us objective—*i.e.* is referred by us to an object—only

[1] *Prolegomena*, § 18. [2] *Prolegomena*, § 18.

when certain non-sensuous elements are added to its content. A simple association of two perceptions in my consciousness, *e.g.* the association of the idea of the sun that shines on a stone with the idea of the stone getting warm, contains as yet no material for an objective judgment about the relation between the sun and the stone.[1] An objective judgment in regard to the sun and the stone will be made from this associated material only when it can be said, *e.g.* that " the sun warms the stone "—when, that is to say, over and above the association of presentations a causal connection has been established between the sun and the stone.

But, now, the data of inner experience may lead to objective judgments—*i.e.* to judgments referring to objects—in precisely the same manner as the data of outer experience. The judgment 'anger prevented me from acting reasonably' is just as objective as the judgment 'the sun warms the stone,' and, exactly like the latter refers, however often I may repeat it, to one and the same object, viz. my emotion of anger. Here it is important to note that the anger which is the content of my objective judgment is not in any way referred by me to a transcendental object $= X$; nor is it in any sense external to me. The assertion that a necessary—*i.e.* an objective—judgment always refers to an object, by no means, therefore, implies that all objectivity means reference to an unknown X which lies beyond the *contents* of experience, nor even that the object of reference

[1] But unfortunately Kant overlooks the fact that such association already contains non-sensuous elements, the awareness of which provides the material for a judgment objective in relation to me, the knowing subject,—the judgment, namely, that in my experience the sun which shines on the stone is followed by the stone becoming warm.

must needs be external to the subject. This, however, is precisely what Kant takes it to mean, and thus confuses the problem of objectivity with the problem of externality. In the section on "The Synthesis of Recognition in Conception" he writes: "And here it is necessary to come to a clear understanding as to what we mean by the phrase an object of presentations. We have said above that phenomena are themselves nothing but sense-presentations which as such must not in like manner be taken to be objects (outside the faculty of apprehension). What, then, are we to understand when we speak of an object corresponding to, and, therefore, also different from, knowledge? It is easy to see that this object must be thought only as something in general $=X$; because, outside our knowledge we have nothing which we could posit as standing over against and corresponding to that knowledge." [1]

It is true Kant observes that every state of consciousness may be called an object, but it is not to this kind of objectivity that he refers when he speaks of the objectivity of knowledge. "Now we can, indeed, call everything, and even every presentation, so far as we are conscious of it, an object; but what this word is to signify with regard to phenomena, not in so far as they (as presentations) are objects but only in so far as they indicate an object, is a matter for deeper investigation." [2]

In the same section, that on "The Synthesis of Recognition in Conception," in which the definition of object is given, Kant says: "All presentations have, as presentations, their object and can in their turn

[1] *Kritik*, A 104, Max Müller, p. 86; cf. *Prolegomena*, § 18.

[2] *Kritik*, A 189 = B 234 5, Max Müller, p. 155.

themselves be objects of other presentations. Phenomena are the only objects which can be immediately given to us, and that which in them is immediately referred to the object is called intuition. These phenomena are not, however, things in themselves, but presentations only which have in their turn their object, yet an object of which we can no longer have an intuition, and which may on that account be named the non-empirical or the transcendental object $= X$." [1] It would appear as if Kant was distinguishing here two kinds of objects—intra-subjective and trans-subjective; but this cannot be his meaning, for immediately afterwards he adds: "The pure notion of this transcendental object (which is in truth in all our knowledge always one and the same $= X$) is that which in all our empirical notions can supply reference to an object, that is to say, objective reality." Kant, then, will not call a presentation objective unless it is felt to be forced upon me from without. It is not objective if it is experienced as my mental state, even though it may not be arbitrarily produced by me, but be due to my other mental states which in relation to it are its objects. The following statement brings out his conception of objectivity with sufficient clearness. In the "Proof of the Second Analogy of Experience," it is said: "We have presentations in us of which we can likewise become conscious. But however extensive this consciousness may be, however exact and minute, yet the presentations remain always only presentations, that is to say, inner determinations of our mind in this or that relation of time. How does it come about, then, that we posit for these presentations an object, or that we

[1] *Kritik*, A 108-9, Max Müller, p. 89.

assign to them over and above their subjective reality, another and I know not what kind of objective reality ? Objective significance cannot consist in the reference to another presentation (of that which it is desired to call object), for in that case the question would repeat itself, how does this presentation in its turn go out of itself and obtain objective significance over and above the subjective significance which belongs to it as a determination of the mental condition of the subject ? " [1]

Accordingly, by the objectivity of knowledge Kant means the relation of presentations to something which seems to lie beyond the subject as phenomenal, *i.e.* the element of trans-subjective compulsion which attaches to certain presentations, even though such compulsion is due solely to the nature of the cognitive process. There is, thus, good ground for saying that Kant confused the problem of transcendental objectivity with the problem of externality, with the question, namely, how my presentations can be referred by me to something that is not myself. And as he identified transcendental objectivity with objectivity in general, and, therefore, with the universality and necessity of judgment, the result is a great confusion of issues many of which were certain to escape notice. One such problem that remains altogether unsolved is just the problem of the externality of objects of outer experience. As we have seen, Kant takes all the elements of experience to be determinations of the knowing subject's mind ; the elements of objectivity, even though transcendental or trans-subjective, form no exceptions.[2] But in that

[1] *Kritik*, A 197 = B 242, Max Müller, p. 161.

[2] See, *e.g. Kritik*, A 129, Max Müller, p. 105.

case he can only explain the trans-subjectivity of outer experience by showing how ' my ' presentations may be so combined as to *appear* to be an external object, although in truth they *contain* no element of externality. And from the preceding three chapters it has become clear that an explanation of that sort is futile.

Further, Kant insists that our judgments are objective in so far as they contain *a priori* synthesis. *A priori* synthesis is involved in the very nature of thought, and without it unity of experience, and consequently the unity and the very existence of self-consciousness, would be impossible. When we are aware of presentations which are subordinate to an *a priori* synthesis and make judgments concerning them, we inevitably feel the necessity of the relations involved in them and are conscious of the reference of our judgments to one single object.

Now this explanation, acute as it is, can at best account for the objectivity of inner experience; it does not account for the objectivity of outer experience. The latter consists in a living consciousness of the dependence of the act of judgment upon a thing which does not form part of my mental life. The content of an objective presentation (*e.g.* of the presentation of a tree when I am looking at a forest) is felt to *be* a thing independent of me and not merely to *refer* to that thing. Kant's theory does not even suggest any explanation of this experience of externality. On his own showing it is absent from sensations and from the *a priori* rules which are due to the spontaneity of ' my ' thought; it cannot arise from a combination of the sensations with the categories of the understanding, for it is inconceivable that ' my ' activity by introducing order into ' my ' sensations could bring

about the appearance of a trans-subjective thing. It is sometimes contended that a complex of sensations *appears* as external because, owing to the necessary character of the *a priori* synthesis, sensations form a whole felt to be independent of my will, and compelling me to recognise its presence. But this argument breaks down because in the sphere of inner experience likewise the element of compulsion is constantly met with, and yet is not accompanied by the experience of externality. Suppose I experience a series of mental states, such as are involved in trying to construct a picture of the sea-king's palace out of such elements as crystal walls, stars on the ceiling, sea-weeds, etc. If I try to analyse this complex of experience in order to discover the succession of 'my' acts of remembering and combining, and in order to make a series of judgments about it, it will stand out in my memory as one single object, independent of my arbitrary caprice, compelling me to admit the presence of certain activities in it, and as yet at the same time in no sense external. My activities that form the content of my judgment will not be felt to belong to the not-self; they will not stand over against me in the same way as does a perceived or even a remembered tree.[1]

It is irrelevant to object that such judgments are unscientific—*i.e.* are not universal and necessary in the way in which the propositions of physics are—and that, therefore, what is asserted in them may well be lacking in the character of externality. In

[1] To see the truth of this it is necessary to analyse judgments upon experiences which I describe as 'mine' (see ch. iii.), and not judgments upon all the experiences that modern psychology refers—incorrectly, in my opinion—to the sphere of the inner life.

the first place, it is doubtful whether judgments referring to particular inner experiences are ever entirely devoid of the character of necessity. But, in the second place,—and this is the main point—that question need not be raised at all. All I am saying is that the content of an act of judgment may be independent of my arbitrary caprice and compel me to recognise its presence, and still not be apprehended by me as external.

The argument in defence of the Kantian position may, however, be modified in yet another way. It may be contended that the *a priori* synthesis is not only the condition of the possibility of the objects of experience, but the condition also of self-consciousness itself. The act in question is an unconscious act of synthesis, and, though it is due to the spontaneity of thought, its products in their necessary and unchangeable form stand over against the individual consciousness as something external, as an *independently existing nature.* This argument is partly founded upon Kant's doctrine of *productive imagination* as an unconscious process of transcendental synthesis that creates the images of things which then find expression through the notions of the understanding.[1] It is assumed that the products of such unconscious activity would appear to the subject, when they arise before his consciousness, as given from without and not as created by him. But this assumption is contradicted by the facts of our inner experience. We may sometimes do things mechanically ; for instance, as I sit engaged in a lively conversation by a table covered with delicacies, I may help myself now and then to the cakes, put jam on my plate, etc., without being

[1] *Kritik*, A 78 = B 103, Max Müller, pp. 64-5.

in the least aware of what I am doing. Yet, the moment I attend to the results and observe, to my surprise, the quantity of dainties piled up on my plate, I at once recognise that the unconscious activities which I now reproduce in memory, were 'mine' in the full sense of the term. I ascribe these activities to myself, not on the ground of any indirect considerations, such as visual or motor memory images of my hands taking the cakes, but because I am immediately conscious of wishes and activities which were present in me though I was not aware of them at the time.[1] The objection may be raised that this example is not *a propos*, because it is a case of empirical synthesis due to an already existing consciousness, whilst Kant is concerned with the transcendental synthesis to which consciousness in the first instance is due. Still, the example proves that according to the testimony of experience the fact of 'my' activity being unconscious is not a sufficient reason for its appearing to me, when it comes to be known, as trans-subjective. Kant's hypothesis, then, assumes something which not merely transcends all experience, but is not even analogous to any experience. The only remaining argument which can be brought in support of it is the contention that a denial of the hypothesis means a denial of "the only possible condition" of self-

[1] There are, indeed, cases in which we refer an activity to ourselves simply because 'my hands took a thing,' 'my feet moved,' etc., but the activity is then ascribed, strictly speaking, not to the self but to the body. This activity appears as something 'given' from without, and there is, indeed, reason to believe that it is 'given' from the sphere of the bodily life. The body can produce movements, such as the reflex movements, which are obviously 'given' to my self as something trans-subjective. I have discussed these topics in my book on *Voluntarism*, chapter i.

consciousness. There can only be self-consciousness if the object is opposed to the subject, the world of the not-self opposed to the world of the self—and this object can only be constructed by the pre-conscious syntheses of the subject himself. But this argument, to which the Kantians attach great weight, is invalid, for there may be other conditions of the possibility of self-consciousness than those assumed by Kant; one of such possible conditions I have indicated above in dealing with the theory of the immediate apprehension of the external world.

Another attempt may be made to prove that Kant has successfully explained the externality of the objects of outer experience. It may be contended that, according to Kant, there belong to the sphere of the not-self those images which have the form both of space and of time, and are subject to the rules of *a priori* synthesis, whilst images that are temporal only, and images which, though temporal and spatial, are not subject to the rules of *a priori* synthesis, form part of the inner world. Kant himself says that an empirical object "is called an outer object when it is presented in space, and an inner object when it is presented in temporal relations only." [1]

This explanation seems plausible, because it is quite true that a spatial image always contains an element of externality, of trans-subjective compulsion. But then a Kantian has no right to conceive of space in the manner here implied. According to Kant, an empirical spatial object that stands over against me in imagination contains no elements of externality or of objectivity: it may be experienced as something wholly subjective, as 'my' mental state. Space is

[1] *Kritik*, A 373, Max Müller, p. 303; cf. *Prolegomena*, § 49.

" a subjective outer presentation," as Cohen puts it in his book *Kants Theorie der Erfahrung*.[1] " Objects can consequently appear to us," says Kant, " without necessarily connecting themselves with the functions of the understanding." [2] " The manifold of presentations can be given in an intuition which is purely sensuous, that is to say, is nothing but receptivity." [3] Such a perception has no objective significance, *i.e.* is not referred to an object, and is experienced entirely as an inner mental state. Kant says so in so many words: " If I take away all thought (by means of the categories) from empirical knowledge, there remains no knowledge at all of any object whatsoever; for by mere intuition nothing can be thought, and the circumstance that this affection of my sensibility is in me constitutes in no way any reference of such a presentation to any object." [4] How, then, can that presentation become an external thing, *i.e.* become something which is not wholly referred by me to my self but is actually experienced as an independent existence ? The only refuge which is open to the Kantians is to refer to the forms of *a priori* synthesis, and to maintain that these, in conjunction with the form of space, convert subjective pictures of my imagination into objects which actually seem to possess independent existence—that is, that they create the *illusion* of externality. But we have already tried to make clear that *a priori* synthesis cannot give presentations the character of externality.

There is yet another consideration which shows that

[1] 2nd ed. p. 177. [2] *Kritik*, A 89 = B 122, Max Müller, p. 74.
[3] *Kritik*, B 129, Max Müller, p. 744.
[4] *Kritik*, A 253 = B 309, Max Müller, p. 207.

a reference to the form of space is not sufficient to explain the trans-subjective nature of outer experience. Certain experiences that have no spatial form at all are nevertheless clearly felt to be trans-subjective. Such, for instance, are fixed ideas, strivings, which may be described as 'given to me,' and so forth. Although this is only an indirect argument, it would prove to be decisive if an attempt were made to render the *Critique of Pure Reason* consistent with the facts just referred to. To do so it would be necessary to find a *more general* basis of trans-subjectivity than the form of space.

Finally, it may be urged that there was no need for Kant to account for the construction of the external world at all. By the objectivity of outer experience he simply means the *reference* of our presentations to an object $= X$; he does not mean that our presentations themselves become external objects. But if this be really Kant's meaning, so much the worse for his theory. When I perceive something in the outer world—for instance, when I look at a tree—I do not say: "I am aware of a presentation of a tree which refers to an X," but I directly experience the content of the perception as forming part of the world of the not-self. Leaving aside this objection, however, nothing would be gained by the admission that the objectivity of outer experience consists merely in the reference of presentations to some external X. Doubtless, in that case, no content of sensuous knowledge would be recognised as external, but a vague and unknown X would still stand over against our consciousness as something external, and it is just this trans-subjective element that remains in the Kantian philosophy inexplicable.

The spontaneity of 'my' thought, the necessary rules of 'my' synthesis, cannot possibly, so far as I can learn from experience, give rise to anything which would appear to me as 'not mine.'[1]

It should also be noted that in explaining externality by means of the *a priori* forms, Kant's philosophy is led to a contradictory result which may be expressed as follows: all that is 'given' (the complex of sensations) is subjective, but the addition to the given of 'my' activities (of the *a priori* syntheses) and of the forms of my sensibility gives rise to a trans-subjective object. The characteristic features of this formula bring it curiously near to the final results of the empirical and rationalistic lines of thought, and thus confirm my contention that the critical theory is based upon the assumption that the self and the not-self are isolated from one another.

The question can now be asked whether Kant's investigation of the objectivity of judgments has enabled him to attain the main purpose he had in view—to discover, namely, the conditions of the universality and necessity involved in judgment. In Kant's opinion a universal and necessary character attaches to all that which the mind contributes to phenomena in accordance with the necessary laws of the understanding—*i.e.* to all that which follows from the nature of our own cognitive activity. Kant believes that the necessity attaching to scientific propositions, *e.g.* geometrical propositions concerning space, is explained on the supposition that space is a form

[1] The fact that in outer as well as in inner experience things stand over against us as living realities and not merely as our presentations, and that the Kantian philosophy is unable to account for this fact is discussed by Professor Karinsky, *Op. cit.*, particularly in §§ 17 and 25.

of our sensibility. But because some product of the mental life is a consequence of my nature, it does not follow that I must, therefore, recognise it as *necessary*. Such recognition cannot take place unless the conditions of the origin of the product in question, viz. my activities occurring in this rather than in that particular manner, lend themselves to investigation and can be thoroughly analysed.[1] And yet Kant not only made no such investigation, but in the case of mathematics was even precluded from attempting it: space and time, which lie at the basis of all mathematical syntheses, are in his view passive forms of sensibility, they are *in* me, but the mechanism of their genesis remains absolutely unknown.

With regard to the question of the universality of judgments, Kant is in a worse position still. How can that which I contemplate at the present moment in one *particular* instance be taken as the pattern of what must take place at all times in all analogous cases?[2] A reference to *my nature*, or even to the fact that the observed structure of the phenomenon is a condition which renders experience possible and must, therefore, be always realised in experience, will not avail Kant, who rejects the method of rationalism. Such reference presupposes that the logical necessity manifested in some one instance that has been observed transcends itself and serves as a guarantee for what lies beyond it, namely, for all other cases of similar phenomena.

But even if we were to declare ourselves in agreement

[1] Karinsky, *Op. cit.*, shows that the *product* of the subject's creative work may contain no indication of the necessity of the forces that brought it about (see § 6).

[2] See Karinsky, *Op. cit.* § 4.

with all that I have so far been disputing in Kant's theory, we should still be left with a problem which his philosophy cannot solve. According to Kant, the contents of the phenomenal world consist of sensations, whilst the order in which they come and the relations between them are determined by *a priori* forms. Yet the *Critique of Pure Reason* and more particularly the *Critique of Judgment* make it clear that the *a priori* forms determine the structure of the world only in its most general features. The law of causality, for instance, asserts that "all changes take place according to the law of connection between cause and effect."[1] This law obviously does not indicate what particular event must necessarily follow a certain other event; the law does not show, for instance, how a definite combination of hydrogen and oxygen, under certain circumstances, necessarily produces water. The question, then, is: what is it that determines the relation between the *a priori* forms and the concrete sensuous data? The question is of fundamental importance for the theory of knowledge. It involves also the question as to the way in which we attain to knowledge of particular laws of nature, and more especially as to the nature and validity of inductive inference, as well as the question of the possibility of particular synthetic judgments.

This problem is analogous to the problem we had before us in dealing with the rationalistic theory of innate ideas.[2] Here again we find it insufficient to point to general principles upon which knowledge itself is founded; it is necessary to show how these principles are realised and made to apply to concrete living material. The relations between the *a priori*

[1] *Kritik*, B 232.

[2] Chapter ii. p. 63 *sqq.*

forms and particular sense-data cannot be accidental. Hence only two alternatives are possible: either this relation is also *a priori*, and in that case the whole structure of the phenomenal world has an *a priori* character, or the relation is established *a posteriori* from an examination of the data of experience. Both alternatives are fatal to the *Critique of Pure Reason.*

Suppose that the structure of the phenomenal world is throughout *a priori.* Then not only the general law of causality, but definite concrete cases of causal relation (such as the connection between a certain chemical reaction of hydrogen and oxygen and the formation of water) must likewise be *a priori.*[1] It would in that case be necessary to assume that the contents of the world—*i.e.* the sensuous materials to be synthesised—are also *a priori*, in the sense, at any rate, that their origin and presence in the mind of the knowing subject is not determined by anything beyond the cognitive faculty of the knowing subject. We should thus be driven to a thoroughgoing intellectualistic solipsism.[2] An eccentric hypothesis of this sort would, perhaps, add no fresh contradictions to the Kantian theory of knowledge. But the hypothesis would certainly possess a highly artificial character and be still more at variance with the testimony of experience than the other assumptions of the Kantian system. Without any further examination of it, it

[1] Kant hints at such a view when he speaks of the transcendental affinity of all phenomena as the basis of the association of phenomena in imagination.

[2] I will not consider here the attempts to avoid solipsism by supposing that the contents of the world and the syntheses of those contents have their source in a super-individual consciousness. Such attempts indicate a transition from the critical theory, as worked out by Kant, to the intuitional point of view.

may, therefore, be said that this line of thought would be destructive of the critical philosophy.

The second alternative is, however, equally beset with difficulties. If it be granted that the application of the *a priori* syntheses to some rather than to other groups of phenomena is determined *a posteriori* by the sensuous data themselves, this means that the sense-data possess certain properties or qualities which predetermine the way in which the *a priori* syntheses are to be applied to them. The relations between phenomena are so many and so various that such predetermination could only be conceived to take place on the supposition that the sense-data appear in consciousness, not as disconnected particulars, but as already related, so to speak, in the rough, and that the spontaneity of thought has simply to elaborate further these relations. That would be, in fact, somewhat analogous to Hume's conception of experience as originally containing merely the temporal relations which subsequently become transformed under the influence of habit and acquire new characteristics in the mind of the conscious subject. But this supposition strikes at the very root of the *Critique of Pure Reason*: it implies that not only sense-data but also ideas of relations can be 'given.' In that case, however, the unity and necessity of experience would be due no less to the unity of the world itself than to the unity of the self-consciousness of the knowing subject.

Kant did not specially deal with the question I am here pressing, but his answer to it may perhaps be gathered from his treatment of a problem of a still more general import. In the section on "The Schematism of the Pure Notions of the Under-

standing,"[1] he inquires how the rules of *a priori* synthesis which are pure notions of the understanding can apply to the data of sense. If an object is to be subsumed under a notion, both the object and the notion must be of the same kind. But sense-data and pure notions of the understanding are entirely heterogeneous and, therefore, the relation between them calls for special investigation.

The first thing to be noted is that Kant puts the question in far too general a way. In view of what he had already said in the *Critique* with regard to experience, he should have formulated it as follows : How can elements so heterogeneous as the *a posteriori* given sense-data and the *a priori* notions of the understanding come into relation with one another ? In other words, attention must be drawn, not merely to the heterogeneous character of the two components of experience, but to the heterogeneous sources from which they spring. If, however, the question were thus formulated, it would at once become apparent that Kant's answer to it—the interposition, namely, of the schemata of time—is unsatisfactory, for it merely pushes the problem one stage further back. The question cannot, in fact, be answered from the point of view of the *Critique*.[2]

From Kant's treatment of the subject it is clear that he adopts neither the first nor the second alternative suggested above, but that—illogically enough —he combines the two in one. He really affirms

[1] *Kritik*, A 137-147 = B 176-187.

[2] Professor Karinsky, *Op. cit.*, shows that the Kantian philosophy cannot solve this problem even with the help of the conception of the unity of self-consciousness and the necessary affinity between phenomena (§§ 26 and 27). I am raising here the same question in a somewhat different form.

that the rules of synthesis and the instances of their application are alike *a priori*; but he formulates his statement in such a way as to suggest that the criterion for applying the *a priori* forms is supplied by experience. And he achieves this result by dividing the *a priori* forms into two classes—the forms of sensibility and the forms of understanding, and then by using one of the former, namely, time, as an intermediary for applying the latter. It is easy here to overlook the fact that, according to Kant, time too is due to the nature of the knowing subject.

In truth, however, the difficulty cannot be solved in this way. The categories are said to apply to the data of sense in virtue of the temporal schemata, because the different forms of relation in time between sense-data correspond to the different forms of categorical synthesis. But a further question analogous to that already raised immediately presents itself. Time itself is an *a priori* form; what then determines the *temporal* order of the sense-data? If it is determined *a posteriori* by the events themselves, relations must be given from without—and this the *Critique* cannot admit. If it is determined *a priori* by the nature of the knowing subject, then the whole of experience is due to the nature of the knowing subject, and we are again landed in intellectualistic solipsism.

The doctrine of the Schematism of the Understanding suffers from other obvious defects. For instance, it is quite incomprehensible in what way the temporal schema of causality differs from simple sequence in time. Kant says that "the schema of cause and of the causality of a thing in general is the real upon which, when once it is taken to exist,

something else always (*jederzeit*) follows."[1] The word 'always' cannot here be taken to mean mere *capacity of repetition* on the part of the sequence, for in that case the category of causality could not be applied to events experienced for the first time. But it cannot be taken either to mean *necessity* of sequence, for if necessity were involved in the temporal sequence as such, the category of causality would no longer be needed. Indeed, Kant's account of the part played by the temporal schemata in experience renders the categories superfluous. The schemata resemble the categories so closely that Kant himself confused them. Thus, in the section on Schematism he takes co-existence to be the schema of the category of reciprocity, while in another connection he pronounces the category of reciprocity to be the condition of simultaneity in time.[2] The section on Schematism, short as it is, abounds in contradictions and obscurities. One of the great weaknesses of Kant's theory of knowledge comes, in fact, here to the surface.

To sum up. The assumptions upon which Kant's philosophy is founded are far from being original, but the explanation he offers of the conditions of knowledge is essentially original and has many features which have opened out new vistas before the philosophy of the nineteenth century. It was a great merit of Kant to have recognised the erroneous character of all theories which take knowledge to consist in a *correspondence* between presentations and things external to the process of presenting, or, in other words, the erroneousness of all transcendent theories of knowledge. In order to render knowledge explicable,

[1] *Kritik*, A 144 = B 183. [2] *Kritik*, A 144 = B 183, A 211 = B 256.

Kant saw that it was necessary to unite subject and object, to reconcile their opposition, and to do away with the idea of any barrier between them. Nevertheless, his method still bears traces of the older systems of philosophy: he still maintains that real existences, real things, are external to the process of knowing. The barrier is removed only between the knowing subject and the thing as an appearance for the knowing subject. The reconciliation is further incomplete in the sense that to subject and object no equality of status is assigned. In the theories of Kant's predecessors, things were supposed to *affect*, to force themselves upon, the mind of the knowing subject. In Kant's view, on the contrary, the knowing subject *creates* objects—and creates them badly, for they prove to be nothing but appearances for the knowing subject, and to be devoid of independent existence.

Yet the power of truth is proverbially great, and the distortions it may have suffered in the process of being born out of the old formulae become rectified of themselves, under the influence, as it were, of a *vis medicatrix naturae*. Despite Kant's argumentation the world of nature given us in perception remains for us full of life and energy; and admitting his true contention that there are no barriers between this world and ourselves, that it is known immediately, and that we cannot get beyond it, we gradually get accustomed to, and rest content with, our world. Discovering in it—notwithstanding Kant's theory—a real and an inexhaustible fulness of life, we learn to think that there are no enigmatic things-in-themselves beyond the world of perception, because things in all their mystery are given to us in perception;

and although it is no easy task so to handle this material as to obtain differentiated knowledge, our experience of things we take to be immediate.

Kant's theory thus seems to me to prepare the ground for universalistic empiricism (intuitionalism). The great thinkers who immediately succeeded Kant directly based their theories on a doctrine of immediate perception (intuition). Moreover, Kant himself, in drawing a distinction between the empirical and the transcendental consciousness, sometimes described the processes of knowing consistently with the requirements of an intuitional theory of perception. He represents the empirical consciousness as discovering relations which are already involved in perceptions; categories of causality, and so forth, seem almost to become detached from the knowing subject and to act independently within the sphere of given phenomena.[1] If the transcendental consciousness be still further distinguished from the empirical consciousness, and be interpreted as a super-individual consciousness numerically identical in all empirical subjects, there will result a fully developed doctrine of the immediate perception of the external world. In that case, however, we shall have gone beyond the philosophy of Kant.

[1] See Volkelt, *Kants Erkenntnisstheorie*, p. 20 *sqq.*

CHAPTER V

THE THEORY OF THE IMMEDIATE PERCEPTION OF THE EXTERNAL WORLD IN THE PHILOSOPHY OF THE NINETEENTH CENTURY

I

General Character of the Post-Kantian Philosophy

INDIVIDUALISTIC theories of knowledge, that is, theories based upon the assumption that all the experiences of the knowing subject consist entirely of his own mental states, had completed the cycle of their evolution by the end of the eighteenth century. In the philosophy of Hume, individualistic empiricism had well-nigh exhausted itself, and all that was left for Mill to do was to work out certain of the details. Rationalism, which presupposed that the ego is a self-contained substance, had reached its culmination in the philosophy of Leibniz. Finally, Kant made the last original attempt to construct a theory of knowledge without relinquishing the assumption that the self and the world are separate from one another. A further development was only possible on the condition that the theory of knowledge should penetrate to more fundamental philosophical principles, of which there had been no clear discernment, and widen its outlook by rejecting epistemological individualism and recognising the possibility of intuitive knowledge. The philosophy

of the nineteenth century actually introduced this new principle, and thus secured for itself the possibility of further progress.

The main tendencies of the more modern philosophy —empirical, rationalistic, and critical—contain permanent elements of truth, but each regards the others with hostile exclusiveness because each is one-sided. If, however, the new principle be sufficiently far-reaching, it must result in a new system of thought which will include all that is true in the older modes of speculation, and, removing the barriers between them, absorb them into itself and reconcile their differences. In the second Part of the present work an attempt will be made to show that the new principle does possess this power of reconciliation. But, like every far-reaching principle, it came first to light in a vague and unreflective guise, and was not, therefore, presented with the methodical fulness and clearness that are necessary for a general reconciliation. On the contrary, during the nineteenth century it appeared rather as one of the chief grounds of dissension. So soon as it made its appearance, all the old systems saw their chance of coming to life again. And, indeed, in the nineteenth century we find rationalism, empiricism, and criticism reappearing in the arena of philosophy, wholly oblivious of the fact that the new principle had given them a new lease of life only in order that they might be merged into one. The possibility of such union accounts for the circumstance that the nineteenth century is rich in philosophical theories which are transitional in character. I propose, however, only to consider here the rationalistic, empirical, and critical movements as modified by the principle of intuitive

knowledge. The general nature of each system might have been predicted, even though we did not know from history what it actually was.

The new rationalism, as represented by Fichte, Schelling, Hegel, and partly by Schopenhauer, may be called *mystical* rationalism. By it perhaps more thoroughly than by any other line of speculation has the principle of the intuitive character of knowledge been elaborated and brought to expression. The great successors of Kant, inspired by the consciousness of the immediate communion of the human spirit with the world and even with God, hastened to lift the veil from all the mysteries of the universe. They did not realise that the new principle merely justifies the assertion that there are no *insurmountable* obstacles to a knowledge of the world, but affords no ground whatever for regarding human thought as divinely omniscient. They despised both the old theories of knowledge and the ordinary methods of slow and plodding reflection based upon particular separate intuitions. They wanted to dispense with the minute sifting of facts and to reconstruct the whole system of knowledge at one stroke by means of the *speculative* method, *i.e.* a method in which the faculty of intuition is manifested in its purest form. They put before themselves and they actually solved problems which their predecessors had not dared to formulate; their genius created splendid systems of thought, full of imposing revelations. But their one-sided method and their unrestrained speculative daring had a bad effect upon their philosophy. They undertook too much, they attempted to decide by pure intellectual intuition alone problems which can only be solved by the help of the telescope, the

microscope, and the retort. They thus discredited their great conceptions in the eyes of a public that could not distinguish between what was permanent therein and what was accidental. Owing to a temporary combination of circumstances they were at first put on a pedestal by the public, that had not as yet grown to their level, but soon they were cast down again, not because the masses of the people had outgrown their teaching, but because they had not yet learnt to understand it. Such a fall cannot be final; the influence of those teachers must be and is, in fact, beginning to be felt again in philosophical research.

Empiricism, breaking loose from the narrow confines of the subjective idealism of Hume and Mill, and plunging once more into the limitless domain of the life of nature, tried, as was its wont, to develop a materialistic *Weltanschauung*, which was, however, through the admission of intuitive knowledge, inevitably coloured by idealism. This empirical movement, represented by Spencer, Mach, and Avenarius, may be described as *positivistic* in contradistinction to universalistic empiricism or intuitionalism. Its method, like that of the older empiricism, is characterised by a combination of scientific *induction* and *speculation* directed in a one-sided way upon the substratum of sensuous experience, and, as a consequence, by a desire to reconstruct the universe out of the smallest possible number of simple materials. Such a mode of thought has always had great influence upon large classes of people; and, therefore, one may hope that positivistic empiricism will gradually popularise the view that an immediate perception of the external world is possible, and thus pave the way for intuitionalism.

Finally, that form of critical reflexion which teaches that the transcendental unity of apperception is super-individual in character, and which is represented by some neo-Kantians and by adherents of the "immanent philosophy," may, perhaps, be called *intuitive criticism*. It is characterised chiefly by its sceptical attitude towards knowledge, and is somewhat inclined to idealistic materialism. It has inherited from Kant a tendency to barren positivism and intellectualism. But it is a mode of thought well fitted to bring the conception of intuition to the notice of philosophical specialists, and to induce them to regard with favour the intuitional theory.

Various considerations, other than those of the prevalent systems of philosophy, may lead to recognition of the possibility of intuitive knowledge. Each one of us unconsciously assumes its possibility, for in practical life we are all naïve realists. Among intuitionalists who do not come within the range of any recognised school of nineteenth century philosophy may be mentioned, for instance, Kirchmann.[1]

Science has, on the whole, always inclined towards the standpoint of naïve realism. It was, therefore, to be expected that when men engaged in the pursuit of some special science came to inquire philosophically into the problem of knowledge, they would be inclined to sympathise with the doctrine of an immediate perception of the external world. Thus perhaps may the origin of certain of the views of Mach and also of William James be accounted for.[2] Aesthetic

[1] J. H. v. Kirchmann, *Die Philosophie des Wissens*, 1864. Also "Die Lehre vom Wissen als Einleitung in das Studium philosophischer Werke," *Philos. Bibl.* 1878.

[2] W. James, "Does 'Consciousness' Exist?" *Essays in Radical Empiricism*, 1912, 1878.

contemplation of the world may also lead to intuitionalism, as can be seen, for instance, in the case of Goethe. This is particularly noticeable in thinkers who try to give a scientific interpretation of the artistic point of view. I have in mind a thinker like Rudolf Steiner who has published a methodical exposition and defence of the philosophy of Goethe.[1]

I must now attempt to justify my assertion that the views of the philosophers I have referred to really do involve the doctrine of immediate perception, and therefore exhibit resemblances to intuitionalism in many various and important respects. I shall not, of course, be treating the matter historically, and I do not propose to follow all the stages of its development.

II

Mystical Rationalism

Like all the successors of Kant, Fichte opposes the critical method to the method of dogmatism. Dogmatism is invalid because it starts with things-in-themselves, with things outside any consciousness, and tries to effect a transition from these to intelligence,—a transition which is impossible. Critical philosophy disposes of all the insoluble problems that thus arise by putting the question in an entirely different way. It first inquires into the nature of intelligence, and seeks to explain by its structure the whole system of experience. This does not in the least imply that such inquiry will result in a system

[1] *Grundlinien einer Erkenntnisstheorie* (1886), and *Goethes Weltanschauung* (1897).

of *presentations* only, whilst *real life* remains in some unknown realm of things-in-themselves. A profound difference between Kant and Fichte evinces itself in the circumstance that Fichte is a realist as well as an idealist. But, notwithstanding his realism, he succeeded in taking only one step in advance of Kant. Strictly speaking, he emphasised alone the real character of the life of the self, although he depicted it on a scale so vast as to transcend altogether the limits of human individuality. It was natural that the realism of Kant's successors should have followed this line of development. Kant was the first thinker who directly opposed the doctrine of transcendent knowledge, but, in this respect, he went too far. He excluded from the sphere of knowledge not only things independent of the human mind, but even the human mind itself. All that remained immanent in knowledge was knowledge itself. Blinded by his tendency to intellectualism, Kant arrived at the conclusion that knowledge could come into touch with living reality only in the mind of beings possessed of a divine creative power (intellectual intuition), —a power of transforming presentations into a living world. The easiest way out of this *impasse* was afforded by the reflection that the thinking ego in so far as it *acts* in creating experience is present with all its activities within the sphere of experience, and is, therefore, accessible to observation. So much, indeed, must be granted by any philosopher who attempts to construct a theory of knowledge. So soon, however, as this is granted, the conception of intellectual intuition acquires quite another meaning. It becomes apparent that knowledge and reality may be reconciled along lines other than those of pure

intellectualism. The reconciliation may be effective if knowledge itself proves to contain real elements which are not presentations. It is true that the only reality thus immediately contained in the process of consciousness was, according to Fichte, the activity of the self. But even this was an important step in the right direction. The critical philosophy had made it clear that there is no fundamental difference between inner and outer experience. The assertion, therefore, that there can be immediate knowledge of the life of the self was almost equivalent to the assertion that the world of the not-self can also be immediately known. Yet, in pre-Kantian philosophy, and in all those systems of thought which preserve its typical characteristics, knowledge of the self was thought without any further discussion to be immediate, while knowledge of the not-self was, no less unreflectively, pronounced to be mediate. In view of this consideration, I would lay stress on the meaning I attach to the terms intuition and contemplation—namely, immediate knowledge of the *world of the not-self*. To prove, therefore, that Fichte admits the existence of immediate perception, it is not sufficient to refer to his doctrine of intellectual intuition. We must examine his view of our knowledge of the world of the not-self. According to Fichte, there are no things-in-themselves lying beyond the sphere of external experience. The objects of external experience contain within themselves *the whole* reality of the world of the not-self: that reality is immanent in the process of knowing. Had Fichte maintained that these immediately known objects are created by the individual human self, his doctrine of immediate knowledge would in no way have differed from conceptions

widely prevalent in the pre-Kantian philosophy. His view can only be regarded as an advance in the direction of intuitionalism if the objects of the external world were conceived by him as produced by a super-individual consciousness and as immediately given to the human ego for contemplation. Such, in truth, was Fichte's teaching. Knowledge, in his opinion, is one unified *living* world,[1] and, as he came to see at the end of his life, the divine image, the schema of the living God.[2] Individual human egos are themselves objects of that world, its products; and to them as individuals that world is given. It is given to them as *their common world, one and the same for all of them.*[3] The separate egos are individual in their inner intuition alone; in the contemplation of external things they *rise above their individuality* and enter the sphere of the one world which is the same for all.[4]

Some of Fichte's modes of expression show, however, that he conceived the activities of the super-individual ego to be numerically different, though qualitatively identical, in different individuals.[5] To insist, therefore, that the doctrine of immediate perception constitutes part of Fichte's philosophy is only possible in so far as he clearly distinguishes in each self the creative super-individual ego from the individual ego. One cannot, indeed, find in Fichte's writings a clear formu-

[1] Fichte: *Gesam. Werke*, ausg. v. J. H. Fichte, I. Abt., Bd. ii. "Die Thatsachen des Bewusstseyns" (1810), p. 688.

[2] *Ibid.* "Die Wissenschaftslehre in ihrem allgemeinen Umrisse" (1810), p. 696.

[3] *Ibid.* especially § 11.

[4] *Ibid.* "Die Thatsachen des Bewusstseyns," p. 609.

[5] *Ibid.* See, *e.g.* p. 610.

lation of the question we are concerned with, for in systematically developing the philosophy of Kant he restricted himself to the sphere of the self. The real life of the objects of outer experience did not sufficiently enter into his sphere of interest. The object of outer experience which stands nearest to man—nature—was in his system deprived of all independent life, and the most important object of outer experience—God—was not contemplated by Fichte in all its non-human and super-human greatness. In this respect, the philosophy of Schelling is more suggestive. Schelling felt himself cramped in the narrow sphere of the self. He sought a way out into the 'open field of objective science'; his interest was in nature and in God. And, at the same time, he understood better than other philosophers had done that there can be no dualism between subject and object, that there can be no reality transcending the processes of knowing—no things that exist somewhere beyond the known things and by affecting us provide the material content of our presentations. To find a way out of the latter position, Schelling first of all further elaborated Fichte's conception of nature—just as Fichte had elaborated Kant's conception of the self. The self is not merely a meeting-place of presentations, the self is a living spirit. Similarly, nature is not merely an object for a subject; nature is, according to Schelling, an independent living organism. But, though independent, this organism of nature never becomes an absolute object: it is the lowest stage of the development of spirit, a living history of spirit, the products of which are preserved in the form of 'what may be called petrified intellect.' Not only the products of nature, but its creative

activity also may be preserved in the 'transcendental memory of Nature.' This memory is roused into activity by sensuously apprehended things, and owing to it we may, in contemplating the ready-formed products of nature, understand at the same time their *mode of genesis*. Consequently, "Plato's thought that all philosophy is reminiscence is in this sense correct; all philosophising consists in recalling the state in which we were one with nature." [1]

If nature be the lowest stage of the development of spirit, the lowest potency of the self, preserved within the sphere of the spirit as its past, it follows that in seeking to know nature we must abstract from ourselves, from our own ego, and contemplate reality as it develops in itself *apart from us*. "For the purposes of the philosophy of nature I demand," writes Schelling, "intellectual intuition as it is demanded by Fichte's *Wissenschaftslehre*; but I demand, besides, that in this intuition abstraction should be made from the *intuiting self*—an abstraction owing to which all that remains is the purely objective aspect of the act. Although that aspect is in itself pure subject-object, it is not by any means identical with the self." [2] "In the 'Philosophy of Nature' I considered the subject-object called nature in its activity of self-constructing. In order to understand it, we must rise to an intellectual intuition of nature. The empiricist does not rise thereto, and for this reason in all his explanations it is always *he himself* that proves to be constructing nature. It is no wonder, then, that his construction and that which

[1] Schelling: *Gesam. Werke*, Abt. I. Bd. v. "Allgemeine Deduktion des dynamischen Prozesses," p. 77.

[2] *Ibid.* "Ueber den wahren Begriff der Naturphilosophie," p. 87.

was to be constructed so seldom coincide. A *Naturphilosoph* raises nature to independence and makes it construct itself, and he never feels, therefore, the necessity of opposing nature as constructed (*i.e.* as experience) to real nature, or of correcting the one by means of the other. Nature that constructs itself cannot err, and all that a *Naturphilosoph* needs is a right method which will not allow him to disturb nature by his interference." [1] It may be said, then, that " nature knows not by means of science but by means of its own essence or in a magical way. There will come a time when the sciences will gradually disappear and be replaced by immediate knowledge. All sciences as such have been invented only because of the absence of such knowledge. Thus, for instance, the whole labyrinth of astronomical calculations exists because it has not been given to man immediately to perceive the necessity of the heavenly movements, or spiritually to share in the real life of the universe. There have existed and there will exist men who do not need science, through whom nature herself perceives, and who in their vision have become nature. These are the true clairvoyants, the genuine empiricists, and the men who now describe themselves by that name stand to them in the same relation as pretentious demagogues stand to prophets sent from God." [2]

There is no doubt that by this immediate knowledge, this *genuine empiricism*, is meant immediate knowledge of the external world in the full sense of the term, *i.e.* of the world of things entirely independent of the knowing subject. And, indeed,

[1] Schelling: *Gesam. Werke*, Abt. I. Bd. iv. "Ueber den wahren Begriff der Naturphilosophie," p. 96.

[2] *Ibid.* Abt. I. Bd. vii. " Kritische Fragmente," p. 246.

although Schelling regards all finite things as phenomenal, and not as things-in-themselves, these phenomena are in his opinion not merely my presentations or appearances for me: *they have their ground in absolute knowledge*,[1] and in this sense Schelling's idealism may be called absolute idealism.

Idealism often meets with ironical criticisms, such as the following: "The man whom I have just met thinks that he left his house of his own free will; how, then, is it possible that he should be in the street owing to my necessary constructive activity?" or "What a happy creature the idealist must be who can regard as his own the divine works of Plato, Sophocles and all other great minds!"[2] These jests may, indeed, be dangerous to subjective idealism, but certainly not to Schelling's absolute idealism. According to the latter, a human eye or human ear is not necessary for the existence of the phenomena of nature: before man came upon the scene these phenomena already existed in the spirit of nature. "In accordance with my theory," writes Schelling, "it may be said that all qualities are the sensations, all bodies are the intuitions, of nature, and nature itself, with all its sensations and intuitions, is, as it were, a frozen intellect."[3]

Knowledge of the Absolute can least of all be based upon the qualities and experiences of the finite

[1] *Ibid.* Abt. I. Bd. ii. "Ideen zu einer Philosophie der Natur," Zusatz zur Einleitung, pp. 57-73.

[2] Schelling remarks that in asking this question "the critic must not forget how much such happiness will be counterbalanced by other works—such, *e.g.*, as his own." *Ibid.* Abt. I. Bd. iv. "Ueber den wahren Begriff der Naturphilosophie," p. 83.

[3] *Ibid.* I. Bd. iv. "Allgemeine Deduktion," etc., p. 77.

individual alone. It is to be expected, therefore, that in Schelling's account of the knowledge of God we shall find the doctrine of intuitive knowledge stated in clear terms. And, indeed, in the Supplement to the Introduction to the *Ideen zu einer Philosophie der Natur* he asserts that philosophic thought about the Absolute is the Absolute Thought itself, and not thought which is the private property of any particular human mind.[1]

Knowledge of the Absolute *cannot then consist merely of abstract ideas* which leave on one side the finite modes of being, and thus *gradually* create in the mind of man the idea of the Absolute as a product of human thought. The living knowledge of the Absolute can only be an ' immediate intuition ' which ' infinitely surpasses every determination by means of concepts.' [2] And such immediate knowledge infinitely surpasses also all non-intellectual individual mental states,—infinitely surpasses, for example, those feelings which suggest the existence of the Absolute, etc. "Any one who has experienced the self-evidence contained in the idea of the Absolute and in it alone, which no human tongue has the power to describe, will certainly regard as utterly incommensurate with it, as below it and even as destructive of its very essence, all attempts to reduce it to what is subjective in the individual by calling it faith, foreboding, feeling, etc." [3]

All philosophical systems that admit the possibility of intuitive knowledge must come to specific conclusions with regard to the methods of human knowledge —conclusions which are characteristic of the intui-

[1] Schelling, *Gesam. Werke*, Abt. I. Bd. ii. p. 61.

[2] *Ibid.* I. vi. "Philosophie und Religion," p. 23.

[3] *Ibid.* p. 27.

tional theory. Some of these we have already noted in the philosophy of Schelling. He attaches great importance to the process of discriminating; in his view the night of the unknown is converted into the bright daylight of knowledge by the process of discriminating.[1] Conscious reflection does not create its objects; before conscious intellectual activity begins, objects of intuition, already formed, are given to the knowing self, and, therefore, "the point of view of reflection is the point of view of analysis."[2] In spite of the essentially rationalistic character of his system, Schelling approaches so near the empirical standpoint that he takes the explanation of reality to be a simple *description* of reality. "In the philosophy of nature," he writes, "explanations are as much out of place as they are in mathematics. It starts with self-evident principles, and does not follow any direction imposed upon it from without—not even by the phenomena themselves. Its direction is contained in itself, and the more truly it follows that direction, the more certain the phenomena will be of falling of themselves within the place where alone they can be regarded as necessary; and this *place in the system is the only explanation of those phenomena.*"[3]

Still, the empirical trend of thought in Schelling's philosophy is not very prominent. Its want of prominence is due to the fact that Schelling was not particularly concerned with the processes of knowing as they take place in the individual human mind. His theory of knowledge is a theory of *Absolute*

[1] *Ibid.* I. ii. "Zusatz zur Einleitung."

[2] *Ibid.* I. iii. "System der transscendentalen Idealismus," p. 505.

[3] *Ibid.* I. ii. "Zusatz zur Einleitung," p. 700.

Knowledge. He presents us, from the point of view of the human individual, with an ontology rather than an epistemology. Such a philosophical discipline may well be necessary, but, like others, it must be based upon a more humble science—namely, upon a theory of knowledge that investigates the processes of *human* cognition, and, in doing so, does not prejudge questions of ontology. In this sense our theory of knowledge, as compared with the ontological epistemology of Schelling, may be described as *propaedeutic.* Had Schelling distinguished between these two disciplines and followed up the second of them, the resemblance of his doctrine to universalistic empiricism would, no doubt, have been more striking still. The same thing must likewise be said of the next great representative of mystical rationalism—Hegel.

Hegel is more inclined than Schelling to make a one-sided use of speculation as a universal method. From his philosophy we can see more clearly that true speculation must be an intuition of reason, that is, *an immediate penetration* into the essence of things, *an experience* of their inmost nature. In this sense Hegel's Dialectic is essentially an empirical method of thought; its opposition to the demands of empiricism is apparent only. Hegel's view of the essence of the cognitive process wholly confirms what has just been said. In his opinion knowledge is not an *instrument* which elaborates and thereby changes the nature of the Absolute; nor is it a passive medium resembling a prism by which the Absolute is, like a stream of light, dispersed into a number of rays. Both these conceptions of knowledge involve the false *assumption* " that the Absolute is on one side and know-

ledge on the other, independent of it." [1] In reality the Absolute is given in the process of knowing. This does not imply that truth is won all at once. Truth is reached gradually, as we penetrate more deeply into the sphere of the Absolute. At first the object appears to us as it is there *for us*, but therewith we do not rest satisfied. We distinguish its appearance from its inner essence, from its being-in-itself, and in the light of this further knowledge discover what was false in our apprehension of the appearance. Indeed, on comparing our knowledge of the object with the actual essence of the object, we find contradictions between the two which compel us to pass from our early idea of the object to a new idea of it. At first sight it seems impossible that we should thus be led to a greater depth of knowledge. The process seems to presuppose that comparison is made between two objects—one of which is given, whilst the other is not, and by its very nature as being-in-itself cannot be given in consciousness. Thus we should at best be able to compare two of *our own* ideas of the object, one of which appears to us to be the criterion of truth, though it, too, has been created by ourselves. But this objection has only force for those who cling to the false assumption that knowledge and the object known are separate from one another. Hegel decidedly rejects this assumption. "The essential fact to be borne in mind throughout the whole inquiry is that both these moments, notion and object, 'being for another' and 'being-in-itself' themselves fall within that knowledge which we are examining. Consequently we do not require to bring

[1] Hegel, *Werke*, II. (2. Aufl. 1843): "Phänomenologie des Geistes," Einl. pp. 57, 59.

standards with us or to apply *our* fancies and thoughts in the inquiry; and just by our leaving these aside we are enabled to treat and discuss the subject as it actually is in itself and for itself, as it is in its complete reality." [1]

The whole truth is not reached through a single act of comparing. Examining the being-in-itself, which in the first act of comparing had been the standard of truth, consciousness finds that "what formerly to it was the essence is not what is *per se*, or what was *per se* was *per se* only *for consciousness*." [2] Hence it is necessary to compare this *appearance of the being-in-itself* with a yet truer and deeper *conception of the being-in-itself*. And this process of comparing must be continued until the object corresponds to the concept.

In the *Logic* Hegel controverts certain doctrines of the immediacy of knowledge, but in doing so he does not question that the objects of knowledge are given immediately. He merely points out that knowledge is a complex process, and that its elements are correlated with and in this sense mediated by one another. For instance, in true knowledge, God is conceived as spirit, but "God can only be called a spirit when He is known to be at once the beginning and the end, as well as the mean, in the process of mediation. Without this unification of elements He is neither concrete, nor living, nor a spirit." On the contrary, "the very essence of the particular" is that "it refers to something else outside." "It is only when we come to see that the content is not self-existent, but derivative from something else, that its finitude

[1] *Ibid.* p. 66; English trans. by Professor J. B. Baillie, Vol. i. p. 84.

[2] "Phänomenologie des Geistes," p. 67; English trans. Vol. i. p. 86.

and untruth are shown in their proper light. Such a perception, where the content is itself accompanied by a recognition of its dependent nature, is a knowledge which involves mediation." [1] From these instances it is clear that although in one respect Hegel affirmed all knowledge to be mediate, he was able, in another respect, to regard all knowledge as immediate. "It has been shown to be untrue in fact to say that there is an immediate knowledge, a knowledge without mediation either by means of something else or in itself. It has also been explained to be false in fact to say that thought advances through finite and conditioned categories only, which are always mediated by a something else, and to forget that in the very act of mediation, the mediation itself vanishes. And to show that, in point of fact, there is a knowledge which advances neither by unmixed immediacy nor by unmixed mediation, we can point to the example of Logic and the whole of philosophy." [2]

In Hegel's view, indeed, *true* knowledge is characterised by greater immediacy than is claimed for it by the present writer. Not only is the object of knowledge immediately given, but it also is mediated *solely* by itself. Certainly such truth can belong to the Absolute alone. "The only content which can be held to be the truth is one not mediated with something else, not limited by other things; or, otherwise expressed, it is one mediated by itself, where mediation and immediate reference-to-self coincide." [3] This knowledge of the Absolute, being the highest kind of

[1] *Werke*, VI. i. (2nd ed.), "Enc. der philos. Wiss., Logik," § 74, p. 141; English trans. by W. Wallace, p. 117.

[2] *Ibid.* § 75, p. 143; English trans. p. 118.

[3] *Ibid.* § 74, p. 142; English trans. p. 117.

immediacy, does not belong to *my* subjective spirit: it is knowledge on the part of the Absolute Spirit of itself. "It is not simply a *relation* of the spirit to the Absolute Spirit; here the Absolute Spirit *relates itself* to that which, in contradistinction to it, we have posited on the other side; thus, to speak more strictly, religion is the idea of the spirit which relates itself to itself, the self-consciousness of the Absolute Spirit." [1] Just as the true knowledge of God is God's knowledge of Himself, so the worship of God in its true and highest sense is the realisation of the life of God in us.

If the subjective spirit can participate in this highest form of knowledge and this highest form of life, it is not surprising that in the acts of finite knowledge concerning finite things it is not separated from the latter by any barrier. The truth of all finite things is the Absolute Spirit, and the process of the life of the universe is no other than the process of the development of the Absolute Spirit. Knowledge of finite things is knowledge of phenomena; but it is a mistake to imagine that phenomena exist for the knowing subject only. "According to Kant," says Hegel, "the things that we know about are to us appearances only, and we can never know their nature behind the phenomena. That nature belongs to another world which we cannot approach. Plain unprejudiced minds have not unreasonably taken exception to this subjective idealism, with its reduction of the facts of consciousness to a purely personal world, created by ourselves alone. For the true statement of the case is rather as follows. The things

[1] Hegel, *Werke*, XI. (2. Aufl.), "Vorlesungen über die Philosophie der Religion," p. 200.

that we immediately know about are mere phenomena, not for us only, but in their own nature and without our interference; and these things, finite as they are, are appropriately described when we say that their being is established not on themselves but on the divine and universal Idea. This view of things, it is true, is as idealist as Kant's; but in contradistinction to the subjective idealism of the critical philosophy may be termed absolute idealism." [1]

In the process of knowing even finite things the individual self as such has simply to compare the appearance of the object in consciousness with its being-in-itself in consciousness; it does not need to create the object. Hence the process of knowing is, according to Hegel, the process of the evolution of experience. "The dialectic process which consciousness executes on itself—on its knowledge as well as on its object—in the sense that out of it the new and true object arises, is precisely what is termed experience." [2] "Nothing is consciously known which does not fall within experience, or (as it is also expressed) which is not *felt* to be true, which is not given as an inwardly revealed eternal verity, as a sacred object of belief, or whatever other expressions we care to employ. For experience just consists in this, that the content—and the content is spirit—in its inherent nature is substance and so object of consciousness. But this substance in which spirit consists is the development of itself explicitly to what it is inherently and implicitly; and only by this process of reflecting itself into itself is it then essentially and in

[1] Hegel, *Werke*, VI. "Logik," p. 97; English trans. p. 79.

[2] *Ibid.* II. "Phänomenologie des Geistes," p. 67; English trans. Vol. i. p. 86.

truth spirit. It is inherently the movement which constitutes the process of knowledge—the transforming of that implicit inherent nature into explicitness and objectivity, of substance into subject, of the object of consciousness into the object of self-consciousness, *i.e.* into an object that is at the same time superseded and transcended—in other words, into the notion." [1]

It is clear from these statements that however great the creative power of the subjective spirit may be, knowledge of the trans-subjective world is for it, according to Hegel, *experience* of that world. In this sense, *so far as the subjective spirit is concerned*, Hegel's theory of knowledge is empirical. The spirit of true empiricism is seen also in his description of the correct process of thought. "When we think, we renounce our selfish and particular being, sink ourselves in the thing, allow thought to follow its own course, and if we add anything of our own, we think ill." [2]

In some respects Hegel is indeed more of an empiricist than the empiricists themselves. In investigating such matters as consciousness and the phenomenology of its development, we need not even, in Hegel's view, institute comparison: the known object itself makes the required comparison, and we need merely to *observe* its results. "Yet not only in this respect, that notion and object, the criterion and what is to be tested, are ready to hand in consciousness itself, is any addition of ours superfluous, but we are also spared the trouble of comparing these two and of making an examination in the strict sense of the

[1] Hegel, *Werke*, II. "Phänomenologie," p. 584; English trans. Vol. ii. pp. 813-4.

[2] *Ibid.* VI. "Logik," § 24; English trans. p. 41.

term; so that in this respect, too, since consciousness tests and examines itself, all we are left to do is simply and solely to look on." [1]

The quotations given sufficiently characterise the mystical rationalism of the post-Kantian philosophy, and illustrate the gradual development of the doctrine of intuitive knowledge. I do not propose to criticise the views of Schelling and Hegel in detail, since the aim of their theory of knowledge is different from mine, which is exclusively *propaedeutic*. But in the second Part of this book I shall have occasion to refer again to their doctrines. I turn now to Schopenhauer's philosophy, not so much because it is characterised by mystical rationalism as for the sake of showing how prevalent the intuitional conception is.

In the philosophy of Schopenhauer more stress is laid on the intuitive element than in the systems of Schelling and Hegel, but its sphere of application is far less wide. His system may, therefore, be said to stand midway between mystical rationalism and the critical philosophy of Kant. The Will which lies at the basis of the phenomenal world is in his view one; and, consequently, even in the sphere of individual events, there may be immediate communion which breaks down the limitations of space and time and transcends the causality of the phenomenal world. This communion may be of two kinds, theoretical and practical—*clairvoyance* and *magic*.

Some varieties of both these kinds of communion are comparatively rare. But one variety is widely prevalent in the human world, namely, the clairvoyance which lies at the basis of moral activity and which finds expression in the phenomena of sympathy, pity,

[1] *Ibid.* VI. "Phänomenologie," p. 66; English trans. Vol. i. pp. 84-5.

compassion. "My true inner essence," Schopenhauer writes, "exists in every living being as immediately as it reveals itself to me in my own self-knowledge. This knowledge, which in the Sanskrit is expressed by the formula *tat-twam asi, i.e.* 'this thou art,' finds its realisation in compassion, which is the basis of all true, that is, disinterested virtue, and manifests itself in every good action." "Every really good deed, every disinterested and truly helpful action, has, as such, for its sole motive, the need of another being; and proves itself in the last resort to be a mysterious act, practical mysticism. For ultimately it springs from the same knowledge, which is the essence of all true mysticism, and it cannot be truly explained in any other way. Even a simple action like giving alms, when done solely for the sake of relieving the need of another, is only possible in so far as the giver knows that it is himself whom he meets in the pitiful form of the beggar, in so far as he recognises his own essence in an appearance foreign to him." "This is the reason why in the previous chapter I called compassion the great mystery of ethics." "At all times poor Truth has had to blush for being paradoxical—and yet it is not her fault. She cannot assume the form of the error that prevails universally. Sighing she looks to her protecting god, Time, who brings her glory and victory; but the strokes of his wings are so huge and slow, that meanwhile the individual dies. I am well aware how paradoxical the metaphysical interpretation of the ultimate fact of ethics must appear to persons brought up upon Western ideas. But I cannot do violence to truth." [1]

[1] Schopenhauers *Werke.* Herausg. v. Grisebach, Bd. iii. "Grundlage der Moral," p. 651 *sqq.*

Schopenhauer's theory of aesthetic intuition also points to some mode of perception which transcends the individual experiences of a knowing subject. Aesthetic intuition is a perception of *Ideas* which express the non-temporal and non-spatial stages in the objectification of the Will, and which are realised in the phenomenal world in innumerable individual entities. The knowing subject is not always capable of such contemplation, but only when, owing to an inward change, he ceases, for a time at least, to be an individual. "The transition which we have referred to as possible, but which is yet to be regarded as only exceptional, from the common knowledge of particular things to the knowledge of the Idea, takes place suddenly; for knowledge breaks free from the service of the Will, by the subject ceasing to be merely individual, and thus becoming the pure will-less subject of knowledge." If a man "gives the whole power of his mind to perception, sinks himself entirely therein, and lets his whole consciousness be filled with the quiet contemplation of the natural object actually present, whether a landscape, a tree, a mountain, a building, or whatever it may be; inasmuch as he *loses* himself in this object (to use a pregnant German idiom), *i.e.* forgets even his individuality, his will, and only continues to exist as the pure subject, the clear mirror of the object, so that it is as if the object alone were there, without any one to perceive it, and he can no longer separate the perceiver from the perception, but both have become one, because the whole consciousness is filled and occupied with one single sensuous picture; if thus the object has to such an extent passed out of all relation to something outside it, and the subject out of all relation to the will, then

that which is so known is no longer the particular thing as such; but it is the *Idea*, the eternal form, the immediate objectivity of the will at this grade; and, therefore, he who is sunk in this perception is no longer individual, for in such perception the individual has lost himself; but he is *pure*, will-less, painless, timeless, *subject of knowledge*." During moments of such intuition the subject may say in Byron's words:

> "Are not the mountains, waves and skies, a part
> Of me and of my soul, and I of them?" [1]

Unfortunately after this Schopenhauer proceeds to dilate upon the states of the *brain* favourable to such pure intuition. A doubt is thus at once suggested as to whether he could consistently work out the doctrine of immediate knowledge as a factor in aesthetic contemplation. And although it probably could be done, Schopenhauer did not take the trouble to do it; and, in consequence, the mystical tendency in his philosophy is not expressed so clearly in the aesthetics as in the ethics.

Schopenhauer's doctrine of magic, clairvoyance, compassion, and aesthetic intuition leads one to expect that his theory of knowledge will be based throughout upon recognition of the immediate connection between the knowing individual and other individuals, or, at least, upon the view that the transcendental unity of apperception is a super-individual unity. Such, however, is not the case. The spatial and temporal world cognised by the individual is, according to Schopenhauer, appearance for that individual and subsists in that individual. At the end of his account of the *presented* world Schopenhauer is

[1] Schopenhauers *Werke*. Herausg. v. Grisebach, Bd. I. "Die Welt als Wille und Vorstellung," pp. 243, 247. English trans. by Haldane and Kemp, p. 231 *sqq*.

able to repeat the opening words of his book: "Die Welt ist meine Vorstellung." At one point only does Schopenhauer here approach mystical rationalism. He maintains that the will of the conscious subject is not a phenomenon but is life itself, reality itself, immediately given in a special act of cognition,—an act which is characterised by the object coinciding with the subject, and is in that sense a miracle κατ' ἐξοχήν.

Numerous followers of the thinkers I have been referring to would have to be taken into account in judging of the influence and the prevalence of mystical rationalism. Moreover, there are several independent representatives of the mode of thought in question, such as Krause, who created schools of their own, though they are hardly known outside their own country. Furthermore, in speaking of mystical rationalism, it must be borne in mind that its beginnings are already to be found in pre-Kantian rationalism. Those beginnings were, under the influence of Leibniz, developed into a more or less coherent system of ideas in Russian philosophy, concerning which I shall have something to say at the end of this chapter.

III

Positivistic Empiricism

The modern systems based upon empiricism exhibit a greater tendency than the rationalistic systems to which we have been referring towards subjective idealism. The rationalists considered themselves entitled to fill in the picture of the world, obtained from subjective experience, by innate ideas, by the creative work of the mind. Empiricists are debarred from so doing. They seek to build the whole of their

systems upon *experience* received from the object itself; and if they deny that the external world is given in perception, they have to interpret all their experiences with reference to it in the sense implied by scepticism, subjective idealism, solipsism, etc. Such a path leads to an ever-increasing poverty of philosophical construction. So that the recognition of the possibility of an experience which immediately and in the full sense of the term carries us beyond the knowing subject is indeed a means of salvation, a source of new life, for empiricism. Individualistic empiricism has always been noted for the weakness of its speculative efforts; and it is, therefore, extremely difficult to pass from it to universalistic empiricism (intuitionalism), which demands clear discrimination of the deep-lying non-sensuous essence of the subjective and the trans-subjective world. It was, on that account, inevitable that the early empiricists should have expressed their doctrine in a confused and contradictory way, that they should have failed to draw forth all the conclusions involved in it, and should in their ontology have been infinitely far from anything which in the least resembles the ontology of the mystics. These remarks are particularly applicable to the theory of Herbert Spencer, the first empiricist who deviated from the path mapped out by Bacon and the terminus of which was reached by Hume and Mill.

Spencer is decidedly opposed to ' idealism,' meaning thereby theories which reduce the whole of the perceived external world to presentations of the knowing subject. In his opinion realists (philosophers who admit the independent reality of the objects of perception) base their theory upon the direct

deliverances of consciousness (upon perception) and idealists upon the indirect (upon reasoning). But the direct deliverances of consciousness have far more force than the indirect, and the preference of the idealists for the latter is a kind of superstition.[1] In his appeal to the direct testimony of consciousness as proving the reality of the external world, Spencer takes both this reality and the immediate perception of it to mean more than they meant in the Kantian system. The reality of the external world is not, in his view, merely the reality of necessary and objective presentations of the knowing subject. Some of his arguments against Kant bring out very clearly his confidence in the testimony of perception. "We will assume that Kant's premisses are incontestable, and his conclusion irresistible. We will assume that the space-consciousness and the time-consciousness behave as he alleges, and that therefore we must agree with him in saying that they are forms of intuition." "Consider first the thing affirmed—that Time and Space are subjective forms, or properties of the *ego*. Is it possible to realise the meaning of these words? or are they simply groups of signs which seem to contain a notion but really contain none? An attempt to construct the notion will quickly show that the latter is the fact. Think of Space—of the thing, that is; not of the word. Now think of self—of that which is conscious. Having clearly represented them, put the two together, and conceive the one as a property of the other. What results? Nothing but a conflict of two thoughts that cannot be united. It would be as practicable to

[1] H. Spencer, *Principles of Psychology*, Vol. ii. Part vii. ch. ii. § 390, p. 315.

imagine a round triangle. What then is the worth of the proposition ? " [1]

In his polemic against Sir William Hamilton, Spencer accuses this author of inconsistency. Hamilton had maintained that " I cannot but believe that material things exist :—I cannot but believe that the material reality is the object immediately known in perception " and had at the same time asserted that space is ' only a law of thought and not a law of things.' [2] But Spencer points out that the testimony of consciousness is equally unequivocal both with regard to material things and with regard to space being objectively real.

The general defect of the reasonings of ' metaphysicians,' according to Spencer, is this : " The postulate with which metaphysical reasoning sets out is that we are primarily conscious only of our sensations—that we certainly know we have these, and that if there be anything beyond these serving as cause for them, it can be known only by inference from them. I shall give much surprise to the metaphysical reader if I call in question this postulate ; and the surprise will rise into astonishment if I distinctly deny it. Yet I must do this. Limiting the proposition to those epi-peripheral feelings produced in us by external objects (for these are alone in question), I see no alternative but to affirm that the thing primarily known is not that a sensation has been experienced but that there exists an outer object." [3] " The simple consciousness of sensation,

[1] Spencer's *Principles of Psychology*, Vol. ii. Part vii. ch. iv. § 399, pp. 359-60.

[2] *Ibid.* § 400, p. 365.

[3] *Ibid.* ch. vi. § 404, p. 369.

uncomplicated by any consciousness of subject or object, is doubtless primordial. Through immeasurably long and complex differentiations and integrations of such primordial sensations and derived ideas, there develops a consciousness of self and a correlative not-self. And far later than this is reached a final stage, at which it becomes possible for the developed self to contemplate its own states as affections produced in it by the not-self. And this final stage is spoken of as though it were the initial stage!"[1]

To affirm that experience is entirely subjective in character is both self-contradictory and contrary to fact. "Among the many contradictions which anti-Realistic hypotheses involve, is the contradiction between the assertion that consciousness cannot be transcended and the assertion that there exists nothing beyond consciousness. For if we can in no way be aware of anything beyond consciousness, what can suggest either the affirmation or the denial of it? and how can even denial of it be framed in thought? The very proposition that consciousness cannot be transcended, admits of being put together only by representing a limit, and consequently implies some kind of consciousness of something beyond the limit."[2] Trans-subjective being is then, according to Spencer, given to consciousness although often it is but vaguely apprehended. "The inquirer finds that he alleges the reality of this something in virtue of the ultimate law—he is obliged to think it. There is an indissoluble cohesion between each of those vivid and definite states of consciousness known as a sensation, and an indefinable consciousness which stands for a

[1] *Ibid.* § 405, pp. 373-4.

[2] *Ibid.* ch. xiv. § 442, p. 444.

mode of being beyond sensation, and separate from himself. When grasping his fork and putting food into his mouth, he is wholly unable to expel from his mind the notion of something which resists the force he is using; and he cannot suppress the nascent thought of an independent existence keeping apart his tongue and palate, and giving him that sensation of taste which he is unable to generate in consciousness by his own activity. Though self-criticism shows him that he cannot know what this is which lies outside of him; and though he may infer that not being able to say what it is, it is a fiction; he discovers that such self-criticism utterly fails to extinguish the consciousness of it as a reality. So that even could no account of its genesis be given, this consciousness would still remain imperative. It cannot even be imagined to be untrue without imagining the absence of that principle of cohesion whereby consciousness is held together." [1] The sensation of resistance is always the most important and the most clearly differentiated element in this experience of external reality. For this reason "the consciousness of something which resists comes to be the general symbol for that independent existence implied by the vivid aggregate." [2]

I have already pointed out that philosophers who are inclined to affirm the givenness of the external world in perception do so most clearly in their account of our knowledge of the Absolute. This is what we find in Spencer's case. Although he maintains that the relative alone is knowable, he argues against Hamilton, who affirms that "the *absolute* is conceived merely

[1] Spencer's *Principles of Psychology*, Vol. ii. Part vii. ch. xv. § 448, pp. 452-3.

[2] *Ibid.* ch. xviii. § 466, p. 479.

by a negation of conceivability," and against Mansel, in whose opinion "the *Absolute* and the *Infinite* are, like the *Inconceivable* and the *Imperceptible*, names indicating, not an object of thought or of consciousness at all, but the mere absence of the conditions under which consciousness is possible." [1] Spencer urges that "in the very denial of our power to learn *what* the Absolute is, there lies hidden the assumption *that* it is; and the making of this assumption proves that the Absolute has been present to the mind, not as a nothing, but as a something." [2] Whatever definite kind of being we think of, it can only appear as definite against the background of something infinite and indefinite, which always stands on the threshold of consciousness but can never be exhausted, or expressed in any one finite form. This infinite content of consciousness is the Unconditioned, it is the object of the religious consciousness; every form into which a religion, *in so far as it is not religious*, tries to fit this Absolute is a degradation of it.[3] Yet "it is possible, nay, probable, that under their most abstract forms, ideas of this order will always continue to occupy the background of our consciousness. Very likely there will ever remain a need to give shape to that indefinite sense of an Ultimate Existence, which forms the basis of our intelligence." [4]

It might appear as though Spencer had completely broken away from the old empirical school with its

[1] Spencer's *First Principles*, Part i. ch. iv. § 26, p. 87.

[2] *Ibid.* p. 88.

[3] "Indeed it seems somewhat strange that men should suppose the highest worship to lie in assimilating the object of their worship to themselves" (*ibid.* ch. v. p. 109).

[4] *Ibid.* p. 113.

tendency to subjective idealism, scepticism, etc. This, however, he has not done, and, indeed, could not do. As is well known, the fundamental conceptions of Spencer's philosophy are not clearly worked out by him. He does not draw any dividing line between such important philosophical disciplines as ontology, epistemology, and psychology; thus, for instance, he expounds his 'transfigured realism' in a work on psychology. It is useless to look to him for a distinction between what transcends the self, what transcends experience, and what transcends consciousness; he never conceives the possibility of an idealistic realism. In his attack on the 'metaphysicians' he simplifies their arguments beyond recognition. Yet had he met them face to face—had he met Hume, for instance—they would have had little trouble in proving to him that, in order to be consistent, he must side with them. Indeed, all Spencer's arguments in support of realism as against subjective idealism are valid only on the assumption that the knowing subject immediately apprehends the external world as it is in itself. If he is supposed to be aware only of a copy or a symbol of that world, or of his own mental states necessarily *produced* by influences from without, those arguments have no force. But although Spencer maintains that the distinction between subject and object is a derivative distinction, he does not make it clear that the external world is directly 'given' in perception. In speaking of the derivative character of the differentiation between subject and object, Spencer means all along a process taking place *in the subject.* He believes that all the experiences that enter into the processes of knowing are merely "subjective affections produced by

objective agencies which are unknown and unknowable." [1] Now, originally these affections do not refer either to the self or to the not-self—that is, though existing within the subject, they do not provide either an idea of the subject or an idea of the object. Subsequently, under the influence of experience, distinctions between the different kinds of subjective affections become more and more manifest, and these begin to fall into two groups—ideas of the subject and ideas of the object. Such being Spencer's conception of subject and object, it is natural that the final outcome of his 'transfigured realism' should hardly differ at all from subjective idealism. "The Realism we are committed to is one which simply asserts objective existence as separate from, and independent of, subjective existence. But it affirms neither that any one mode of this objective existence is in reality that which it seems, nor that the connexions among its modes are objectively what they seem. Thus it stands widely distinguished from Crude Realism; and to mark the distinction it may properly be called Transfigured Realism." [2] This 'transfigured realism' affirms, in other words, that knowledge is transcendent in character, although it does not even copy reality, but only represents it in a *symbolic* form. Spencer compares this symbolic knowledge with the projection of a cube on a cylindrical surface. The image of the cube will then be "a symbolisation in which neither the components of the symbol, nor their relations, nor the laws of variation among these relations, are in the least like the components, their relations, and the laws of variation among these relations, in the thing

[1] *Principles of Psychology*, Vol. ii. Part vii. ch. xix. § 472, p. 493.

[2] *Ibid.* p. 494.

symbolised. And yet reality and symbol are so connected that for every possible rearrangement in the *plexus* constituting the one, there is an exactly equivalent rearrangement in the *plexus* constituting the other." [1]

The final outcome of Spencer's theory of knowledge makes it clear that he was not aware of the fundamental difference between the actual *givenness* of the external reality and the necessary *assumption* of its existence. He adopted now the one, now the other of these doctrines, which are, in fact, *toto genere* distinct. The quotations given above show that he tended to regard idealism as a theory resting on inference, and realism as a simple statement of what is given in immediate perception, of what *is* actually present. But quite as many quotations could be produced to show that in his view external reality is not given to the subject, that the assumption of it is merely the subject's conjecture, though one possessing the highest degree of probability. Moreover, in the final result this second view triumphs over the first. So much is evident from Spencer's own description of transfigured realism as symbolic realism. Not only so; the presence of this second view can also be detected in all his arguments in support of realism. In speaking of the 'negative justification of realism' Spencer constantly combines, as though they were one, the two absolutely distinct conceptions of realism as an immediate and as an inferred truth, and opposes both of them to idealism as a more complex inferred truth. Further, in his search for a criterion of truth, he distinctly says that the "consciousness in which Realism rests is reached by

[1] *Principles of Psychology*, Vol. ii. Part vii. ch. xix. § 473, p. 497.

a *single* inferential act, while the consciousness professed to be reached by Idealism is reached by a *series* of inferential acts." [1] And in summing up his view he expresses the same idea: "Thus the normal processes of thought inevitably originate this inexpressible but indestructible consciousness of existence beyond the limits of consciousness; which is perpetually symbolised by something within its limits." [2]

The whole of Spencer's elaborate argument, starting originally from the fact that in primitive consciousness there is neither subject nor object, amounts in the end to the assertion that *we cannot get rid* of the thought of the existence of an external reality. In view of this result, it must be said that Spencer neither revolutionised the empirical theory of knowledge, as he had intended, nor did he set it on to the path of a realism that is epistemologically justifiable. If, on the supposition that all cognitive processes are the individual mental states of the knowing subject, realism is proved to be simpler, clearer, more convincing than and prior to all other theories, this merely establishes its utilitarian and not its epistemological value. All that the proof would amount to is that I cannot help thinking in this way, and that it is the most practical way of thinking; but since these thoughts are merely *my* mental states, the existence of a reality external to me is never given in perception, *i.e.* in immediate experience.

Spencer gains nothing by calling here to his aid the process of evolution, which results in the adaptation of the inner relations to the outer, and which finally brings about that particular adaptation to the external

[1] *Ibid.* ch. ix. § 413, p. 383.
[2] *Ibid.* ch. xviii. § 470, p. 488.

reality which expresses itself as the ineradicable *belief* in the existence of this reality. I am by no means opposed to the attempts of evolutionists to apply their theories to the explanation of cognitive processes. On the contrary, it will be seen that in the second Part of this book I am inclined to make use of the laws of evolution as established by Spencer for the solution of some of the problems of epistemology. But, then, evolution cannot create everything out of nothing. Any specific instance of evolution must be based upon something that is given; the nature and the worth of the whole process of development will be to a large extent determined by *the nature of the originally given.* When a geologist accounts for the origin of a mountain valley by the destructive action of water, he represents this total effect as coming about through a vast number of distinct acts of washing away bits of soil. These single acts, though insignificant in amount as compared with the final result, are nevertheless of the same nature as that result. A like consideration applies in epistemology. No exception can be taken to Spencer's procedure when, in speaking of the perception of resistance, he refers to the consciousness of the remotest of our animal ancestors and even to the consciousness of the zoophytes.[1] Yet, no appeal to evolution will enable him adequately to justify realism if he takes impressions to be entirely the knowing subject's mental states, to be symbols of reality that originate in the knowing subject. Throughout, the objection is irresistible that the evolution is entirely an inner subjective process which results in the mental states of the subject falling for him and

[1] *Principles of Psychology*, Vol. ii. Part vi. ch. xvii. § 347, p. 232.

within him into two groups, namely, ideas of the self and ideas of the supposed external reality—the latter, indeed, not to be got rid of, but which nevertheless may be false.

Despite the crudeness of Spencer's theory of knowledge, his opposition to subjective idealism contains glimpses of a new empirical line of thought. It seems to me significant that certain of the details of his doctrine concerning the processes of cognition are similar to conceptions which are necessary ingredients of a *universalistic* empiricism. In the process of knowing, the foremost place is assigned by him to the activity of *comparing*. The highest scientific knowledge does not in his view differ in kind from that more primitive knowledge which consists in *description*. In his *First Principles* there are even some indications of an *empirical theory of intellectual intuition*. His doctrine of the universal criterion of certainty has also some points of contact with the intuitional view. These matters will be discussed more fully in Part II., in which I shall have to consider the processes of cognition in greater detail. I turn now, in the search for new forms of empiricism, to Spencer's successors.

A greater power of speculative insight than that possessed by Spencer was necessary in order to give a more definite expression to the new empirical principle, and to free the theory of knowledge from subjectivism. This was possessed by Avenarius, the founder of so-called 'empirio-criticism.' According to Avenarius, the only true concept of the world is one which is based upon 'pure experience' not yet vitiated by either science or philosophy. 'Pure experience' is a simple description of what is 'sensed' (*Erfahrenes*), of

what is 'found as actually present before me.' In giving expression to it, " the individual is conscious of himself, not as of one who 'invents,' 'composes,' 'makes up' or 'imagines,' but as of one who, in so far as he simply 'experiences,' finds or 'discovers' in reality that which he describes as 'given,' and in his description merely '*communicates*' it (or 'tells,' 'depicts,' 'states' it)." [1]

The concept of the world which consists solely of what has thus been 'found,' Avenarius calls 'natural.' This concept, freed from all subjective fictions, is to be sought for not midway in the process of the evolution of knowledge, but either in the primitive—*i.e.* naïvely realistic—*Weltanschauung*, or in the perfect *Weltanschauung* of the future. At all other stages the 'natural concept of the world' is vitiated by elements that are not found in experience. As evolution proceeds, however, it excludes these subjective elements, and at the same time complicates the original naïve realism by making certain essential additions to it. Thus, when the process of excluding the subjective additions is completed, we shall not return to the naïve realism with which we started, but attain to a new empirio-critical point of view. One profound difference between the two standpoints will come to light if we give a further and a more fundamental definition of pure experience: a " pure experience " is a content of a statement (*ein Ausgesagtes*) " which in all its component parts has for its presupposition constituents of our environment and nothing else." [2] Naïve thought takes statements (*i.e.* the mechanical process) to be

[1] Avenarius, *Kritik der reinen Erfahrung*, ii. § 938.

[2] *Ibid.* i. p. 4.

directly dependent upon the environment, whilst in truth the dependence is only indirect. There are many intermediate links between environment and statement; these are to be found in the organism of the individual who makes the statement, and, more particularly, in his nervous system. Since the number of intermediate links in the nervous system cannot be infinite, we must assume that some parts of the nervous system immediately condition the statements (namely, the central part of the nervous system, the system *C*). Changes in that system depend not only upon the environment (upon the amount of practice conditioned by the environment) but upon the interchange of substances in the system itself (upon nutrition); or, to be more exact, they depend upon a certain relation between both of these factors. It is clear, then, that not the whole content of any statement refers to the environment. In such a content there are two different groups. To the first belong such constituents as 'green,' 'blue,' 'cold,' 'hard,' and to the second 'pleasant,' 'unpleasant,' 'intense,' 'weak,' 'familiar,' 'unfamiliar,' etc., those of the second group always standing in a certain relation to those of the first.[1] The first Avenarius calls 'elements,' and the second 'characters.' Characters do not presuppose the presence of parts of the environment, but the presence of certain definite states of the central nervous system. Thus, for instance, the character of 'familiarity' (*Heimhaftigkeit*) depends upon the degree of exercise the central nervous system has had in respect of a given 'stimulation.'[2] Some statements do not refer to the extra-organic environment at all; they are caused by

[1] *Ibid.* i. p. 16. [2] *Ibid.* ii. p. 30.

stimulations in the system *C* which are dependent, not upon changes in the environment, but upon the organic changes in the body (*S*).

From the relation just indicated between statement and environment it follows that the concept of experience may have a wider or a narrower significance. In the wider sense the term may be applied to all contents of statements (things, memories, images of fancy) in so far as they have 'the character of being posited' (*Positional-Charakter*).[1] But in the narrower sense Avenarius means by experience only such contents as have 'the character' of belonging to a thing, which is the case whenever I, from my own point of view, am compelled to suppose some constituent part of the environment R_1, R_2, R_3 ('a colour,' 'a sound,' 'pressure,' or anything else, *e.g.* a given combination of 'colours' in the environment) to be a simple or complex complementary condition of the *peripherically caused* stimulation of the system *C*, and to recognise as dependent thereon the content of the statement—what Avenarius now calls an E-value—which bears the same name as the part of the environment in question.[2]

The final world-concept (*Weltbegriff*) must consist solely of elements which have, in the course of evolution, definitely preserved the 'character' of experience in the narrower sense of the term.[3] The difference between the naïvely realistic and the future empirio-critical concept of the world is then clear. Naïve realism builds its world-concept on experience in the wider sense of the term, and empirio-criticism on experience in the narrower sense.

[1] Avenarius, *Kritik der reinen Erfahrung*, ii. pp. 365 ff.
[2] *Ibid.* ii. pp. 65, 363.
[3] *Ibid.* ii. p. 410.

Avenarius's theory of experience may easily be taken to be a form of sensationalism based upon the assumption that the self and the not-self are separate from one another, and that experience depends upon the influence of the environment upon the organism. In that case, his doctrine would differ from the old individualistic empiricism only in unimportant details, borrowed from the biological doctrine of the adaptation of the organism—and consequently of cognitive processes—to the environment. It would not then have been worth while to have referred to it, for it is clear from what has gone before that such an evolutionary theory of transcendent knowledge is logically akin to subjective idealism. But in truth Avenarius attempts to work out a wholly different conception of experience. He wants to change all our habitual modes of thought fostered by the theories now in vogue. His aim is to create a system which, on the one hand, would be entirely new, and, on the other, would bring us back to naïve realism—the realism which still holds good whenever, instead of theorising, we describe our relation to the real as it is immediately experienced. Perhaps, the best way to bring out the difference between Avenarius's conception and individualistic empiricism is to express the relation between experience and reality after the manner of naïve realism, but in the terms used by Avenarius. In the process of making a statement two aspects must be distinguished—namely, the statement as a *movement* of the organs of speech and all the mechanical consequences of that movement, and the *content* or the meaning of the statement, *i.e.* that to which the statement *refers*. Suppose two men see one and the

same tree, and say that they see it. A naïve realist who does not know or think anything about the nervous system would assert that this fact involves the following elements: two different statements (two processes of movement in the organs of speech) and one content of such statements, *qualitatively and numerically the same*, namely, the tree, the actual *external* tree. As opposed to the naïve realist, many modern philosophers, and almost all the educated people of our day, would assert that the fact in question is more complex. It consists, they would say, of two mechanical modes of statement, of two presentations which constitute the meaning of the statement and are in the minds of the speakers, of two processes within the nervous systems of these two persons, and of one real tree which is external to them. Which side would Avenarius take? If both the *Kritik der reinen Erfahrung* and *Der menschliche Weltbegriff* be taken into account, it will be seen that Avenarius takes neither side, but that, as a matter of *principle*, he comes nearer to the naïve realistic than to the individualistic view of the content of a statement. So much is clear from his doctrine of introjection. In the opinion of Avenarius the essential difference between naïve realism and the various 'animistic' or 'idealistic' theories consists not so much in the way in which the latter regard the processes in the nervous system, as in the contention that 'in the mind' or 'in the brain' or simply 'within' the knowing subject there exists an image of the object as a mental state. The act of putting images of things into the knowing subject Avenarius calls introjection. Introjection results in a *duplication* of objects: we imagine that the process of making

a statement about a tree involves both the tree as a material thing and the tree as a mental image. Owing to such duplication, or, rather, to such systems of duplication, the world for each person breaks up into an inner and an outer world, and only his own inner world appears to be accessible to immediate experience. This leads to a number of insoluble problems. Thus, for instance, it turns out that 'experience is produced by experience,' that 'the corporeal and the mental cannot be compared,' that it is impossible to pass from the subject to the object (from thought to existence), for "if we start with existence, we do not get at objects within consciousness, and if we start with consciousness, we do not get to objects external to it."[1] Even the more special problems, such as the problem of the projection of percepts, are involved in irresolvable contradictions, all of which are due to the gratuitous *duplication* of things, which is not given in experience but comes about through introjection. So soon as we free ourselves from introjection, these problems fall to the ground, and our concept of the world is purified from artificial elements unwarranted by experience. In truth, when I say that I see a tree, two things only, the self and the tree as part of the environment, are given in experience, and not three things—the self, the tree, and the perception of the tree. 'My' tree as something subordinate to me, as a product of the activity of my brain or my mind, is not to be found in experience. What we actually find in experience are the self and the environment as coordinate and not the one as subordinated to the other. Neither can be subordinate to the other for the simple reason that

[1] *Der menschliche Weltbegriff.* p. 60. See also p. 65 *sqq.*

both are complexes of elements which are essentially homogeneous.[1]

If another man standing by my side looks at the same tree and says that he sees it, then, on the ground of my experience, I ought to suppose that his mechanical act of speech has the same meaning as my own, *i.e.* that it refers *to one and the same tree* in our environment. If this were admitted, introjection would be done away with, and "if we could avoid introjection, we should avoid the breaking up (*Spaltung*) of the individuals and their experience into two and the duplication of 'things.' The natural conclusion, which is implied in what has gone before, and which lies at the basis of all the special empirical sciences—the conclusion, namely, that one and the same constituent of my environment is also a constituent of another person's environment, would at last have been established."[2]

This does not imply, however, that the content of the two statements will be *wholly* identical. The mechanical act of speech depends upon the environment indirectly, but it is directly conditioned by the stimulation of the system *C*. Therefore, in so far as the different systems *C* exhibit individual variations, the contents of the said acts, referring to one and the same feature in the environment, may contain elements that are qualitatively different.

[1] *Der menschliche Weltbegriff*, p. 80. According to Mach, also, the self and the not-self are coordinate and given with equal immediacy. "If anyone were to consider 'the self' as a *real* unity, he could not escape the following dilemma. He would either have to contrast this unity with a world of unknowable entities, which would be absurd, or to regard the whole world, including other selves, simply as contained in his own self, which could hardly be seriously done by anyone" (Mach, *Popular Scientific Essays*, p. 131).

[2] *Ibid.* p. 90.

For instance, cinnabar may be red for me and black for another, a tree may be 'familiar' to me and 'unfamiliar' to my neighbour. Avenarius formulates this thought briefly as follows. "If it is legitimate to assume in general that in both coordinations the correlative member, R, is *numerically identical*, this does not forthwith justify the further assumption that the correlative member R in the coordination $\left(M\left\{\begin{matrix}T\\R\end{matrix}\right.\right)$ is *qualitatively* identical with the R in the coordination (TR)."[1] In other words, Avenarius does not deny the presence of subjective elements in the contents of statements, and he therefore avoids the crude contradictions of naïve realism.

The resemblance between empirio-criticism and intuitionalism is not limited to the contention that the environment is immediately given in experience. It inevitably extends further. Thus, for instance, in its methodology of the sciences, intuitionalism also leads to the conclusion that the whole process of knowledge is *descriptive*, and in ontology it leads to the view that the environment contains all the elements which form part of the self. Nevertheless, there is a profound difference between the two theories. The intuitional theory of knowledge does not prejudge the chief questions of ontology (for instance, it leaves open the question as to the existence or the non-existence of matter) though, undoubtedly, it excludes certain narrow conceptions of the world, as, for instance, the materialistic.[2] Avenarius's teaching

[1] *Ibid.* p. 91.

[2] I am referring here to scientific materialism and not to hylozoism, which is rich in content, although that content is undifferentiated. (See Schelling's Essay on *Bruno*.)

tends to follow another direction. It might have been expected *a priori* that the positivistic empiricists who have always had a leaning towards sensationalism and materialism would take advantage of the doctrine of the immediate givenness of the external world in experience in order to re-establish materialism. This is precisely what Avenarius has done. He may insist that, in his view, there is neither spirit nor matter in the universe, that complete experience always includes both the environment and the self, and therefore transcends any such opposition. But in truth his philosophy is based upon a narrow biological materialistic conception which so overshadows the new elements of his teaching that these are often extremely difficult either to detect or to see the bearing of.

IV

Intuitive Criticism

Intuitive criticism, like empirio-criticism, has a positivistic character. Yet, along one line of development,—that followed, namely, by the school of the "immanent philosophy," it exhibits a greater freedom of thought and has formulated clearly the doctrine of the immediate givenness of the external world in knowledge.

The very name 'immanent philosophy' implies that the thinkers in question deny the possibility of transcendent knowledge. They regard as transcendent "everything that lies beyond consciousness or beyond the process of becoming conscious."[1] It is impossible to think of a transcendent thing, *i.e.* of a

[1] Schubert-Soldern, *Grundlagen einer Erkenntnisstheorie*, p. 5.

thing that is beyond any consciousness; for that would mean to think the unthinkable. "There is no existence of which there is no consciousness, and there is nothing cognisable which is not existent," says Schubert-Soldern.[1] On the ground of these contentions, some members of the school gravitate towards solipsism, and others (for instance, Schuppe and Rehmke) secure for themselves an outlet into an external world by affirming the immediate givenness of that world in perception.[2] It is the latter thinkers that I propose to refer to here. They maintain that an object of knowledge can only exist in someone's consciousness; hence, their view of the trans-subjective world must take the following form. They insist that individual minds have a part of their contents in common. It is obvious that this "common and identical part of the contents of individual minds *is independent of the individuals as such.*"[3] It must, however, be the object of some mind;[4] and if the individual minds as such are not its bearers, there is nothing left but to suppose that its bearer is a super-individual generic consciousness—'consciousness in general.' The objects of this super-individual ego are immediately given to the individual, because the individual participates in the generic consciousness and is, indeed, only a modification of it.

The 'immanent philosophy,' like empirio-criticism and intuitionalism, decidedly rejects any duplication of objects. In its theory of perception it is also

[1] *Ibid.* p. 7.

[2] See, *e.g.* Rehmke, *Unsere Gewissheit von der Aussenwelt.*

[3] Schuppe, *Grundriss der Erkenntnisstheorie und Logik*, pp. 31, 32.

[4] *Ibid.* p. 34.

curiously at one with intuitionalism on the question as to the nature of sensations. The thinkers in question regard sensations,[1] or, at any rate, some of them (*e.g.* the sensations of light, sound, etc.) as external. The intuitional theory avoids, however, all possibility of conflict with the special sciences by referring sensations to that sphere of the external world which lies within the body. But the 'immanent philosophy' distinguishes only two elements in perception, the subjective and the objective (the external), and it is, therefore, compelled either directly to ascribe sensation to the subject or directly to include it in the sphere of the *extra-organic* world.

The 'immanent philosophy' is closely akin to intuitionalism, because, to a greater extent than any previous philosophical theory, it is based upon the conception of the equal immediacy of the knowledge of the subjective and of the trans-subjective world. But it is sharply distinguished from intuitionalism by its method of sustaining the conception in question and by the conclusions it draws from it. The difference lies chiefly in the fact that the theory of knowledge advanced by adherents of the 'immanent philosophy' prejudges certain ontological questions.[2] Thus, in their discussion of transcendence the thinkers in question are not concerned with what is transcendent in regard to

[1] They use the term 'sensation' in a wider sense than the one generally adopted in psychology; but I am speaking here of 'sensation' in the more limited sense.

[2] As already said, the intuitional theory of knowledge prejudges ontological questions only in so far as they depend upon the view taken of the nature *of knowledge itself*. Other ontological questions are touched upon in this book simply because the bad precedent has already been established, and a work on epistemology irreproachably free from all reference to metaphysics would run the risk of not being understood.

knowledge, but with what is transcendent in regard to the self.[1] From the point of view of their theory of knowledge, they must, therefore, either side with solipsism and coordinate all objects with the individual self, or make the metaphysical assumption that there exists a cosmical self as the bearer of the external world. The intuitional theory handles the problem of transcendence solely in respect to the process of cognition; there is, indeed, no necessity for it, as a theory of knowledge, to raise the ultimate question of the relation of the self and the not-self at all. The 'immanent philosophy,' once drawn into the realm of metaphysics over the question of transcendence, inevitably settles at the same time other ontological questions as well. It concludes that things exist only as contents of consciousness, and is thus led to an *idealism* of the *intellectualistic* type. Finally, owing to their tendency to constitute only a *formal* difference between the subjective and the objective contents of experience, the thinkers we are now considering adopt an unphilosophical view of the criterion of truth; they take the criterion of objectivity to consist in an *agreement between the perceptions* of different individuals.[2]

Rickert, who occupies a position midway between that of empirio-criticism and the 'immanent philosophy,' propounds a conception of knowledge which is apparently a modification of the theory of intuitive criticism. He, too, assumes the existence of an 'all-embracing consciousness,' which plays the part

[1] When they speak of what transcends consciousness, their meaning is the same, for the term 'consciousness' frequently bears with them the same significance as the term 'self.' See Schuppe, *Grundriss*, etc., p. 16.

[2] The defects of this view are discussed in Wundt's essay "Ueber naiven und kritischen Realismus," *Philos. Stud.* vii. pp. 358-365.

of the 'epistemological subject.'[1] This subject "contains in itself nothing peculiar to me as a particular individual, and it is to this impersonal subject alone that the external world can be referred." It is clear, then, that "such consequences as that of solipsism" are utterly invalid, and that it is an error to speak of "the immediately given world as the content of *my* consciousness."

I note with particular satisfaction that Rickert differs from the 'immanent philosophy' in one important respect. Although he regards "every reality known by us" as "a process in consciousness (*Bewusstseinsvorgang*)," he does not think that, therefore, the whole of reality must necessarily be a "psychical process."[2] In other words, he agrees with the intuitional view that immediate knowledge of the external world is compatible with the existence of the physical world as a trans-subjective reality. Speaking generally, he has emancipated himself more thoroughly than the other thinkers to whom I have referred from certain traditions of the critical school, and his theory, therefore, contains many new possibilities.

Among the representatives of intuitive criticism I reckon also those followers of Kant who take the transcendental unity of apperception to be a super-individual unity, numerically identical in all empirical selves. After what has been said, it will be readily seen in what sense a rudimentary theory of intuition (or contemplation) may be looked for in the writings of these Kantians. There is no need, therefore, to discuss their theories in detail; it is

[1] Rickert, *Die Grenzen der naturwissenschaftlichen Begriffsbildung*, p. 168.

[2] *Ibid.* p. 174.

sufficient to mention that an influential thinker like Windelband may be taken as representative of this way of thinking. In his *History of Modern Philosophy* Windelband expounds Kant's doctrine of the transcendental unity of apperception, or of 'consciousness in general,' in such a manner as to make it appear that Kant took 'consciousness in general' to be a 'super-individual function.'[1] When stating his own views, Windelband speaks of 'consciousness in general' or of 'normal consciousness' as conditioning the possibility of absolute values. In his opinion, philosophy is no other than "reflexion on this normal consciousness and a scientific investigation of the question as to which elements of the content and of the form of the empirical consciousness have value for the normal consciousness."[2] "Philosophical inquiry is only possible for those who believe that over and above their individual activity is the norm of what is universally binding, and are convinced that it may be discovered."[3]

Windelband, however, seems to conceive this consciousness as though it manifests itself only in acts of the empirical consciousness, and does not commit himself to affirming the eternal presence of the absolute normal consciousness. "The light of the ideal casts but few rays into the sphere of our experience, and the conviction of the reality of the absolute normal consciousness is a matter of personal faith and not of scientific knowledge."[4]

[1] Windelband, *Die Geschichte der neueren Philosophie*, 2 Aufl. Bd. ii. p. 77.

[2] Windelband, *Präludien*, 1 Aufl. Was ist Philosophie? p. 44.

[3] *Ibid.* Kritische oder genetische Methode? p. 271.

[4] *Ibid.* Was ist Philosophie? p. 53.

V

The Doctrine of the Immediate Perception of the External World in Russian Philosophy

Of the three lines of thought described above, it is mystical rationalism that has been most fully and originally developed in Russian philosophy. The movement has branched out into two main directions, one springing from Schelling and Hegel and the other from Leibniz. At the head of the first stands V. S. Solovyov, who has put forward a doctrine of intuition both in respect to finite things and in respect to God. In his view, the knowledge of anything, even of any finite thing, involves three aspects—the mystical, the rational, and the empirical. "In every object," he writes, "we distinguish necessarily the following three aspects: first, its *substantive existence* or inner reality, that is, its own essence; secondly, its *universal essence*, that is, the universal and necessary qualities and determinations which form the *logical* conditions of its existence, or the conditions under which alone it is thinkable; thirdly, its *outer* visible *reality*, its manifestation or appearance, *i.e.* its being for another. In other words, we distinguish each object as existing, as thinkable, and as actual. It is obvious that the object's own existence, its own unmanifested reality, can only be affirmed by faith or mystical perception, and thus corresponds to the religious principle. The object as thinkable is evidently a matter for philosophic speculation, and its manifestation or its external phenomenal reality is a subject of investigation for empirical science." [1]

[1] Vladimir S. Solovyov, *Kritika otvletchonih natchal*, p. 16.

It should be specially noted that this mystical perception is not merely an awareness of *something* external, as one might be led to imagine from some of Solovyov's modes of expression. In truth, by the phrase 'perception of *existence*,' he means the perception of the whole inner essence of an object, *richer* in content and more *significant* than all that is given in sensuous or 'empirical' knowledge, as he calls it. "We must suppose," Solovyov says, "such a correlation between what is known and the knowing subject, such an interaction between them, that the subject perceives not merely certain qualities or effects of the object, but its very character, essence or idea." [1]

It is natural, therefore, that in his ethics he should agree with Schopenhauer and regard compassion as a 'mysterious phenomenon' which consists in the fact that "I have to a certain extent identified myself with another, and that, therefore, the barrier between the self and the not-self has for once been removed." [2] Notwithstanding this feature, however, Solovyov's ethics differs fundamentally from the ethics of Schopenhauer; it is based not only upon the capacity of apprehending another person's suffering, but also upon other and higher principles.

With regard to the knowledge of God, Solovyov insisted emphatically throughout his philosophical career that God is immediately given in perception. In the *Critique of Abstract Principles* he speaks of God as the absolute and all-embracing Being, and maintains that this Being is "inwardly connected" with the conscious subject who springs from it, and

[1] *Ibid.* p. 318, and the whole of ch. xlv. See also p. 286.

[2] *Ibid.* p. 33.

constitutes the truth of everything, including finite things.[1] In his work, *The Justification of the Good*, he prefers to use the term God, and maintains once more that God is immediately given in consciousness. "The reality of the deity is not a *deduction* from religious experience, but the content of it—*that which is experienced.* If this immediate reality of the higher principle be taken away, there would be nothing left of religious experience. It would exist no longer. But it does exist, and therefore that which is given or experienced in it exists also. *God is in us, therefore God is.*" [2]

Solovyov did not live to develop his epistemological views in detail. Fortunately his speculative effort did not die with him, and does not stand to-day alone in Russian philosophy. Valuable additions to his teaching are to be found in Professor S. N. Trubetskoy's *Concrete Idealism.* In his book, *The Foundations of Idealism*, Prince Trubetskoy has elaborated the doctrine of 'mystical perception' more fully than was done by Solovyov. He conceives that the external world is given to the knowing individual in three ways: in sensuous empirical phenomena, in logical thought, and in the living inner connection of the non-rational and non-sensuous being of the subject with the all-embracing essence. Sensuous empirical phenomena, in so far as they are given in time and space, are external to the knowing individual. They come about through sensibility only, yet not "through my personal empirical perception, not through the sensibility of Peter or Sidor, but through perception in general, through *sensibility* as such," that is, universal, all-

[1] Vladimir S. Solovyov, *Kritika otvletchonih natchal*, pp. 274, 280-286.

[2] V. S. Solovyov, *Opravdanie dobra*, pp. 216-218.

embracing sensibility.[1] The thought of reality possesses a trans-subjective character in so far as in it the real is given as an *idea*. In this sense the real "is logically determined by our thought." "Thought may be merely subjective, but in that case it is illogical and is based on no sufficient ground in reality; on the other hand, it may be objective, that is, universal; and, then, outside of it nothing is thinkable and nothing exists."[2] Finally, reality as a non-rational and non-sensuous essence is revealed to us in faith which "affirms the reality of beings that are related to our being as objects of thought and perception, and involves the consciousness of this inner immanent correlation."[3] Although he sought to determine the relation between the sensuous appearance of the real, the idea of the real, and reality as a concrete universal unity, Professor Trubetskoy did not apply his conception to the special problems of the theory of knowledge. His work needs supplementing in this respect.

As I have remarked already, systems of mystical rationalism were also developed in Russia from the basis of pre-Kantian rationalism. Before commenting upon this development, however, a few words are needful about the source from which it sprang.

According to the rationalists, an effect can contain nothing but what was already contained in the cause. On the strength of this dictum, pre-Kantian rationalism could assume that in experience the external world is, to some extent at least, known immediately,

[1] Prince S. N. Trubetskoy, "Osnovaniya idealisma" in *Voprosi Philosophii*, No. 31, pp. 82-84; also No. 35, p. 762.

[2] *Ibid.* No. 31, p. 114. [3] *Ibid.* No. 35, p. 736.

just as our own mental states are.[1] And, indeed, there is evidence to show that the assumption was sometimes made by the pre-Kantian thinkers. Spinoza was least of all encumbered by preconceptions which stand in the way of the theory in question. He recognised that elements of the external world are present even in sensuous knowledge, but owing to the confused nature of that knowledge they cannot, he thought, be distinguished from the subjective elements.[2] In his treatment of adequate knowledge, at any rate in so far as it refers to God, Spinoza's tendency towards intuitionalism is still more apparent. He maintained that "every idea of any existing body or thing whatsoever necessarily contains the eternal and infinite essence of God." [3]

In fact, with regard to the problem of a knowledge of God, all rationalists exhibit a tendency towards the intuitional view. For Descartes it would have provided the best way out of the vicious circle in which his reasoning seems to be involved; and, indeed, among his proofs of the existence of God, the thought is not seldom intruding that the knowledge of God's existence is as immediate as the knowledge of our own existence. Sometimes he even says that it precedes self-knowledge [4] Malebranche advanced further still in the same direction, and affirmed that we contemplate ourselves together with God and see all things in God.

Even the monads of Leibniz, that have 'no windows or doors' in relation to one another, are yet accessible to influences from God. "It is clear,"

[1] See above, ch. ii. [2] See likewise, ch. ii.

[3] Spinoza, *Ethics*, II., Prop. xlv.

[4] See, for instance, *Meditation* iii. Veitch's trans. pp. 126 and 132.

writes Leibniz, "that created substances are dependent upon God who preserves them and constantly creates them by a kind of emanation, similar to the way in which we produce our thoughts." [1] In so far as the monads represent God's idea of the universe, and are microcosms harmoniously related to the macrocosm, Leibniz readily concurs with Malebranche's dictum that 'we see all things in God.' Another step would have brought him to the intuitional point of view. It was both easy and necessary for the followers of Leibniz to take this step, for they were driven to it by reflexion on the relation of the monads to one another. Leibniz had conceived the monads to be absolutely separate from one another, and yet they appeared to be most intimately connected and to be in constant interconnection. With remarkable ingenuity Leibniz surmounted the contradiction by supposing that, although each monad is absolutely cut off from the rest of the world, it is yet in *immediate relation* with the universe, because from all eternity it contains within itself the whole world, as a copy, —a copy which, it is true, remains for the most part in the subconscious region of the soul. But this hypothesis involved a number of new contradictions, —in so far, for instance, as it led to a transcendent view of knowledge and to the admission that there exists in each monad not only a copy of the world, but a copy of that copy, and so on *ad infinitum*. Yet, at the same time, the hypothesis in question indicated new ways of escape from these contradictions. It was only requisite that the supposed barriers first between the monads and God and then between the

[1] *Discours de métaphysique*, Gerhardt's edition of Leibniz's works, Vol. iv. p. 439.

monads one with another should be removed, in order that there should result a comprehensive theory of intuition. The first part of this task was undertaken by Professor A. A. Kozlov. In his article on 'The Consciousness of God and the Knowledge of God,' he developed the thought that "the *reality* or the *existence* of that object which men call God, and which in its most general expression is *the highest we can conceive*, is given in our *immediate consciousness*." [1] He pointed out, however, that the intellectual elaboration of this given reality presents the greatest difficulty, and that this is the reason of the contradictions and discrepancies prevalent in the various theories of its nature.

A further step in a like direction was taken by Lutoslawski, who is a Slav, though not a Russian, but whose philosophical career began in Russia. In his work *Seelenmacht*, he definitely insists that knowledge of God as well as knowledge of every finite soul is obtained immediately.[2] Since he agrees with Leibniz that the world consists entirely of psychical existences, it follows that he must admit an immediate perception of the world as a whole and not only of certain of its elements.

But Lutoslawski's arguments are based chiefly upon exceptional facts, such as those of telepathy, scientific intuitions in the construction of hypotheses, the magical effects of one soul upon another manifested in the activity of great leaders of armies, orators, teachers, etc. Moreover, Lutoslawski, whose chief

[1] *Voprosi Philosophii*, No. 29, p. 459.

[2] W. Lutoslawski, *Seelenmacht*, particularly ch. iii. See also *Ueber die Grundvoraussetzungen und Consequenzen der individualistischen Weltanschauung*, by the same author.

interest lies in problems of greater complexity, more particularly in social problems, does not apply his theory of immediate perception to a detailed treatment of epistemological questions. The present writer has taken upon himself the task of further working out Kozlov's conception and of carrying the doctrine of an immediate perception of the external world to its legitimate issue. He proposes to do this without having recourse to exceptional phenomena, such as those of telepathy, and to apply the conception to the solution of epistemological and even logical problems, in so far as the latter bear upon the theory of knowledge.

In my book, *The Fundamental Principles of Psychology from the Point of View of Voluntarism*, there is developed a psychological conception of the self according to which not all the contents of the individual consciousness can be said to be the property of the self. The individual consciousness is shown to contain not only the states of the self, but also states "given to me," or trans-subjective.[1] In the present work the doctrine of the immediate apprehension of the external world is made to serve as the basis of a theory of knowledge. I proceed on considerations of a quite general character, and so remote from the field of ontology that the result of the investigation in no way prejudges the question as to the nature of the world that is thus immediately apprehended. The conception I am trying to expound is not exclusively bound up with the monadology of Leibniz, but is no less akin to the philosophy of Schelling and

[1] See in particular the chapter on "Personality," the section on "The non-personal ('given') elements of the individual consciousness," and also the chapter on "Intuition."

Hegel, and consequently to the mystical idealism of Solovyov and of Professor S. N. Trubetskoy.

Another thinker whose speculation has been making in the same direction is S. A. Askoldov. He has been attempting to bring together the Leibnizian view of Kozlov and Lutoslawski and the mystic rationalism that emanates from Schelling and Hegel. So far the mystical element in his philosophy has only shown itself in his treatment of the ontological problem of interaction. Here, however, it is so pronounced that I feel justified in referring to his work in this connection. He defines the causal relation as " a living synthesis or union of two or more entities, in which a part of the essence of one entity passes into and is synthesised with the essence of the other." [1] He took a similar view of interaction in his earlier work, *The Fundamental Problems of Epistemology and Metaphysics.* With regard to the consciousness of an external world, he thinks it " may be taken to mean that certain states of consciousness, while still remaining mine, contain at the same time an element which is continually becoming a part of the world of the not-self. In other words, certain states of consciousness form as it were a bridge between the self and the not-self, and the bridge is at the same time the common limit of both." [2] But it is clear from the sequel that Askoldov is inclined to argue that the intra-organic external world alone (*i.e.* the world of sensations) is given in experience. At any rate he does not say whether the extra-organic

[1] Askoldov, "V zashtchitu tchudesnago," *Voprosi Philosophii*, No. 71, p. 29.

[2] Askoldov, *Osnovnyia problemi teorii poznaniya i metaphyziki*, p. 238.

external world is, in his opinion, likewise immediately given in consciousness.

The points of view and the methods of thought of Leibniz, on the one hand, and of Schelling and Hegel, on the other, are profoundly different. Yet, notwithstanding their divergence, they are being brought together in Russian philosophy and show promise of becoming organically united. This is a significant fact for Russian philosophy. With philosophic systems, as with living organisms, union of opposed principles indicates an act of fertilisation resulting in a new and independent life. In Russia there has been hitherto no history of philosophy, no successive series of philosophic systems developing the one from the other, as in ancient Greece or in modern Germany. I am not without hope that mystic idealism (using the term idealism in Plato's sense), which already has many followers in Russia, will be capable of such organic growth and development.

PART II

THE INTUITIONAL THEORY OF KNOWLEDGE

CHAPTER VI

KNOWLEDGE AS JUDGMENT

I

The Differentiation of the Objects of Knowledge The Objective Aspect of Knowledge

OUR inquiry into the nature of the cognitive process has shown that the known object is immanent in the process of cognition: reality itself, life itself, is present in and experienced through the act of knowing. But reality as such is not knowledge; it only becomes knowledge when the process of comparison is brought to bear upon it. Therefore, *knowledge is an experience compared with other experiences.*[1] Until reality is subjected to comparison it flows before me as something dark, formless, unconscious (*i.e.* uncognised). If on a hot summer noon I walk leisurely along a river bank covered with luxurious vegetation and do not think of anything, do not wish for anything, lose my personality, so to speak, and become one with nature, then nothing specific exists for me, all things are merged into one vague, powerful stream of life. Suddenly, however, a splash in the water attracts my attention, and the intellectual process of discriminating begins. The mirror-like surface of the water, the green banks,

[1] See Part i. ch. iii. 1, "Relation of the Object known to Knowledge."

the reeds near the shore,—all begin to grow distinct from one another. And there is no end to this process of differentiation so long as I feel inclined to look into reality and to occupy myself with it. The growth near the banks had previously appeared to me like a blurred, uniform mass, but now the dark green of the reeds stands out against the lighter green of the sedge grass, and even in the sombre background of the reeds, their stems, leaves, and dark-brown tufts can be distinguished from one another by their colour, shape, and position. As I go on discriminating everything becomes more distinct, the formless acquires form, the vague becomes definite.

Knowledge, then, *is a process of differentiating the real world by means of comparison.* In virtue of this process, reality, without losing its real character, becomes a known reality, a presentation or an idea. But in human knowledge, presentations or ideas never exhaust reality: over and above these there is always left over an undifferentiated remainder. This is, from the nature of the case, inevitable. Every act of comparing differentiates only some one, infinitesimally small, aspect of the object—say, its colour, weight, spatial determination, etc., and each of these discriminated aspects contains still undifferentiated elements. The various shades and other peculiarities of colour, for instance, come to light only after an endless number of comparisons with other colours and other facts. In this sense each object, *i.e.* each fragment of the life of the universe, proves to be truly infinite,[1] and could only become

[1] In Rickert's work, *Die Grenzen der naturwissenschaftligen Begriffsbildung*, this characteristic of the objects of knowledge is very well described under the name of "their extensive and intensive infinity." See p. 33 ff.

exhaustively known if it could be compared with all the other objects in the world. The human mind is immeasurably far from having attained this ideal of knowledge; for us each object is, as a rule, but slightly and superficially differentiated, and underneath the thin layer of discriminated characteristics there remains still an inchoate reality that has not yet assumed the form of presentation, but which has nevertheless already evinced itself as an actual existence infinitely rich in content.

By means of a series of comparisons, knowledge transmutes vague and indefinite into more and more definite appearances of objects, into the differentiated form of presentation or idea. If, as a result of this process, there is obtained the appearance of the object we seek to know and not of some other fact, our purpose is reached—we are in possession of truth (by ' appearance ' I do not mean a copy of the object, but the object itself in so far as it is discriminated). In other words, we have acquired truth only when the differentiated appearance is composed entirely of elements present in the object itself and nothing has been introduced into it from without. But since, in the process of knowing, the only agent is the knowing subject who makes the comparison, it is only he who can introduce into the object elements foreign to it. In this sense it may be said that truth is the *objective* and falsity the *subjective* appearance of the object. It is clear, then, that truth can only be distinguished from falsity if there are marks by means of which the knowing subject can tell which elements proceed from the object and which are introduced by himself, the conscious subject. On the strength of the same considerations which guided us in determining the

criterion of subjectivity and of externality,[1] we can affirm *a priori* that the difference between the subjective and the objective cannot be quantitative and cannot consist merely of relations, but must be grounded upon a difference in the quality of the experience. In other words, in every act of knowledge two aspects must be represented,—the one coloured by the feeling of subjectivity, the other bearing the character of objectivity. A single instance will suffice to prove that this really is the case. Suppose I am making up a story and recounting, for example, that there are four massive oak trees by the monument of Peter the Great in Petrograd. There is no doubt that the picture of the monument stands before my mind as something which I do not in any way regard as a product of my own activities. The oak trees which I have seen somewhere else may also have the same *objective* character attaching to them. But the *conjunction* of the monument with the oak trees is certainly felt to be an act of synthesis *produced by myself*, and not to be contained in the object. On the other hand, when I say that the mounted figure of Peter stands on a granite rock, I am conscious that this conjunction emanates from the object itself.

These aspects of experience are excellently described by Lipps in his *Logik*. "In some cases I am aware," says Lipps, "that the existence of the objects of consciousness, their coming and going, their combination and distribution, their subsistence and change, seem to be an immediate realisation of my will; in the process of presenting I feel myself to be active, free, creative. I am conscious that the objects belong

[1] See Part i. ch. iii. p. 82 *sqq.*

to me, are connected with and dependent upon me—in short, I have an immediate *consciousness of subjectivity*. In other cases, I am aware that the objects of consciousness oppose the way in which I should like to present them. In my process of presenting I feel constrained, bound, compelled, passive. In this experience there is contained an immediate consciousness of something apart from me, independent of me, in short, an immediate consciousness of objectivity." [1]

It should be noted at the outset that objectivity must not be confused with externality. My own activity may become an object of my knowledge, *e.g.* I may recall my story about Peter's monument and it will stand over against me as something I cannot undo. It will compel me to admit its presence, and will constrain me in an objective fashion in the act of judging.[2]

It is in this consciousness of objectivity and subjectivity, and not—as will be shown later—in the laws of identity, contradiction, and excluded middle, that our thought has a real and immediate guide in its search for truth. But although this criterion of truth may well be called real and immediate, it does not in the least follow that it excludes all possibility of error. It may be seen from the example I have just used that the experience of one and the same fact can in one respect be accompanied by a consciousness of subjectivity and in another respect by a consciousness of objectivity. For the attainment of truth, the complex facts of reality must be subjected to a process of careful differentiation: fine discrimination alone can definitely show which elements of reality

[1] Th. Lipps, *Grundzüge der Logik*, p. 5. [2] *Ibid.* p. 11.

possess objective significance and what is the relation between them. The procedure is so difficult that, when it first comes to be deliberately followed, truth is always mixed with falsity; and the entire progress of science consists in clearing away the falsity by reiterated differentiations of objects, guided by the consciousness of objectivity.

II

The Judgment

The cognitive activity must always lead either to truth or to falsity. And, according to traditional logic, the truth or the falsity is expressed in the form of a judgment. But in that case, ideas, concepts, and even inferences must be in essence judgments, or modes of judgment, for they, too, express truth or falsity. Epistemology, then, must develop a theory of judgment according to which, starting from the nature of the cognitive process, it may be shown that the only form which knowledge can take is the form of the judgment. It must explain the structure of a judgment, and especially the nature of the connection between subject and predicate. Its analysis must be sufficiently thorough to embrace the whole of the various forms of judgment. Moreover, it must render explicable, as indicated already, how those modifications of judgment, designated by the terms idea, concept, and inference, emerge from the judgment. Let us, then, now take up the inquiry, starting with the fundamental characteristics we have found to be involved in knowledge.

Knowledge is differentiation of the object by means of comparison. The process of differentiation must

inevitably pursue the following course. Until comparison is brought to bear upon it, reality stands over against us as something dark and chaotic. The first acts of discriminating separate out from that 'something' a certain aspect *A*. The reality as a whole still remains for us dark and confused, but one aspect of it is now clearly and definitely characterised as *A*. This stage of knowledge is preserved by language in the form of such expressions as 'it is getting light,' 'it rains,' 'it is dusk,' etc. Through further acts of discriminating, something vague, but already determined on one side as *A*, is now determined as *B*, something determined as *AB* is further determined as *C*, and so on. For instance, as I walk through a wood I notice that something small darts across my path; that 'the something small which darts across my path' squeaks, etc. Every such act of discriminating includes each of the three elements usually considered necessary for a judgment —a subject, a predicate, and a relation of the predicate to the subject. In fact, in every act of discriminating and comparing there must be a starting-point: a confused reality as yet wholly unknown, and therefore not described by any word; or, in more complex acts of cognition, a reality some aspects of which have already become more or less distinct. The act of discriminating separates out from this reality some fresh aspect, of which we become aware precisely as an aspect of, or an element in, the part of reality under investigation. In this way there is preserved a living and intimate connection—closer than mere temporal sequence—between the point from which the discrimination started and the result to which it attains. It is clear, then, that

the process of knowing, *as a process of discriminating and comparing, must inevitably come to expression in the form of the judgment.* The *genesis* of the judgment completely explains its *structure*, the fact, namely, that it necessarily involves the presence of the three elements—a subject, a predicate, and a relation between them. A precise definition of the terms 'subject' and 'predicate' can be easily obtained from what has been said, and there is no need for us to enter here into that discussion. We are now also in a position to define the term 'judgment,' but we will do so later in connection with a criticism of other current definitions of that term. As yet, however, the connection between subject and predicate has been too indefinitely indicated; that connection will be examined in detail in the next chapter.

It will appear at first sight as though the subject of a judgment were a differentiated idea or a concept with a limited, strictly determined meaning. As a matter of fact, this is not the case. The subject of every judgment is the dark, inexhaustible, unknown reality, but in a highly developed judgment this reality is denoted *by means of some idea* which designates its previously discriminated aspects. It might, therefore, easily seem as though this idea as such were the subject of the judgment. Professor Karinsky, in his work on *The Classification of Inferences*, deals at length with the difference between the subject of a judgment and the idea of the subject. "The true subject of a judgment," he says, "is always an indefinitely conceived object whose content is never believed to be completely summed up in the quality connoted by the subject term. In judging we

posit this undetermined object as some *X*, many aspects of which are not unfolded in the judgment, and whose content could be exhausted only in a whole series of judgments. The definite idea which is immediately connected with the subject term is meant simply to indicate the indefinitely conceived object, simply to hint, as it were, at that upon which our thought is directed, and what we intend to determine in a certain way. The true meaning of a judgment is always this: an object, which in the first instance is characterised for us by a certain combination of qualities (*i.e.* by those presentations which are immediately connected with the subject term), has also certain other characteristics (immediately connected with the predicate term). The definite idea immediately connected with the subject term is, strictly speaking, only a part of the content of the object." "This partly explains why we understand one another quite well when exchanging opinions about some object, despite the fact that the terms which denote that object often call forth very dissimilar ideas in different people. It does not matter that one person immediately connects with the term 'man' the idea of a moral and rational being and another a certain visual image, nor that that image is far from being identical in the minds of different people—for instance in the mind of a person with normal sight and in the mind of one who is blind; it does not matter that the *mark* is not the same mark. Mutual understanding is completely secured if the different marks indicate one and the same object, one and the same indefinite fulness of reality, from which they have all been taken in order to characterise it. For it is this reality, and not a

particular idea connected with the subject term, that we seek to determine in a judgment." [1]

Unfortunately, however, Professor Karinsky did not see the full significance of this doctrine of the subject of a judgment. The line of thought I am following leads naturally to the same view because, according to it, the subject of a judgment is reality itself, life itself, which is slowly being brought to the stage of knowledge by means of a gradual process of discriminating and comparing. And this conception of the subject of a judgment furnishes a key to the solution of many problems.

It is not difficult to see how successive acts of discriminating which come to expression in the forms of judgment lead to the elaboration of ideas or concepts. Suppose that by means of the first act of discriminating we learn that something is S; through the second we learn that S is P, through the third that SP is M, and so on. Then, the features discriminated in the preceding judgments will be thought of as one compact mass of elements S, SP, SPM, on the background of a reality still undifferentiated.

The complexes of discriminated elements which have thus resulted from judgments will become in their turn elements in new and more complex judgments. Every such complex, arising, as it does, out of a certain concretion of judgments, so to speak, may again be broken up into judgments. It is true that explicit acts of judging do not necessarily precede the formation of such a complex; sometimes the differentiated elements take from the first the form of an idea. It may, therefore, be said that ideas and concepts are over-developed or insufficiently developed, and,

[1] Karinsky, *Klassifikatsiya vyvodov*, p. 88.

onsequently, abbreviated, complexes of judgments. Thus, in the judgment 'this tall, thin man resembles my brother,' the idea 'this tall, thin man' is a omplex of insufficiently developed or over-developed udgments, 'this is a man,' 'this man is tall,' etc.[1] The only objection that can be raised against this iew is that a judgment always contains either truth r falsity, whilst ideas—constructions of fancy, for nstance—are neither true nor false. How far this bjection is valid will be considered later.

Does the definition of a judgment as the result of n act of differentiating the real world by means f comparison include all types of judgment? A loubt at once suggests itself with reference to judgnents which do not apparently include the three lements necessary to an act of differentiation—a ubject, a predicate, and a relation between them. refer to so-called interrogative, impersonal, and xistential judgments.

Interrogations need not trouble us: it has long been customary to regard them as incipient judgnents and not as judgments in the full sense of he term. They furnish the subject of a future udgment, *i.e.* a point of departure for a further lifferentiation, and they set the task of carrying it out nd of finding the predicate. Of more interest are mpersonal judgments, such as 'it is getting light,' it thunders,' etc. These do not, however, present ny difficulty for our theory, and are, indeed, required by it. The first acts of discriminating must be lirected upon something as yet completely indefinite nd, therefore, inexpressible by means of language. The predicate of such judgments—the only clearly

[1] See Lipps, *Grundzüge d. Logik*, p. 22.

discriminated element in them—need not necessarily be expressed by a verb: any word will do, as can be seen from such expressions of baby language as '*bo-bo*' ('it hurts'). It should be noted, however, that it is only the verbal form of such judgments that entitles us to call them 'subjectless.' So far as its meaning is concerned, no judgment can be entirely without a subject. Such judgments as 'it is getting light,' 'it thunders,' etc., are no exceptions to the rule: in them the subject is either the whole world that lies before us or an indefinite part of it which is not indicated just because it is not determined clearly. Hence it is explicable why, with the development of knowledge and of language, the number of impersonal judgments decreases on the one hand and increases on the other. As our knowledge becomes more and more exact we sometimes use purposely indefinite forms of speech in order to indicate that the subject cannot be definitely specified. We use such expressions as "it seems to me unlikely," "there is no believing it," "there is no sitting still" (suggesting that the states in question are non-voluntary, and cannot, therefore, be ascribed to the self), "it is close in the room," etc. Thus I am not called upon to oppose those philologists who affirm that "as time goes on, the number of impersonal judgments steadily increases. The nearer we get to modern times, the larger is their number; in fact, modern languages may be said to be full of impersonal forms of speech of every degree and of every shade of meaning."[1]

Existential judgments appear at first sight to be much more difficult to explain. A typical example is the judgment 'God exists.' The whole difficulty

[1] D. N. Ovsyaniko-Kulikovsky, *Syntaxis*, p. 189.

is due, however, to the fact that we attend exclusively to the verbal form of such judgments and not to the thought which they express. If, from the verbal form of the judgment 'God exists,' we conclude that its subject is 'God' and its predicate 'existence,' it will indeed be difficult to make this judgment conform to any theory, as will be shown later when the different theories of judgment come to be considered. But, as a matter of fact, this is not what the judgment in question means. The judgment 'God exists' is a result of a process of discriminating directed not upon a complete blank but upon a certain reality, which, though still vague, is already denoted by a word, and undoubtedly *is*. To think of what is not, and is not recognised as standing over against us in the act of judging, is utterly impossible. The subject of *every* judgment as the starting-point for further differentiation is recognised as in that sense real, and, therefore, to affirm this reality over again in the predicate would be meaningless. Yet, the reality which belongs to all contents of thought may be very different in different cases. Thus God may exist merely in the creative imagination of the race, or may have independent trans-subjective existence. These differences in the mode of the existence of an object may be inquired into, and it is precisely the function of existential judgments to inquire into them. The subject, in these cases, is not a thing, but the *existence* of a thing, and the predicate defines more exactly the manner of its existence. Expressed accurately, the meaning of the judgment 'God exists' is this: 'the existence of God is a real existence' (and not an existence in people's imagination or in virtue of my subjective activity, etc.). If existential judgments are

understood in this way, the difference between them and the results of other acts of differentiation by means of comparison will be seen to be purely external.

Another intricate problem which is easily solved by our theory of judgment is that concerning analytic and synthetic judgments. The intricacy lies in the fact that it is very hard to draw a line of demarcation between analytic and synthetic judgments, to decide whether that line is movable or fixed, and to discover the meaning of purely analytic judgments. All these perplexities fall to the ground, and the misunderstandings and confusions in which they are involved are cleared away, when once it is recognised that all judgments are in one respect analytic and in another respect synthetic. The fact cannot be disputed if it is seen that the subject of every judgment '*S-P*' is in reality rich in undifferentiated content, characterised but not exhaustively characterised by the property *S*. Hence it becomes manifest that in reference to the still undifferentiated portion of the subject even the most typical synthetic judgment has an analytical character. Thus, for instance, the judgment 'this tall, thin man is remarkably pale' is undoubtedly formed by a further differentiation, *i.e.* analysis, of the subject which was first described as 'this' (*S*) 'man' (*M*) 'tall' (*N*) 'thin' (*R*). But, on the other hand, if we look at the formula of this judgment '*SMNR-P*,' and confine attention to the already known part of the subject characterised as *SMNR*, it will appear that the judgment was formed synthetically,—namely, by adding *P* to *SMNR*, which does not in the least resemble *P*, and could not by any analysis be made to yield *P*.

In like manner the typical analytic judgments are analytic only in reference to the subject taken as a whole; in reference to the already known portion of the subject they too are synthetic, and only when so regarded do they possess any meaning and save themselves from sinking into a mere tautology. Thus the axiom, 'the whole is greater than its part,' can only be regarded as a judgment if the subject 'the whole' is not taken in the definite quantitative sense expressed by the predicate, but merely conveys a general impression which makes us call one thing a part in reference to another. So understood, every judgment is synthetic.

Professor Karinsky is in entire agreement with this view, as indeed one would expect from his treatment of the subject of a judgment. "Even when the determination," he writes, "is taken from the number of those very characteristics which form part of the object ('analytic judgments'), it is never ascribed to these characteristics themselves, but to an indefinitely conceived object about which a number of other judgments might be made, and which, therefore, appears to our thought as indefinitely rich in content, and presupposes a whole series of properties and relations. In saying that 'all bodies are extended' we do not mean that the idea of a 'body' involves the attribute of extension. We mean that objects which are characterised by the attributes connected with the term 'body,' but which must also possess many other properties and relations, have the attribute of extension. Such judgments can be called analytic only in the sense that in order to be convinced of their truth it is sufficient to refer to that idea which has characterised their subject for our consciousness in the first instance. They are

not analytic in the sense that in them the predicate is ascribed to this idea itself."[1] A similar view was expressed by Hegel. He maintained that dialectical "development has both an analytic character, in so far as an immanent dialectic posits only what is contained in the immediate idea, and a synthetic character, in so far as in the idea the distinction indicated has not yet been posited."[2] It is noteworthy that Kant himself, in whose theory of knowledge the division of judgments into analytic and synthetic played so prominent a part, came very near regarding all judgments as synthetic, as may be seen from some of his remarks in the *Prolegomena*.[3]

Every judgment, then, is an analysis of the unknown aspects of the subject, while in reference to the known aspects of the subject every judgment is a synthesis. These properties of judgments will be seen to be of cardinal importance when we come to deal with the validity of the definitions and axioms upon which science is based.

III

Theories of Judgment

Having considered the various forms of judgment, we can now define judgment as such, and compare our definition with the definitions of others. According to our view, *a judgment is the result of a single act of differentiating an object by means of comparison.* This definition is almost a repetition of the definition of knowledge, and so it must be. Knowledge can only

[1] Karinsky, *Op. cit.* p. 89 ff.

[2] Hegel, *Encyclopädie der philos. Wiss.*, 'Logik' (2 Aufl.), § 239, p. 411.

[3] *Prolegomena*, § 2, c. 2.

be realised in acts of judging, and, taken as a whole, knowledge canbe none else than a complex of judgments. Hence, if knowledge is the differentiation of objects by means of comparison, a judgment must be a single act of such differentiation. The conception of differentiation and all that it implies has already helped us in our inquiry, and will continue to do so.[1]

The activities of discriminating and comparing may be directed upon any content of reality; and, therefore, all theories according to which judgment expresses merely certain aspects of the real world are one-sided. Some of these theories,—those, for instance, which take judgment to be a relation between ideas, an identification or a comparison of ideas—leave the actual process of judging altogether out of account. They take the judgment as a completed, accomplished fact, find in it two elements—a subject and a predicate—and note the relations which may be established between these elements as already given. These theories have been criticised at length in Mill's *System of Logic* and in other works. I pass, therefore, to the theories which treat judgment as the expression of a relation between things and not between ideas.

In the view of Mill every judgment is an assertion of existence, coexistence, succession, similarity, or the connection of cause and effect.[2] In other words, for Mill every judgment is either an assertion of existence or an assertion about the relations of phenomena. A somewhat similar view is worked out by

[1] Lipps (*Grundzüge d. Logik*, p. 16) also defines a judgment as 'a single act of knowledge,' but, as he gives no satisfactory definition of knowledge, he derives no advantage from this definition of judgment. Further on he substitutes for it another definition which will be discussed later.

[2] Mill, *System of Logic*, Bk. i. ch. v. §§ 5 and 6.

Lipps, who defines judgment in general as " the consciousness of objectivity or of constraint which the represented objects bring to bear upon the process of representing." He immediately adds, however, that this definition covers also imperfect acts of knowledge, *i.e.* incomplete judgments, under which he includes, among others, existential judgments. Lipps needs, therefore, another definition for developed judgments, *i.e.* for the results of those acts of knowing to which as a matter of fact logic is almost exclusively confined. The definition is as follows: judgment is "*the consciousness of the objective necessity of a coexistence or of an order (relation) of objects of consciousness.*"[1] But an existential judgment is merely 'a simple act of acknowledging the existence of a presented object,' or 'the consciousness of its objective reality.'[2]

According to these theories, then, we must assume the existence of two types of judgment absolutely distinct in structure and in meaning. This fact alone casts a doubt on the truth of the theories in question; and, moreover, it leads to numerous sceptical conclusions with regard to cognitive activity in general. If all knowledge takes the form of judgment, and if every judgment is an assertion of existence or of relation, it follows that the things themselves remain unknown to us. They are simply the X's, Y's, Z's, etc., about which we merely know that they exist and enter into certain relations with one another. Mill and Lipps do not, however, draw this conclusion from their definition of judgment. In another connection the view of knowledge to which I am referring

[1] Lipps, *Grundzüge der Logik*, p. 17.

[2] *Ibid.* p. 52.

is worked out by Rickert,[1] though, it is true, he limits it to conceptual scientific knowledge. This view must now be considered, for, as already said, it necessarily follows from the definition of a judgment as an assertion of the existence of things or of the relations between them.

It is true that every judgment posits a certain relation between subject and predicate; and it is, therefore, easy to understand how the theory supported by Mill and Lipps has arisen. But the presence of relation in every judgment does not prove, by any means, that every judgment is an assertion of relation. The content of knowledge in a process of judging is the judgment as a whole, and not merely the relation between the subject and the predicate. This is particularly clear in the cases where a judgment undoubtedly *is* an assertion of relation, as can be seen from the question which it answers. Suppose that to the question, 'How is Paris situated in regard to Berlin?' the answer is given that 'Paris lies south-west of Berlin.' The undifferentiated relative position of Paris and Berlin is still the subject of this judgment, but the predicate differentiates one aspect of this relation,—namely, that 'the position is a south-westerly one.' From this instance it is clear that in a judgment of relation the subject is the undifferentiated relation itself which is under consideration, and that the predicate differentiates it. As in every other judgment, the predicate stands in a certain relation to the subject, but this relation is only a part of the truth conveyed by the judgment; it does not, in any way, exhaust it or even form

[1] H. Rickert, *Die Grenzen der naturwissenschaftlichen Begriffsbildung*, ch. i. § 4; ch. ii. § 2.

an important part of it. From the same example it can be seen that if the subject of a judgment is a thing and not a relation—if, *e.g.* to the question, 'What is Vienna like from the aesthetic point of view?' the answer is 'Vienna is a fine town'—the knowledge obtained is knowledge of a thing and not of a relation.

After the act of judging has been accomplished, the subject of the judgment becomes better known to us than it was before. It is better known in so far as a new property, expressed by the predicate, has been discovered in it by means of comparison. The predicate is one of the aspects of the subject, and stands in a certain definite and very important relation to it; hence the illusion that the knowledge obtained through a judgment is simply a knowledge of relations. The relation of subject and predicate will be discussed later on; and it will then become still more apparent that, although it does form part of the meaning of a judgment, it does not exhaust that meaning.

Those who affirm that all knowledge is knowledge of relations may not, however, have in view the relation between subject and predicate. They may mean that the things which serve as the subjects of judgments turn out, on closer examination, to consist of nothing but relations. Such, apparently, is Rickert's contention. According to Rickert, the knowledge of a red colour, for instance, is simply knowledge of the relation between the eye and the ether waves, *i.e.* of their length and of their relation to a certain magnitude taken to be a unit, etc. It should be noted that this contention is probably based upon a confusion between two quite different notions: conditioned by relations and consisting of relations. In the *finite*

world every single thing is conditioned by its relations to all other things, and in its turn enters into relations with them. But this does not, by any means, imply that every finite thing can be resolved into relations, or that all we can know are its relations,[1] while it itself remains for us a mere *X*.

The question does not, however, concern us here; I have touched upon it simply to point out that it belongs to the department of metaphysics and not to epistemology. It would be an epistemological question if the very structure of knowledge, as judgment, indicated that we can know relations only, and not things; but this would only be true on the supposition that the knowledge expressed in a judgment is concerned solely with the relation between subject and predicate. So soon as this is seen to be a misapprehension it at once becomes clear that the structure of knowledge, *i.e.* the structure of judgment, does not in any way predetermine whether relations or things will be known in the judgment. The form of the judgment accommodates itself both to knowledge of things and to knowledge of relations; the content that fits into the form depends on the reality to be known and not on the nature of the cognitive activity.

Still more frequently judgment is defined as the *consciousness* of the objective character of an experience or as the *recognition* of an experience as objective. In an undifferentiated form *both* these definitions are implied in the widely current view according to which judgment is an act of affirming or of denying, an act of asserting being or non-being, etc. When further elaborated these two definitions give rise to two fundamentally

[1] *E.g.* the relations which condition the red colour.

distinct theories of judgment. The one lays stress on the objective character of a judgment, on the presence (or absence) of a *reality* expressed by it, the other upon its *practical* aspect, upon the element of *valuation* or recognition involved in it. Lipps takes the first view. He defines every judgment, developed or undeveloped, as " the consciousness of objectivity or the consciousness of constraint which the objects presented bring to bear upon the process of presenting." The same opinion had been advanced by Ueberweg, who maintained that " judgment is the consciousness of the objective significance attaching to a subjective connection of presentations." [1] Sigwart, in his *Logik* discusses this definition, and admits that it correctly expresses one aspect of judgment.[2] Windelband and Rickert may be regarded as the modern representatives of the second view. Windelband insists that the essence of judgment lies not in the conjunction of presentations but in the value put upon this conjunction.[3] And the theory is systematically worked out in Rickert's book, *Der Gegenstand der Erkenntnis*. Rickert maintains that truth and falsity are found only in a judgment; but judgment is more than a mere conjunction of presentations. Judgment arises only where there is the practical element of affirmation or recognition (*Anerkennung*), which indicates that the presentations *ought* to be conjoined in a certain way. The judgment is an expression of a *Sollen*. The obligation to unite the presentations in a particular way indicates the presence

[1] Ueberweg, *System der Logik*, 5th ed. p. 189.

[2] Sigwart, *Logik*, 3rd ed. Vol. i. p. 103.

[3] Cf. Windelband's Essay in *Strassburger Abhandlungen zur Philosophie*, entitled " Beiträge zur Lehre vom negativen Urtheil," p. 167 *sqq.*

of an object, of an existent reality. It is not existence that is the ground of the 'ought' expressed by the judgment, but, on the contrary, the binding character of the judgment is the ground of existence.

Both these theories contain germs of truth: judgment arises only when we are *conscious* that what we are experiencing is an object, an actually present reality, and when we *recognise* it as an object. I desire, then, now to show that the definition which I have given of judgment does justice to both these features,—that of existence and that of the recognition of existence.

We have defined judgment as an act of differentiating an object by means of comparison. By insisting that what is differentiated is an object, we have admitted the element of truth contained in the theories which define judgment as the consciousness of objectivity. But we go further and contend that the object to be known is itself present in the process of judging. Indeed, according to our theory, to be an object means 'to be that actually present reality' which is not yet known but is to be discriminated in the judgment, and which fashions the judgment in the sense that the content of a judgment is only true in so far as it is necessarily determined by the object and not by the knowing subject. Since any reality with which we are confronted may become an apprehended object, it follows that the conception of object and the conception of reality are very closely connected: an object is a reality in its relation to the act of judging. The two are related as genus and species. Moreover, in practice every *known* reality is an object, hence in practice the extension of the species term 'object' coincides with the extension of

the genus term 'reality.' We take the conception of reality to be the genus simply because in the abstract we distinguish between reality in its relation to the act of judging and reality as apart from that relation.

Every judgment, then, involves the consciousness that the object *is*, but no judgment stops there. It proceeds to determine the nature of the object, *i.e.* to differentiate it. I have already urged that even such existential judgments as that 'God exists' cannot be reduced to a mere recognition (of the being of an object) simply because everything about which we judge—without exception, but also without any significance for knowledge—'*is*, or forms part of reality.' Existential judgments do not merely assert that an object is, they differentiate the manner of its existence, *e.g.* its independence of the knowing mind.

The practical element of judging—recognition or affirmation—is also duly recognised by our theory, in so far as we pronounce judging to be an *act*. Every act is guided by a striving towards a certain end; and, in so far as the end is or appears to be realised by the act, the activity and its product are accompanied by a feeling of consent; we sanction, we recognise, we affirm it. Judgment is based upon a striving for truth, *i.e.* according to our definition, upon a striving so to discriminate the real world as to obtain purely objective characteristics. In this sense Rickert is perfectly right when he says that epistemology has for its subject-matter a "will to know" (*Wissen-Wollen*), that "the process of affirming or denying is impossible without a desire for truth," that the necessary character attaching to a

judgment manifests itself "as a categorical imperative," and that obviously we only obey the imperative when we will the truth.[1] In order to emphasise this practical element, our definition of judgment might be amplified by the addition that it is an act performed by the knowing subject. It would then run thus: *judgment is the knowing subject's act of differentiating the object by means of comparison.*

There is, likewise, a certain justification for the contention of Windelband, Rickert, and other logicians that presentations and complexes of presentations contain neither truth nor falsity, and do not, therefore, constitute knowledge. If a presentation, or a complex of presentations, is constructed by imagination or reproduced by memory apart from the *will to know, i.e. to discriminate the object*, it is neither true nor false. But presentations are not always of this nature. Every presentation that enters as an element into a judgment is either an affirmed truth or falsehood, either an insufficiently developed or an over-developed judgment (*e.g.* in the judgment 'this tall, thin man resembles my brother,' the idea 'this tall, thin man' is an insufficiently developed judgment). An exactly similar character attaches to every percept resulting from a deliberate act of perceiving, to every memory intended to recall what has happened, etc. Such presentations must be described as objective in contradistinction to those presentations that have no cognitive function.

But our agreement with Rickert goes no further. We cannot admit that the element of affirmation is of dominating importance for judgment. It is true that so long as I have not affirmed anything I have

[1] Rickert, *Der Gegenstand der Erkenntnis*, 2te Aufl. pp. 139-140.

not given expression to either truth or falsity. This, however, does not mean that my affirmation *creates* the truth or falsity; my affirmation merely makes me *responsible* for siding with the one or the other.

In the development of judgment the following stages are to be distinguished. To begin with, we wish to discriminate some aspect of the reality before us,—a reality infinitely rich in content (for instance, we observe a scorched tree trunk, and are struck by its unusual colour), and we approach it as an object which is to be differentiated by means of comparison. If the act of discriminating is deemed by us to be successful—if we believe, *i.e.* that the object has been differentiated correctly, without any foreign elements having been added to it,—the product of the differentiation (*e.g.* the judgment, 'the trunk of the tree is scorched') is held to be sufficient for our purpose; and, accepting the result as satisfactory, we go no further in this particular direction. *The sanctioning of the result* of an act of knowing is, in most cases, so closely interwoven with the act itself, that it is not expressed separately; and, therefore, like all the conative aspects of our life, it does not readily lend itself to observation. But comparison with other acts of conation, the phases of which have been discerned, will help to make clear the significance of the different stages of the act of judging. Such comparison will suffice to show that truth or falsity is contained in the result of the differentiation, independently of the fact whether I concur in it or no. No doubt, it only becomes *my* truth or *my* falsity from the moment when I acknowledge that the product of my activity *satisfies* me. If, for example, in playing a game of chess I think out a plan to

checkmate my opponent and make imaginary movements now with the knight, now with the castle, every one of such movements contains the fulfilment or the non-fulfilment of a purpose. Yet, only from the moment when I actually move one of the chessmen and say, 'I play,' have I sanctioned this act and made myself responsible for it.

It follows, then, that, although judgment does contain a *practical element* in the form of recognition, it is not this element which *makes* a judgment true. It has no creative character and does not introduce anything new into the content of the judgment. As the final stage of the process of judging, it is of the greatest importance for the life of the knowing subject, and also for his individual character. But it is only the objective aspect of the act of recognition that is of interest from an epistemological point of view. The knowing subject's act of recognition may be either free or constrained, and it is only when the constraint is felt—and felt as proceeding from the content of the judgment—that the act is one of affirming truth. Consequently, what is characteristic of truth is not that *I recognise it*, but that the truth, as something external to myself, *compels me, forces me, to recognise it*. Epistemology, therefore, has to concern itself not with the act of recognition, but with those properties of the content of the judgment which compel recognition of it as true. Now, we know that the contents of judgment are objects, and that an object is nothing other than an actual reality, an actual entity, in its relation to judgment. Our question, then, takes the following form: what are the properties of the reality with which the knowing subject is confronted that compel him to recognise it? So

soon as the question is formulated in this way, it is clearly seen to indicate its own answer—if, that is to say, the fundamental positions we have been contending for be granted. According to our theory, the reality known is neither copied nor reproduced by the knowing subject, but is itself actually present in the act of judging, and forms part of its content. It is the *presence of reality* that compels the knowing subject to recognise reality. If the knowing subject desires truth, *i.e.* desires to know reality, he must recognise only what is given to him in intuition, what is actually present, and which, therefore, compels him to accept it.

In itself this thought is quite simple, and requires no further elucidation. But, as it is of vital epistemological importance, a number of questions that require an answer arise in connection with it.

The notion that the truth of a judgment is dependent on reality is sufficiently prevalent. It lies at the basis of all those theories according to which true knowledge is that which *corresponds* to reality. But in such theories this notion is combined with an assumption which deprives it of value,—the assumption, namely, that knowledge and reality are isolated from one another, or, in other words, that knowledge is transcendent. Indeed, if true knowledge consists in a *correspondence* between ideas and reality, the implication is that ideas do not contain the reality which is being known; ideas are then purely subjective, and reality lies somewhere outside the intellectual processes. How, in that case, can reality be a criterion both of the truth and, at the same time, of the necessary character of judgment? Whatever judgment we take, *that which is in it* is not reality

itself. Hence, if a criterion is to be sought, it would have to be looked for in the opposite direction, and the necessary character of judgment be taken to indicate the presence of reality. In fact, this line of reflection compels us to impoverish reality further still. The critical philosophy has shown that there can be no transcendent knowledge; even, therefore, if it be admitted that the necessity involved in judgment is the criterion of reality, it does not by any means follow that it is a criterion of transcendent reality. That which is in me cannot possibly be an absolute guarantee of what is external to me and of what is not given. Thus, it would follow that the reality about which we learn in a judgment is in the long run nothing but what is expressed by the word 'is' which we add to a combination of ideas felt by us to have a binding character. Existence so understood would be a *category of thought*; it would belong not to the content of the world we seek to know, nor to the content of our ideas about the world. It would be simply a *form of knowing* the world. "I can apprehend colours, sounds, etc.," says Rickert, "and if I think of them as existing I can add to them *in speech* the word 'existing'; but the apprehended *existing* colour and the apprehended colour are absolutely identical. The word 'to be' as a presentation has no meaning whatever, or is equivalent to nothing. Only as a component of a judgment, *i.e.* of an affirmation or a denial, does it acquire any meaning."[1] Rickert briefly summarises this view as follows: "We started with the contention that transcendent existence is to us unknown, that nothing is given to us but contents of consciousness

[1] Rickert, *Der Gegenstand der Erkenntnis*, p. 119.

accompanied by a feeling of necessity in judging, which feeling compels us to recognise these contents as existing. Our whole theory is based on the two positions that the process of judging is not identical with the process of apprehending (*Vorstellen*), and that 'existence' acquires meaning only as a component of a judgment. Certainly, we demand a complete reversal of the commonly held view of knowledge, according to which the judgment must correspond to a reality, and we do so simply because the usual opinion is dogmatic and metaphysical. We know nothing about any real existent unless it is judged of as existing; no one knows anything about it, if he asks himself the question seriously. For how could he know anything about it without having judged, and how could he judge without thereby acknowledging the binding character of an 'ought'? We cannot, therefore, say that judgment ought to conform to reality, but contrariwise we must insist that only that is real which ought to be judged as existing, and that, accordingly, the 'ought' and not the 'is' is the logically prior." [1]

The first Part of the present work has furnished grounds for thinking that Rickert's view is essentially akin to the views he is opposing. The views in question arise from the false assumption, common to them all, of a gulf between the knowing subject and the world to be known. It was this assumption which led Kant's predecessors to seek for a criterion of truth in the conformity of the knowing subject's ideas to a reality external to those ideas (*i.e.* never 'given' to any consciousness). And it compels such followers of Kant as Windelband and Rickert to say, in so

[1] Rickert, *Der Gegenstand der Erkenntnis*, pp. 156-157.

many words, that reality is not an *object* of knowledge, that presentations have no reference to anything beyond themselves, and that a true judgment is nothing but a combination of presentations, guided by the consciousness of an obligation to combine them.[1] Truth, then, consists in the conformity of the judgment to the obligation of constructing that judgment; and, therefore, "if we want to call by the term object that to which knowledge conforms, the object of knowledge can only be the obligation (the *Sollen*) recognised in the judgment." [2]

On the other hand, our view, that truth means the *presence* of reality in the judgment and not a correspondence between knowledge and something which is external to it, is in no sense a return to the pre-Kantian theories of knowledge, nor is it akin to them. Rather is it a complete break with the pre-Kantian philosophy, for it banishes from the theory of knowledge, and consequently from ontology, all elements that are transcendent in relation to knowledge. But Rickert's theory—like the theories of most Kantians—reveals its kinship to the pre-Kantian philosophy by the fact that, in spite of all his efforts, he cannot get rid of the transcendent element. This is extremely characteristic of Rickert's view, and deserves, on that account, to be considered more closely.

When Rickert pronounces truth to depend upon the act of recognition, he does not by any means regard that act as determined by the will of the individual subject. The act of recognition can lead to a universal and necessary judgment only if it is based upon an 'ought'—upon a necessity which constrains the individual's will, and is, therefore, in relation to

[1] *Ibid.* p. 116. [2] *Ibid.* p. 122.

the individual, transcendent.[1] In order, then, to find a ground for truth, Rickert falls back upon a transcendent element. He insists, however, that there is no likeness at all between his view and that of 'the realists': they hold that truth depends upon transcendent Being, whilst according to him it depends upon a transcendent 'Ought.' Unfortunately there is one important point which Rickert does not make clear. He does not explain whether the binding principle transcends both the knowing subject and knowledge as a whole, or whether it is immanent in knowledge and transcendent only in regard to the knowing subject. Let us examine his theory in the light of both of these suppositions, and begin with the last of them.

In a theory of knowledge as in the full sense immanent, truth must be conceived to depend entirely upon elements immanent in the process of knowledge. Rickert is precluded from holding a view of this sort, for according to it being or existence would have to be more than a mere category. If everything is immanent in knowledge, the problem of grounding existence upon thought,—a problem that played so large a part in Kantian philosophy,—falls; there is no need to deduce Being from a transcendent *Sollen* any more than to deduce the transcendent *Sollen* from Being. Both Being and *Sollen* turn out to be given, and in that sense *are*; presentations cease to be *mere* presentations; they include within themselves being, and accordingly we can speak not of the presence of being, but only of the nature of the being that is present. Under such circumstances, to

[1] *Der Gegenstand der Erkenntnis*, p. 131. See also *Die Grenzen der naturwissenschaftlichen Begriffsbildung*, p. 681.

deduce being from the act of recognition, or from some other aspect of the act of thought, would be as extraordinary as to deduce the colour red or green from an act of thought. Rickert himself says, "if, for instance, two patches of colour are given to me, all I can do, even from the point of view of transcendental idealism, is to recognise that the one is blue and the other is red. This blue and this red are, in every respect, irreducible, or, as it might be put, absolutely non-rational, for in definite contents such as these thought finds its limits."[1] If, however, everything is immanent in knowledge, these considerations must be extended further: not only are all the modifications of being non-rational, but being itself is non-rational. Being is *given to thought* as something there, and is not an intellectual element or a product of thought. So far, then, from *Sollen* furnishing the ground of being, it turns out itself to be one of the modifications of being. Rickert says that the object which we oppose to the judging subject is nothing but an 'ought' which *is* not but has timeless validity.[2] Yet, is there intelligible meaning in saying that anything can be *valid* and at the same time not *be*? Contradiction seems to be involved in this line of thought; and for our part we turn to the realistic conception of being which instinctively guides us in science and in practical activity. The fact that this realistic conception has hitherto failed to free itself from epistemological errors is due to the assumption generally made that the object to be known and the process of knowing it are separate from one another. Rickert is himself aware that his view of the relation between *Sollen* and *Sein* may seem

[1] *Der Gegenstand der Erkenntnis*, p. 168. [2] *Ibid.* p. 165.

strange, and this is how he tries to meet objections: "If it be said that this *Sollen* and the recognition of it must *be*, and are, therefore, only a part of reality, such an objection would simply be based on a use of the term '*Sein*' to cover everything that has, or is going to have, being predicated of it in judgment. In that case, of course, it has the same significance as 'reality.' But in the proposition 'the *Sollen* together with its recognition *is*'—the 'is' is merely the predicate of a judgment, and those who always understand being as simply the predicate of a judgment have not only no right to speak of transcendent being, but if it be granted that an entity can be conceived only where we have judgment, *i.e.* recognition of a *Sollen*, will have to admit that the transcendent *Sollen* and its recognition are conceptually prior to immanent being."[1] This priority of the 'ought' is well brought out by the following passage: "The assumption of transcendent being cannot be proved, and even if it could be it would not account for the element of relation in knowledge which is rightly pre-supposed by the empirical realist, even though it is not to be found in the given. All we can do is to point out that the relatedness arises owing to the categories which are involved in judging, and that judging requires for its objectivity a transcendent *Sollen* but not transcendent Being."[2]

In this way Rickert avoids crude and obvious self-contradiction. But he does so by adopting the first of the two alternatives we have mentioned,—that is to say, he adopts as the basis of his theory of knowledge a principle which is transcendent not only in regard to the knowing subject but in regard to know-

[1] *Der Gegenstand der Erkenntnis*, p. 151. [2] *Ibid.* pp. 204-205.

ledge as a whole. He is compelled to do so, for, as has already been shown, on the other alternative, his conceptions of Being and of *Sollen* cannot be reconciled. In fact, Rickert says in so many words that he comes to "a metaphysic based upon the unconditionally binding character of values," though he adds, "it would be a good thing to distinguish this metaphysical conviction from any rationalistic metaphysic, for super-sensuous reality can never become an object of our knowledge"; and, indeed, we have in this case to use the term 'reality' in a sense which it can never have in science.[1]

If a theory appeals to principles which transcend knowledge, there is no need for us to criticise it in detail in order to exhibit the contradictions involved in it. The whole of the first Part of this book has been devoted to showing that the process of cognition can give no information about anything that transcends cognition—cannot, indeed, even afford any indication of such a reality. To assert that, although we cannot know transcendent being, we can know a transcendent 'ought,' is to get out of the difficulty by means of purely verbal distinctions. A similar criticism must be urged in reference to the contention that, although the transcendent 'ought' is no object of knowledge, it is an object of *faith*. If the cognitive process cannot even hint at anything which is transcendent, it is clear that nothing transcendent can be an object of faith either.

In their opposition to theories of knowledge based upon the conception of a transcendent reality the followers of Kant have constructed a theory which is based upon an 'ought' transcending knowledge.

[1] *Die Grenzen der naturwissenschaftlichen Begriffsbildung*, pp. 737-738.

At first sight it seems as if theirs were a totally new system of philosophy. But in truth, as I have already attempted to show in the chapter on the philosophy of Kant, these views are based upon the same assumption as that which lies at the root of the pre-Kantian systems; and it is, therefore, inevitable that they should be involved, to a certain extent at least, in the same contradictions as the latter. An entirely different character attaches to a theory of knowledge which returns to the notion of Being, but finds the criterion of truth not in the *conformity* of knowledge to Being, but in the *presence* of Being itself in knowledge. Such a theory can avoid the pitfalls of solipsism, subjectivism, etc., only if it succeeds in making clear that, although Being is immanent in knowledge, it need not in any way be immanent in the knowing subject. This task has been attempted in the first Part of the present work, and thus the ground has been prepared for a new theory of knowledge freed from the insoluble problems which arise from the assumption of a separation between knowledge and existence. We have been able, in consequence, to develop a theory of judgment as the process of differentiating by means of comparison the immediately apprehended reality with which we are confronted. This view of judgment will be of help in dealing with one of the most important of epistemological problems. I propose to show how the presence of reality in the content of judgments can furnish a justification for the necessity, self-identity, and universality characteristic of truth.

CHAPTER VII

THE NECESSITY, SELF-IDENTITY, AND UNIVERSALITY OF TRUTH

THE object known is the real world. But since everything about which we judge is real in one sense or another, we want to know not *that* an object *is*, but *what* it is—*quid sit*, and not *quod sit*.

Knowledge of the nature of the object is obtained by means of comparison. A finite being cannot forthwith compare an object with everything else in the world, and for this reason any single act of human knowledge discriminates some one aspect only of the object. All human knowledge must, therefore, take the form of the judgment, *i.e.* must consist of an object (the subject of the judgment), a differentiated aspect of it (the predicate), and the relation between these factors.

A true judgment has a necessitating or binding character. This characteristic of truth is realised in three ways: in the first place, in a true judgment the predicate attaches to the subject with necessity; in the second place, the judgment retains this necessary character for ever—at whatever time and however often the knowing subject essays to think of the same object the same judgment will remain binding and obligatory; and in the third place, a true judg-

ment is binding upon *all* thinking beings, and not merely upon the person who happens, as we say, to make it. The first characteristic of a true judgment I propose to call its necessity, the second and third I shall call its constraining power. It should be noted that the property of being 'once true, always true,' must not be confused with the universality of a judgment. Such universality is dependent on the fact that phenomena are conformable to law. At present we are not concerned with the *laws* of nature or with *universal* judgments; the character of being binding upon all thinking beings attaches to all true judgments, whether particular or universal.

On the ground of what we have been repeatedly urging, we can assert, at the outset, that the conditions of the necessity and the constraining power of true judgments are not to be found in a world which transcends knowledge, for there is no such world; these conditions must be sought either in the knowing subject or in the objects to be known. But the only thing which in an act of knowledge belongs to the knowing subject is the activity of comparing. The results of this activity are wholly determined by the nature of the objects. Now, since the whole world, including the knowing subject himself, may become an object of knowledge, the constraining power of true knowledge must be determined—to put it more simply—*by the characteristics of the world as a whole*, and not by the characteristics of some special part of it. In order to discover these characteristics we must consider first of all the nature of the necessary connection between the subject and the predicate of a judgment.

The subject of a judgment, S, is a part of the real

world, and, like everything else in the world, it is infinitely rich in content that has not yet been discriminated in knowledge. The predicate P is a certain aspect of the reality S, which, in the act of judgment, is differentiated. Since the known reality is itself immanent in the process of knowledge, it follows that the same relation that holds between the elements of the real world will also hold between the elements of the judgment S and P. If there were no relation between the parts of reality there could be no judgment. If there were no inner necessary connection between the different aspects of the real world, then, in discovering the element P, we should feel no objective necessity of joining it to S. But this is not what we find: in a true judgment, be it in reference to things, or events, or processes, the nature of the subject S is such that, given S, the predicate P is necessarily added to it. In the same way every part of reality is so constituted that if some aspects of it are given, other aspects are necessarily conjoined therewith in organic connection. The connection between them is organic, similar to that between the head and the body of a vertebrate animal.

The relation which consists in a certain given A being necessarily connected with B is found under many forms—under the form of causal connection, of functional dependence, of the connection between motive and action, etc. It is not necessary to discuss here the different forms of necessary connection. What is of interest to us is the generic notion of relation which consists in a certain given X being necessarily connected with Y. This relation in its *universal generic form* I propose to call the relation

of functional dependence, or of ground and consequent, without ascribing to these terms a *rationalistic* significance.

If, then, reality is actually present in judgment, the explanation of the necessity involved in judgment will be found in the necessity involved in reality itself, in the organic functional relation between the various aspects of reality. However much judgments may differ, their necessary character will, in all cases, be dependent upon this source.[1]

To make the point clear, let us look at two kinds of judgment that are, in a sense, opposed—judgments of perception, on the one hand, and apodictic judgments, which seem to have a peculiar character of rational necessity attaching to them, on the other hand.

If, after I have been rambling in the garden, I come back and say, 'the rose bush in the round bed has withered,' this judgment will be no less necessary than the judgment, "the sum of the angles of this acute-angled triangle is equal to two right angles." If the subjects of these two judgments are given to me, I cannot but add to them their predicates, and this means that in both cases the subject contains the ground of the predicate. In each case the subject is a part of reality infinitely rich in content, and is known or differentiated in the consciousness of the knowing subject only to a limited extent. The difference between the two judgments, in respect to the feature we are now concerned with, depends entirely upon the number of elements of the subject that have been discriminated. The only features

[1] Concerning the subject as ground and the predicate as consequent, see Lipps, *Grundzüge d. Logik*, p. 41.

discriminated in the subject of the first judgment are that it is a 'rose bush' and that it grows 'in the round bed.' Take these two features and consider them in abstraction from all the richness and fulness of the living subject, 'this bush,' and it will at once be apparent that they contain nothing which compels us to add to them the predicate, 'is withered.' The known aspects of the subject do not, therefore, contain the ground (in its totality) of the predicate. The ground, then, is hidden in the *unrecognised* content of the subject. It must be hidden there, for otherwise we should not feel compelled to ascribe a predicate to 'this bush.' If we could trace the structure of all the tissues of this bush, and all the physical processes in them, the ground of the predicate would come into the light of knowledge. The second judgment has, however, a different character. In it the ground of the predicate is contained in the differentiated aspect of the subject. Indeed, the subject is differentiated more than is necessary for asserting the predicate. The triangle need not be 'acute angled,' nor 'this' triangle. If there be present a surface and three straight lines on it which cross at any angle and enclose a part of the surface, the sum of the angles must be equal to two right angles.

There are, then, two kinds of judgments. In some judgments the predicate follows from the unknown aspects of the subject, and only a vague awareness of the connection as a whole warrants the belief that the predicate really has its ground in the subject. If the discriminated aspect of the subject is abstracted from the rest, and attention is confined to it alone, we see clearly that it does not compel us to add on to it the predicate. This is true of most judgments of

perception. In other judgments the predicate follows from the known aspects of the subject; and, therefore, even if that aspect is considered in abstraction, the predicate is seen to follow from it of necessity. This is the case with respect to numerous propositions of such highly developed sciences as mathematics.

Minds inclined to attend chiefly to the known aspects of things estimate judgments of perception lightly and even distrust them. This is natural, because the known side of the subject in such judgments does not alone contain the ground of the predicate. On the other hand, a mind sensitive to the living concrete reality in all its fulness—the mind of the artist, for instance—is more apt to see the necessity involved in judgments of perception than that involved in abstract scientific propositions. As a matter of fact, however, both kinds of judgments are equally necessary, and the difference between them is simply in the degree to which the subject has been differentiated. But since the ideal of knowledge demands that all aspects of the reality should be known, it must be said that judgments of the first kind, though containing truth, fall short of the ideal—they are insufficiently developed. In a fully developed and true judgment the predicate will follow from the known aspects of the subject.

It is a much greater departure from the ideal when the subject is not the ground of the predicate. In that case we have to do not with an insufficiently developed but with a false judgment. There are three kinds of false judgments. In some judgments the subject contains only a part of the ground of the predicate. In others the subject is the full ground of the predicate, but contains other superfluous

elements that have no relation whatever to the predicate. Finally, the third kind of false judgment combines both mistakes; whilst the subject is in some respects incomplete, it is also encumbered with superfluous elements.

The possibility of false judgments may seem to throw doubt on the truth of the theory we are developing. If the subject of a judgment does not contain the full ground of the predicate, how can a false judgment arise? If the ground is not fully given, the consequent cannot follow; and, hence, in accordance with our theory, it would seem that, under such conditions, false judgments could never emerge at all. It should be noted that the objection could only be urged if the presence of reality in the process of judging be understood to mean that the reality itself, without any cooperation of the knowing subject, forms the judgment. But this is not what is meant. The reality, with its relations, is certainly present in the act of judging, but it does not constitute the judgment in its totality. In order that an act of judging may take place, there must be a knowing subject with his activities of attending, comparing, remembering, etc. And, this being so, the following circumstances may ensue. Suppose the subject S is not the ground of P, and that, therefore, there is no *objective* reason why it should be followed by the thought of P. Yet, still certain conditions C emanating from the knowing subject, such as emotional states, acts of imagination, association built up by one-sided personal experience, and so on, may supplement S in such a way that, in the thought of the person in question, the experiences $S+C$ will be necessarily followed by P, and thus $S+C$ will be a

ground for passing to the idea *P*. For instance, in the judgment, 'persons with an unsymmetrical type of face are criminals,' the subject does not contain the ground of the predicate, but it is not difficult to see how one-sided personal experiences, aesthetic likes and dislikes, etc., may induce some people to defend the thesis with warmth.

Thus all apparent contradictions may be disposed of. The process of judging is more complex than the fact judged about. The objective content of the subject, of the predicate, and of their connection is contained within the process of judging as a constituent of it. The characteristic of a true judgment is that in it the predicate *follows* from the subject *without any help from the side of the knowing individual*, whose function it is simply to discriminate the relation between them by concentrating his attention upon it, by comparison, etc. On the other hand, we have falsity when the content of a judgment is conditioned by subjective, as well as by objective, factors. In this sense one may endorse the words of Hegel, " when I think, I renounce my subjective peculiarities, I become absorbed in the object, I allow my thought to develop out of itself, and I think badly if I add anything from myself." [1]

Strictly speaking, a false judgment is not a judgment at all. The predicate does not follow from the subject *S* alone, but from the subject plus a certain addition *C, which in no sense belongs to the content of the judgment.* What takes place may be a process of association of ideas, of imagining, or the like, but is not a process of judging. An experienced psychologist will be able by careful observation to detect that in this

[1] Hegel, *Werke*, Vol. vi. *Logik*, p. 49.

process there is wanting just the specific element of the objective dependence of the predicate upon the subject which is characteristic of a judgment. It must be admitted, however, that an exceptional power of observation is needed in order to distinguish, by means of introspection, mere combinations of ideas from judgments.

The analysis of the connection between subject and predicate shows that in a true judgment the subject contains a full, *i.e.* a sufficient, ground for the predicate. We have here simply an instance of *the law of sufficient reason* which governs not only the relation between the subject and the predicate of a judgment but the relation between one judgment and another. If a judgment be deducible from other judgments there must be a sufficient reason for the circumstance in their objective content. The objective content of a judgment is not a copy of the reality but *is* the reality itself, and the law of sufficient reason expresses the necessity that obtains in the real world, in so far as this necessity is known, *i.e.* in so far as it enters into the structure of the judgment. The objection may be raised that the necessity of the real world is a stern, inviolable law of nature, while the law of sufficient reason is a normative law, which ought to be observed by those who strive after truth, but which may be violated. This objection supplies, however, its own answer. It shows that the law of sufficient reason can be regarded on the one hand as a norm and on the other hand as a law of nature, and that, accordingly, in every true judgment the subject must include the full ground of the predicate.

We explain, then, the necessity involved in judgment by the necessity involved in the reality itself—

that is to say, by the nature of the objects known. Is this explanation valid? The necessity and constraining character of real fact is, it may be urged, recognised almost universally, and yet modern philosophy hardly ever appeals to the nature of things in order to account for the necessity of truth. As a matter of fact, however, philosophy has at all times grounded the necessity of truth upon the nature of real existence. But the theories which culminated in the philosophy of Kant, isolating as they did the self from the not-self, were bound to reach the conclusion that the necessary character attaching to a judgment is due not to the nature of reality as a whole, but to the nature of that part of reality which was taken to be immanent in knowledge—to the nature, namely, of the cognitive activity, that is to say, of reason, understanding, and sense. This tendency is particularly prominent in Kant's treatment of mathematics. In Kant's view, mathematical judgments are based upon the intuition of space and time. Now, space and time are forms of the sensibility of the knowing subject. Hence, in being conscious of spatial and temporal relations, the knowing subject is apprehending his own nature, and, that nature being necessary, he cannot get rid of it, and cannot even conceive of its forms not being realised.

A similar line of thought I am also trying to develop, but I would extend and amplify it by introducing the two following considerations. The process of knowledge contains not only the nature of the knowing subject, but also the nature of the things known, for in the process of knowledge the self and the external world are not isolated from one another but are harmoniously coordinated. Consequently, when the

knowing subject is aware of some feature of the external world as necessary, he is not following the necessity of his own reason, but the necessary nature of the known thing. Or, to put it more exactly, the objective content of an act of judgment is necessary, not because the knowing subject cannot get rid of his own nature, *but because the known thing, present in the judgment, cannot get rid of its nature.*

Another remark that must be made in reference to Kant's view is this. Kant was profoundly mistaken in supposing that it is sufficient to refer to the necessary nature of the knowing subject in order to establish the necessary character of the judgments corresponding thereto. This question has been touched upon in Chapter IV. of Part I., in which Professor Karinsky's criticism of Kant's view of the matter was referred to.[1] If the products of a necessary activity are given in an act of knowledge, their necessary character, however pronounced, may yet remain entirely unnoticed. "In order that we should discriminate when contemplating a certain appearance, and especially an appearance actively produced, the necessary connection which holds between certain features of it,—that is to say, in order that we should contemplate not simply a given, an actually existing, combination of features, but a necessary combination, differing from accidental combinations by its necessity—it is essential that the necessity itself should be immediately given. It must be given, not merely as a part of the content combined, but as an actual combining."[2] In other words, it is not enough that in the act of knowledge a thing should

[1] See above, pp. 149-151.

[2] M. I. Karinsky, *Ob istinah samootchevidnih*, § 6, p. 31.

be given as a ready-made product; the activity itself, the laboratory of nature which makes a thing in this rather than in that particular way, must also be given. Now, this last condition of the necessity attaching to the judgment is secured by maintaining that there are no barriers between the world of the self and the world of the not-self, that things are given to us with all their relations of activity, causality, etc.

True knowledge exhibits a self-identical as well as a necessary character. If at a given moment, under given conditions, we have perceived a thing to be in a certain state, and formed a true judgment about it, we shall be compelled for ever afterwards to affirm the objective content of that judgment. This property of truth cannot be accounted for by thinkers who isolate the known reality from the processes of knowing, and suppose that every time a judgment is expressed *it is an entirely new act as compared with former expressions of the same judgment.* The solution of the problem seems to me, on the view I am taking, to be this. The objective contents of judgments are elements of the world of reality itself, and not its copies or products. Hence, every time that I—or anybody else—make a judgment concerning an event *A*, the objective content of my act of judging is *one and the same real A.* Every element of reality, even a fleeting event in the far-off past, remains eternally one and the same, identical with itself. The fact that a true judgment is *always* true is simply an expression of the eternal self-identity of the real world, which, as such, is unaffected by the flow of time.

No exception can be taken to the axiom of the eternal self-identity of the real world. Yet, it may,

perhaps, be urged that this axiom will not help to explain the self-identical character of judgments which refer to past or future events, or, speaking generally, to events not contemporaneous with the act of judging. We explain the feature of a true judgment being always true by the presence of an ever-changeless real *A* in a judgment about *A*. But if *A* be an event that happened in 1902 how can it be present in a judgment expressed in 1918? A similar criticism is suggested by our ordinary conception of spatial relations. If the event of which I am speaking happened in Paris, how can it be present in judgments made about it in Petrograd? At first sight these criticisms seem unanswerable. When carefully considered they will be seen, however, to have no solid basis. They are founded upon the ordinary sensuous presentations of time and space. Yet these presentations are so full of contradiction that not a single fully developed system of philosophy takes them as they are, but submits them to a thorough process of transformation. In order that this task may be performed successfully, the requirements of epistemology must, among other things, be taken into account. Indeed, as I have pointed out in the Introduction, the requirements of the theory of knowledge ought to be put above those of the other sciences. So far as time and space are concerned, this rule has become well established, and has indeed been carried to extremes. Many theories of knowledge (that of Kant, for instance) have not only influenced our current doctrines of space and time, but have actually furnished the basis of those doctrines. I do not propose to follow the example. Epistemology, as I conceive it, ought not to encroach

on the domain of metaphysics, and, since the nature of space and time is a metaphysical question, I shall not discuss it here. The part which epistemology has to play with regard to questions of metaphysics and of the other sciences is simply to formulate its requirements and to bring them into prominence. With respect to space and time, these requirements are as follows. Truth depends on the actual presence in judgment of the reality judged about. Now, according to the ordinary representations of space and time, and of the order of events in them, it seems impossible for an event separated from the knowing subject by an interval of space and time to be present in his acts of judgment. Ontology must, therefore, construct such a theory of space and time as would dissipate the seeming impossibility. It must show that events of the past, though in one sense gone for ever, remain, in another, for ever real, super-temporal; so that an act of comparing which results in a judgment need not be contemporaneous with the event judged about, and can yet be directed upon that event as upon an *actually present* reality. In the same way, an *act* of judging may endure but for a second and yet yield knowledge of eternal being or of an existent lasting, say, a thousand years. It does not follow that such knowledge is transcendent: the eternity or the thousand years embraced by the momentary act of comparing will stand over against us in the judgment as *an actually present reality*. In order to know that a thing has existed for a year it is not necessary to go on judging about it for a year, just as a man who compares the magnitudes of two mountains need not himself be of the magnitude of one of them.

The change in our ordinary notions of the spatial

and temporal world must be no doubt far-reaching in order to satisfy the demands of epistemology. But the objection that the task thus imposed is an impossible one will only be raised by those who are ignorant of the history of philosophy and hence of the many possibilities open to a thinker who undertakes to work out a theory of space and time.

From the epistemological standpoint there is no contradiction in what we are maintaining, so long as it is granted that knowledge is a complex process containing within itself both the activities of the knowing subject and the external reality known. In that case the mental acts of judging about one and the same object may be very different and extremely variable *psychologically*, whilst the object upon which those acts are directed—*i.e.* the content of the judgment—may remain identical.[1]

Some judgments are not only necessary and self-identical, but also universal. In them the predicate

[1] Husserl in his inquiry into the phenomenology of knowledge writes as follows about the difference between the particular psychical nature of the act of judging and the 'ideal' meaning of the judgment ever identical with itself: "That which is expressed by the words, *e.g.* 'π is a transcendent number,'—that which we mean by them in reading and in conversation, is not merely an ever-recurring individual feature of our cognitive experience. In each new case this aspect of the judgment is individually different, while the meaning of the judgment must be *identical*. If I or anyone else repeat the assertion, using it in one and the same sense, in each case different words will be used, different expression will be given to them, and there will be differences in the way they are understood. But in contradistinction to the infinite variety of these individual experiences, *that which* they express is everywhere identical, everywhere one and the same in the strict sense of the term. The meaning of a judgment is not multiplied by the number of persons and acts of judging; the judgment in the ideal and logical sense remains one." (Husserl, *Logische Untersuchungen*, II Theil. *Untersuchungen zur Phänomenologie und Theorie der Erkenntniss*, p. 99. See generally pp. 42-45, 92-195.)

attaches not only to 'this' S, but to every, to any S, and the number of S's may be inexhaustibly great. This property of judgments is perhaps one of the most puzzling. It presupposes the regularity of certain events, the existence of law in phenomena. But if regularity be taken to mean, as it generally is, a repetition of similar events, the problem is not only not solved but becomes more than ever difficult. For it is incomprehensible how different conditions can give rise to events *numerically* different but *qualitatively identical*. Nor is it any more explicable how the knowledge of such events could be *immanent* knowledge. In making a universal judgment we perform a *single* act of thought, and this act can contain only some *one* instance of the connection between S and P. All the other instances of it, asserted in the judgment, and they may be endless in number, must of necessity be *transcendent* to the judgment in question.

Obviously, the only way out of the difficulty is to modify our conceptions of universality and of law in accordance with the requirements of epistemology, and not to be deluded by the deceptive appearances of sense. Since the act of thought resulting in a universal judgment, 'every S is P,' is one single act, and since truth consists in the presence of the reality in the judgment, the S referred to in the universal judgment cannot be numerically different in the different cases, but must be one and the same S, the *identical* basis of the many. The modification thus introduced into our ordinary conceptions of universality is analogous to the transformation which, as already said, must be made in our conceptions of space and time. It has, also, important ontological consequences, but in this case the matter cannot be left entirely to ontology.

The problem of the universal and the individual is so important for the theory of knowledge that it calls to be considered here, and to have a special chapter devoted to it.

The self-identity and the universality of judgments depend, as we have seen, on the nature of the world of fact, on its eternal identity with itself. It must now be shown that this characteristic of reality coincides with that quality of objects which in the traditional logic is expressed by the law of identity, '*A* is *A*.' The reason why we have not, so far, fallen back upon the law of identity is that many different interpretations of it are to be met with, and these must first be considered and reconciled. To begin with, the law of identity may be taken to mean that the content of a judgment remains identical whenever the judgment is repeated. In this sense the law of identity directly corresponds to that eternal self-identity of the world of fact which is the condition of the generally binding and universal character of judgments.

But the law of identity may be understood in a much wider sense. It may be maintained that the formula '*A* is *A* ' expresses a law which governs every separate act of judgment without reference to its possible repetition. According to this interpretation of the law, the predicate of every true judgment contains in a differentiated form *the same* matter that is contained in the subject in an undifferentiated form. It has already been pointed out that every judgment is analytic, if by the subject of the judgment be understood the object judged about in all the fulness of its reality. The law of identity expresses this analytical aspect of every judgment.

It might at first sight appear as if the law of identity, in so far as it applies to every separate act of judgment, does not coincide with the law of identity that governs all repetitions of a judgment. But this is a mistake. In both cases we have to do with one and the same law expressing the eternal self-identity, the eternal inviolability of the world of fact. The point will become clear if one reflects that each separate act of judgment is also a case of the repetition of the object, in the sense that the same reality which is undifferentiated in the subject is repeated in a differentiated form in the predicate.

In examining the conditions of the necessity, self-identity, and universality attaching to judgments one is obliged to touch upon the significance of the laws of contradiction and of excluded middle. In the author's opinion, these laws do not belong to the group of conditions which determine the three properties of judgments we have been discussing. But it is usual, both in epistemology and in logic, to ascribe great importance to the two laws, and I will say a word about them in order to show, at any rate, that they have nothing to do with the subject of the present chapter.

The law of identity and the law of non-contradiction are sometimes regarded as one and the same law differently expressed. The position cannot be sustained. The law of identity might conceivably hold good without the law of contradiction. Suppose there were in the world certain subjects S which both possessed and excluded a quality P at the same time and in the same respect. The law of contradiction would in that case no longer hold, but the law of identity would still remain valid and require

that the predicate *P* should be both ascribed and not ascribed to the subject *S*. It is difficult even to imagine a world of that sort, but in spite of the difficulty we both can and must distinguish in thought between the properties of objects covered by the law of identity and those covered by the law of contradiction. And it is equally necessary to distinguish from the requirements of these laws those of the law of excluded middle, for the latter refers to a characteristic of objects not within the compass of the two other laws. It asserts, namely, that every object either has or has not the predicate *P*, and that there is no third alternative.

The laws of contradiction and of excluded middle do not determine *what* is to be acknowledged as true. They merely indicate the way which must not under any conditions be pursued, since it is sure to lead to error. As a criterion of falsity their significance may be great, but as a criterion of truth they have little value. I would even urge that they ought not to be numbered among the fundamental laws of thought, alongside of the laws of identity and of sufficient reason, for they have significance only with regard to thinking about finite things and not to thinking in its entire range. Indeed, the relation of contradiction—and the necessity of choosing between *P* and non-*P*—subsists only in the sphere of determinate things, a characteristic feature of which is that the being of any one thing excludes by its very presence other forms of being (a white patch excludes a black patch, and so on). But over and above the world of determinate things we are conscious of the presence of another world, the world of the Absolute, where the essential feature of affirmation is retained, but where there is no negation.

In the latter there is none of the exclusiveness, the externality, and the limitation of the finite world. Containing within itself the entire fulness of reality, the Absolute is not subject to the laws of contradiction and excluded middle, not in the sense that it cancels them, but in the sense that these laws have here no relevance. In a similar manner, the theorems of geometry are not cancelled by ethics, but are not in any way applicable to ethical problems. We exaggerate the worth of these laws for thought, simply because we are almost always thinking of finite limited things. They are not at all necessary for thinking as such. It follows that while they may be of interest for logic, and especially for ontology, they are not of interest for epistemology. They have been referred to here simply because it is a tradition to group together these so-called four laws of thought. Moreover, there is another and a more important reason why they cannot be passed over in silence. Rationalists and intellectualists in general are inclined to regard the law of contradiction as the criterion of truth. Their view will be discussed later when the question as to the criterion of truth comes to occupy us, and what has here been said about the law of contradiction will there be found to be helpful.

CHAPTER VIII

THE UNIVERSAL AND THE INDIVIDUAL

KNOWLEDGE cannot be transcendent: the reality to be known cannot be external to the judgment, but must be actually present in it. If, in accordance with what has been said in the preceding chapter, some of our ordinary conceptions of the spatial and temporal structure of the world require revision, the legitimacy of the contention might, perhaps, be granted so far as it relates to singular judgments. But how can it be conceded in respect of universal judgments and also in respect of universal ideas and concepts (admitting that ideas and concepts are judgments)? When the physicist asserts that 'pressure is transmitted in fluids with equal force in all directions' the judgment refers to millions of cases of pressure in innumerable different fluids. This endless multiplicity of phenomena cannot be present in the act of judgment *as a multiplicity*, for a universal judgment is a *single* act of thought and not a conglomeration of *many* judgments. The question, then, seems to involve hopeless contradiction, and to assume the form of a paradox: how can an endless multiplicity of phenomena be present in a single act of thought? To show that this question can be answered in the light of an immanent theory of knowledge we must pass

in review the various possible theories of universal judgments and concepts.

To the question how in a universal judgment a single thought can embrace a multitude of different phenomena one of three answers may be given. In the first place, it may be maintained that phenomena separated from one another in time and space contain identical elements or aspects, and in so far as they are identical constitute one and the same object ('a universal object') both in thought and in reality. There is here no contradiction between the One and the Many, for the One can be present in the Many. This is the doctrine of realism. In the second place, it may be contended that, although real phenomena are many, our thought forms a unity out of the multiplicity. Here again there is no contradiction: the multiplicity is in the phenomena, the unity is in our thought. This is the doctrine of conceptualism. In the third place, it may be urged that the problem as to how a single thought embraces a multiplicity of phenomena does not present itself at all; for there are no universal judgments in the proper sense of the term. To a multiplicity of phenomena there always corresponds a similar multiplicity of judgments and concepts. What we have to do is to account for the *illusion* that universal judgments exist, and to explain in what way singular judgments can fulfil all the demands of thought. This is the doctrine of extreme nominalism.

According to conceptualism and its various stages of transition to nominalism, the phenomena to be known are separated from the knowledge of them in so far as this knowledge is expressed in a universal form; conceptualism, therefore, at any rate in its theory of

universal judgments and concepts, presupposes the possibility of a transcendent knowledge. Extreme nominalism and realism, on the other hand, do not prejudge the question as to the transcendent or immanent character of knowledge. In the first Part of this book we have tried to show that any transcendent knowledge is impossible, and we might now, on that account, have dismissed conceptualism and have confined our attention to nominalism and realism. And then, if nominalism turned out to be untenable, realism would call to be accepted. The fundamental principles of realism are sufficiently familiar, and it would remain for us only to show that the realistic interpretation of universals is required by the conception of immanent knowledge, and, at the same time, to clear away the misunderstandings which are still prevalent in regard to that theory and which prevent it from gaining general acceptance. But in view of the importance of the question, we will first glance at the conceptualist theory in order to show that it is full of contradictions and obscurity. It is, moreover, advisable to do this because conceptualism occupies a middle position between extreme nominalism and realism.

Extreme nominalism is the doctrine that reality consists of separate phenomena, absolutely individual in character, and containing no identical elements which might serve to combine different individual things into classes. Judgments and ideas are no less particular and individual; strictly speaking, there are no universal judgments. The subject of the judgment, 'tigers belong to the feline family,' denotes the separate individual tigers that we have met with in experience. To each of them there

corresponds an individual presentation, and, when the judgment is expressed, every one of these presentations either actually appears in consciousness or stands on the threshold of consciousness. The reason why they appear in consciousness together is that they are all associated with one and the same word, 'tiger.' The so-called general idea is then, as a matter of fact, a bundle of individual presentations which are chained to one and the same word. In like manner, a universal judgment is a bundle of particular judgments connected with one and the same set of words.

But it is impossible to stop at this transformation of the universal into a sum of individuals. Having gone so far, logical consistency compels us to go further and to maintain that every individual thing—such as the Troitsky Bridge over the Neva—is given to us in experience only in the form of single individual states and processes, that these contain no really identical elements, and that they arise in consciousness as single individual percepts, which are all associated with one and the same name, 'Troitsky Bridge.' When we utter the name, the percepts appear in consciousness in all their particularity and singleness, or stand, at any rate, on the threshold of consciousness, and constitute the meaning of the words, 'Troitsky Bridge.' That is to say, having transformed classes of things into individual things, we must now transform the things into individual states, processes, phenomena, and thus arrive at a curious mode of thought which might, perhaps, be described as extreme phenomenalism. That the mode of thought in question contains elements of value need not be disputed. It draws attention to the ever-fluctuating, the

ever-moving aspects of reality, which are, on account of their fluctuation, difficult to grasp. It trains us in the habit of noting carefully all the subtle differences of the real world. Such observation is of special value for psychology, and more particularly for the psychology of cognition in so far as it is concerned with the phenomenology of knowledge. Yet, one-sided concentration on the changing aspects of the real world, leading to a phenomenalistic philosophy or to nominalistic theories, can give no permanent satisfaction. Their artificiality is too patent and their contradictions are too transparent. The fluctuating aspect of the real world is an indisputable fact, but the existence of a permanent being forming the background of the ever-changing reality and binding together its various manifestations is also an indisputable fact. And these aspects of the real world do not exclude one another; on the contrary, the one cannot be apart from the other. Both observation and reflection lead inevitably to the same conclusion. To establish its validity, it is sufficient to show that the nominalists, who deny the existence of universals, themselves unconsciously admit such existence all the time, and that their theory could never have been formulated had they not tacitly assumed what they explicitly reject.

Extreme nominalists maintain that classes of things are bundles of individual phenomena which have become associated with *one and the same* name. Yet if the point of view of extreme nominalism be consistently adhered to, and the changing aspects of life be *exclusively* attended to, the question arises whether we are justified in speaking even of the *same* name. The name 'tiger' spoken or written by me yesterday

and to-day is not one and the same word, but two different words: the intonation, the clearness of pronunciation, the intensity of the sound, the timbre of the voice, are sure to have been quite different yesterday from what they are to-day. We have here to do with phenomena almost as different from one another as two real tigers that live in different forests or as two acts of representing them in consciousness. From the point of view, therefore, of extreme nominalism, we have not one and the same word but one and the same *class of words*. But if so, classes of things are formed in the mind of the knowing subject owing to the association of a group of presentations not with one and the same word but with one and the same class of words.

What, however, does this imply save that the problem of the origin of classes of things—*i.e.* of general ideas of them—has not been solved but merely pushed a stage further back? It has now to be explained how classes of words come to be formed. The problem can no longer be solved in the old way, by reference to an association with some sign; for in that case it would again be carried only another stage further back, and we should be involved in the absurdity of an infinite regress. A different course must, therefore, be followed, and the nominalists do, in fact, follow a different course. They do not leave the question as to the origin of classes of words an open question, they tacitly and unconsciously assume that the different acts of uttering a word, in spite of their difference and apparent disconnectedness, do contain identical elements which justify us in regarding them as the *same* class of events, expressed by *one and the same* word. Instead of nominalism, we

are thus landed in a doctrine of realism. It turns out, then, that extreme nominalism cannot dispense with realism, for, although the former denies the existence of universals, it has to make an exception in the case of one group of objects, namely, words. But if words possess the characteristics required by the realistic theory, there is no reason why other things should not possess them also, and the contentions of extreme nominalism must, therefore, be pronounced untenable.

There is yet another argument which nominalists might use in support of their doctrine. They might urge that a universal judgment is a complex of singular judgments associated with one single act of uttering a word. For the explanation of such a judgment there would then be no need to have recourse to past acts of judging, and, therefore, no need of conceiving the word as a universal element, with which these acts have gradually become associated. Yet this very extreme form of nominalism merely emphasises the difficulties involved in nominalism as such. The contention is that the grouping of things into classes is not in any way determined by the properties of the things themselves but is due to names. The name gives rise to a class of things, and it is not the class of things that attracts a certain name to itself. A rejoinder at once suggests itself which, in spite of its seeming to be almost ironical, is nevertheless very much to the point. If the grouping of things into classes is determined by names—understanding by a name not a universal element but something created afresh in every single act of utterance—how is it that a name is never associated with groups of heterogeneous things, such as tiger, coffee-pot, candle, and birch-tree,

but always with groups of homogeneous objects —homogeneous not merely in the sense of being connected with one and the same word? The only answer is that we associate with a name not anything which we choose but only things which resemble one another. This, however, means that the name merely assists in the final crystallisation of a general idea, and that the essential condition of things being grouped into classes is the resemblance between them. The explanation is fatal to extreme nominalism, and leads to its being supplanted either by a more moderate nominalism or by some form of conceptualism. To these theories, standing midway between extreme nominalism and realism, we will return. But, meanwhile, something must be said of realism in this connection.

Realism, especially when combined with an intuitional theory of knowledge, gives a very simple account of the formation of universal judgments and concepts. Different phenomena separated from one another in time and space are, so it is maintained, not absolutely separate. They may contain not merely similar, but *identical* elements or aspects. And in so far as they do contain identical elements, they constitute one and the same object, both in thought and in reality. *The universal element in things is ultimate, and, therefore, in thought likewise the universal cannot be derived from or composed of what is not universal.* Many important problems of logic and epistemology can thus be solved. Nevertheless, realism does not, in these days, meet with ready acceptance. It takes the super-sensuous (non-sensuous) elements to be of primary importance, whilst the belief has long been prevalent that what transcends sense must of necessity

transcend experience. Were this belief well founded, I should be the first to oppose the realistic doctrine, because in that case it would be incompatible with empiricism, and would lead to the assumption of transcendent knowledge. But we have already seen that the belief in question is without foundation. If the self and the not-self be not isolated from one another, by far the greater part of the experiences that enter into knowledge must be non-sensuous in character. Realism will certainly appear paradoxical and contradictory to those who are accustomed to lay stress chiefly on the sensuous aspects of the world, and who are constrained to do so by the metaphysical theories (such as materialism) to which they are inured. With the metaphysical results to which our theory of knowledge may lead, we are not, however, concerned. Metaphysics has to conform to the demands of epistemology, and not epistemology to the demands of metaphysics. All we can be called upon to do is to show that realism does not conflict with the facts, and conceals no obvious contradictions such as would render metaphysics and the special sciences impossible. And this task is capable of being fulfilled, because realism is not strictly an explanation but a *direct expression of what is immediately experienced in the act of asserting a universal judgment.*

Objections against realism are based partly upon logical *a priori* considerations and partly upon experience. As a logical objection it is contended that abstract general ideas are contradictory, and, therefore, impossible. They cannot be realised in consciousness, for in conceiving the general idea, say, of a triangle, we should have to think of a triangle

which is "neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once."[1] The criticism seems in itself unanswerable, and it is further strengthened by the circumstance that experience seems to confirm it. Introspection shows that at the moment of asserting a universal proposition we always have in consciousness presentations which, the more we attend to them, *become in every respect more and more individual and particular.*

Let us, then, first consider this *a priori* logical objection and the introspective observations which seem to confirm it. As is often the case with *a priori* objections, there is left here out of sight the whole complexity of the real world, and with it all the complexity and variety of the possible theories in respect to the real world. Misled by the resemblance of words, we imagine that the *idea* of a triangle must resemble concrete individual triangles; and, therefore, on the one hand as an individual triangle that it must contain, and on the other hand, as a general idea, that it must exclude the properties of being equilateral, scalene, etc. This, however, is a manifest error. If there be an identical element in all triangles—if there be an idea of triangle—it cannot itself be either a rectangled or an acute-angled or an obtuse-angled triangle, but must be something which is capable of becoming any one of these. And experience is herewith in full accord. When we examine the content of any general idea, in order to determine whether it really has an individual character, it immediately begins to individualise itself more and more, and in the end we do obtain a particular

[1] Berkeley, *Principles of Human Knowledge*, Introd. 13.

presentation, or even a whole series of changing presentations that replace and exclude one another. But, to whatever extent the content of a universal judgment may be individualised, even if it finally resolves itself into a singular judgment, or a series of singular judgments, we are yet clearly aware that it is not these particular details that constitute the meaning of the judgment in question.

The circumstance just mentioned at once suggests that we fail to discover the universal content of the judgment simply because we have not looked for it. Instead of attending to the *universal content*, which in its purest form is found in living thought and in grasping the meaning of a proposition, we have become engrossed in observing the particularisation of that content. The latter process is so complex and variable that in attending to it we lose sight of the object for which we are in search. But it is noteworthy that even after the object has become individualised and is no longer susceptible of exact observation, it is still present to consciousness, for we are well aware that the meaning of the proposition by no means consists in the particular individual details.

It may, perhaps, be granted that realism does not contradict the facts. But that in itself, it may be thought, is hardly sufficient. The theory must be confirmed by experience and not merely be compatible with it. Now, the realistic theory does not seem to be confirmed by experience, for the dispute between realists, conceptualists, and nominalists arises largely from the circumstance that the universal is not *clearly* detected in consciousness, whilst the individual features of reality can be observed with the

greatest vividness and distinctness. In speaking of the beautiful autumn tint of a yellow maple leaf I single out 'this yellow' with such distinctness from the complex content of perception that it would be madness to doubt its reality. On the other hand, when I say that 'all events are subject to the law of causality,' the content of the conception of causality is thought of so vaguely that it seems rash to maintain that what is present in consciousness is the *idea* of causality in the realistic sense rather than particular instances of causation, as would be maintained by the nominalists. The argument is a strong one, but its whole force will be turned against nominalism if it can be shown that the *aspects of reality observed with the greatest clearness and distinctness, and undoubtedly present both in judgment and in perception, are universal; and that it is only through a series of misunderstandings that these are taken to be individual.* The absolutely individual is extremely difficult to discriminate and to observe. To substantiate this contention, which will at first sight appear paradoxical, let us divide the possible contents of judgment and of perception into three groups—individuals, universals of a medium degree of generality, and universals of the highest degree of generality. I will now endeavour to show that at the present stage of its development the human mind discriminates with greatest clearness the 'medium universal' aspects of the real world (which are wrongly taken to be individual aspects), whilst the *most universal as also the individual* aspects are very imperfectly differentiated by us and extremely difficult to observe.

To the question whether universal or individual (particular) ideas are the first to appear in con-

sciousness the answer is often given that originally ideas are neither universal nor particular, but merely indefinite. "Intelligence progresses from the indefinite to the definite," says Ribot. "If 'indefinite' is taken to be synonymous with 'general,' it may be said that the particular does not appear at the outset; but, then, neither does the general in the more exact sense. What appears at the outset would more appropriately be said to be the vague. In other words, no sooner has the mind progressed beyond the moment of perception and of its immediate reproduction in memory, than the generic image makes its appearance, *i.e.* a state intermediate between particular and general,—a confused simplification."[1]

The truth of Ribot's contention cannot be disputed if it be borne in mind that the lower phases of perception—so indefinite that they cannot be called either universal or particular—are extremely prevalent even in developed human consciousness. If I am taking a walk, and am completely absorbed in my own thoughts, and distinguish but vaguely the trees, the people who pass me, etc., these images of trees and people cannot probably be called either general or particular. And it is possible that animals and children perceive at first only such vague images. The question whether these images, which certainly cannot be said to be particular, may with justice be described as universal, requires a special investigation, and I will not go into that question here. For our purpose it is sufficient to ask whether the particular or the universal is the first to be discriminated when these vague images are replaced by clearly differentiated ones (*i.e.* by definite perceptions which are none

[1] Ribot, *L'évolution des Idées Genérales*, Ch. i. 2.

other than complexes of undeveloped or highly developed judgments). The answer will at first sight appear paradoxical. Even when we are face to face with an individual particular thing and obtain in perception an extremely differentiated image of it, that image is in a vast majority of cases a general idea. That such is the case is proved by the fact that even the possession of a highly individualised presentation of some particular thing does not save us from confusing it with some other thing which appears to us to be indistinguishably like the first—and that not through any lack of memory but owing to the presentation not being sufficiently individualised during the act of perception itself. Suppose, for example, I am carefully examining a beautiful large golden-yellow lemon. However distinctly I may apprehend its peculiarly irregular shape, the shade of its colour, the multitude of deep depressions on the rind, there is no doubt that if another lemon very much like the first were substituted for it so that I did not see them change places, I should not be aware of the change. The fact that our ideas of things are not completely individualised becomes still more evident if a part of a thing be taken instead of the whole thing. If there be on the table before me a sheet of paper of an even yellow colour covered with a sheet of black paper with a square hole in it, I shall see a yellow square. If someone moves the yellow paper from side to side without my being aware of it, in every act of apprehension there will be a different square before my eyes while I shall go on believing it to be one and the same, and that not through failure of memory, but owing to the percept not being sufficiently individualised. The objection may be

raised that, as the change of the object in position is not taken into account, we have in this instance a kind of abstraction, and there is nothing strange in its giving rise to a general idea. Yet, in arguing thus, a nominalist would be giving his case away, for the objection admits precisely the point at issue. It makes no difference whatever how such percepts come about. All that the argument is intended to show is that even at the moment of apprehension, when we have in consciousness a distinct, highly differentiated presentation, we are aware of those aspects of a thing which it has in common with many other things, so that our presentation of it is partly or entirely indistinguishable from our presentations of several other things. What *is* before us is 'this definite thing'—this lemon, this book in a grey binding, this sheet of red blotting paper; but what we perceive is *a* lemon in general, or at best, 'a large lemon,' 'a greenish-yellow lemon,' '*a* book in a grey binding,' '*a* sheet of red blotting paper.' The extent to which perception is individualised is, as a rule, just sufficient to enable us to distinguish one thing from others, though not from *all* other things, *but merely from those which form part of our surroundings.* If only one book in my library is bound in grey cloth, it is enough, in order to find it, to individualise the percept to the extent of discriminating the grey binding. Further discrimination of the individual characteristics is possible but not necessary for the purpose in hand, and, therefore, it is generally wanting. Thus, when confronted with a unique individual thing we discriminate, as a rule, only such aspects of it as it has in common with many other things, and our presentation of it proves to be of the medium degree of generality; it is certainly

not individual, as the nominalists affirm it to be and as it has hitherto in science been taken to be.

Now, if the percepts by which we are guided in every-day life are presentations of a medium degree of generality, it follows that cognitive activity furnishes us first of all with knowledge of a medium generality, and that from this basis there develops on the one hand knowledge of a higher generality, and, on the other, knowledge of the less general and of the particular. Observation of the development of ordinary practical experience, of language, and even of scientific knowledge, entirely confirms this view. Not a single science has as yet completed the process of ascent to knowledge of the highest generality, nor the process of descent to knowledge of the lowest degree of generality. The first statement is too self-evident to require further elaboration. The truth of the second will be apparent from the following instances. Physics has established some general laws concerning the rate at which sound travels in gases, fluids, and solid bodies, but an incalculable number of the more particular laws of the transmission of sound have not as yet been inquired into at all. Chemistry has investigated a vast number of the reactions that ensue from the combination and decomposition of substances, and established, in a general way, their final results. But in most cases it knows nothing of the particular manner in which these reactions alter relatively to different pressures, temperatures, etc. Botany and zoology are as yet far from having succeeded in determining all the various species of plants and animals even in Europe. History, whose problem is essentially the study of the particular, so far dwells mainly on the general

characteristics of the facts it brings to light. It notes, for instance, the dogmatic nature of Calvinism and the freedom of thought characteristic of the doctrine of Zwingli, but it is unable to reconstruct out of these general features an individual event in the true sense of that term.

I may be accused of contradicting obvious facts. When a man of science—an expert in chemistry, for instance—investigates different reactions that take place under his eyes as real individual processes, he is unquestionably observing, it will be urged, definitely particular events. From this he ascends to more general knowledge, and then, combining his generalisations, obtains still wider generalisations, etc. This view of the procedure of the exact sciences is extremely prevalent, and is still considered to be indisputable. But in truth it conceals a dangerous *quaternio terminorum* which leads to an utterly erroneous conception of scientific method in general and of the difference between the philosophical and the 'exact' sciences in particular. When a scientist adds sulphuric acid to a transparent solution of chlorate of calcium and observes that the solution becomes cloudy and forms a sediment of sulphurate of calcium, he is concerned, no doubt, with a unique individual event which can never again be repeated. Yet, it is equally certain that what he *sees* in this event are not its unique individual features but only such aspects of it as are indistinguishably like other events of the same kind. So that even his first judgment, 'if sulphuric acid be added to a solution of chlorate of calcium, there is a sediment of sulphurate of calcium' belongs, from the point of view of its content, to knowledge of a medium

degree of generality. It can be transformed into knowledge of the particular only by formal and artificial means—by making, namely, an entirely superfluous addition and giving the *time* and *place* at which the reaction occurred. So far as the discriminated content of the event is concerned, this addition plays the part of an inscription on a bottle of transparent fluid: it helps us in a purely external way to distinguish similar events from one another.

There are many reasons why, when confronted with a concrete particular thing, we discriminate most readily the features of medium generality, whilst discrimination of the least general presents greater difficulty, and knowledge of the most general and of the individual is hardest of all to acquire. There is no need to go into these reasons here, with the exception of one of them which is directly due to the nature of cognitive activity. Knowledge is the differentiating of an object by means of comparison. If the conditions of the process of comparing are such that they facilitate, in the first place, differentiation of those aspects of things that are of medium generality, and render difficult differentiation of the most general and of the individual aspects, the fact that knowledge develops in this particular manner will be largely accounted for. It is not difficult to see that such is actually the case.

The most universal—substantiality, for instance—is experienced by us in almost every act of apprehension. Metals, minerals, plants, animals, our own selves, are given in experience as substances. In spite of the overwhelming variety and difference of these things, there is something identical, something constantly the same, in all of them—

the character of being substances. As I pass from one thing to another my apprehension in this particular respect does not vary, and I am, thus, precluded from discriminating this aspect of things, for discrimination involves comparison, *i.e.* relating an experience to other experiences which differ from it, but are not entirely heterogeneous. The material for such comparison and differentiation is, in this case, lacking. Moreover, an exceptional power of intellectual intuition [1] is needed in order to abstract from the infinite variety and multiplicity of things, and to concentrate on the little island of identity, almost submerged in the differences, making it the subject of such comparison as is necessary for discrimination and knowledge. The difference between a philosopher who is inquiring into the nature of substance and a man of science who is investigating the reaction which forms $CaSO_4$ does not lie in the alleged circumstance that the one has to do with an empirical fact, given in the perception of a particular thing, while the other is concerned with something not given in experience. Both find the aspects of the real world which they are concerned with in experience, in the apprehension of particular things. But, owing to the conditions of comparing, the empirical data of philosophy are discriminated, fixed upon, and observed with the utmost difficulty, whilst the empirical data of the special sciences can be differentiated with relative definiteness. This is the reason why a philosophical exposition of such concepts as the concept of substance is thought by persons who have not discriminated that aspect of things to be either devoid of all meaning or to have a meaning which cannot be given to consciousness,

[1] Intellectual intuition will be discussed in the next chapter.

in the same way as the meaning of the words 'this red colour' is given in the perception of a red thing.

Knowledge of a lower degree of generality is less hard to acquire, though it too is not obtained as readily as knowledge of medium generality, and in some cases the facility of attaining it requires an enormous amount of training and practice. All of us easily distinguish a sparrow from a yellow-hammer, but few can observe the differences which lead a zoologist to distinguish the species of the house sparrow from that of the field sparrow (*passer domesticus* and *passer montanus*). Fine distinctions between grains of rye which enable an experienced farmer to say whether the grain will germinate; differences in the quality of cheese which show to an experienced cheese-maker what change, if any, needs to be introduced in the method of making it; differences in the kind of steel which help an engineer to decide for what purpose the steel may be used, and so on—all these are instances of knowledge of the lower degree of generality. Everyone is aware of the labour, the attention, the training, and the perseverance that are necessary for the acquisition of such knowledge. We meet here with an obstacle analogous to those which stand in the way of acquiring knowledge of the higher degree of generality. When confronted with things which are in a great many ways exactly alike, one must possess an exceptional measure of discriminative power in order to concentrate attention on the little island of difference submerged in a sea of similarity, and to make that difference the subject of comparison and of knowledge.

Most difficult of all to know is the individuality

of a thing[1]—that which makes a thing absolutely unique and irreplaceable by anything else in the world. Every human being, every plant and animal, every event or process—*e.g.* the acting of Rossi in *King Lear*—has undoubtedly its own individual character. But very few minds, and these, in relation to few objects only, succeed in catching the individuality of a particular thing. An interest in the individual and the capacity of apprehending it is a fine flower of culture. These blossom only where there has been developed the striving for an aesthetic contemplation of the world, and for creative work leading to a transformation of the real.

In apprehending the individual aspects of a thing, we become suddenly conscious of entering into an exceptionally close and intimate relation with that thing, conscious of having penetrated into the inmost depths of its unique, independent life. But in most cases we get no further than a vague consciousness of individuality: to note exactly what part of the experienced content of a thing is truly individual is no less arduous than to point out the most general aspects of it.

Minds that are unaccustomed to an artistic contemplation of the real world detect the individuality of those things only which, from practical motives and interests, they often meet with as individualities. Every one has such knowledge with respect to his relatives—at least the nearest of them—with respect to his social circle, his town, his house, etc. Sometimes people have this intimate knowledge even of

[1] As will be seen later, the universal has also individual characteristics. To avoid misunderstanding, I note that here I am speaking exclusively of the individuality of particular things, events, processes, etc.

insignificant things. Thus, a shepherd knows every sheep in his flock, a gardener every apple-tree in his garden. But these cases are most often instances of an exceptionally well-developed knowledge of the lower level of generality (this sheep has longer wool than all the others, that one limps a little, etc.), and not of a knowledge of the individual nature of particular things.

If knowledge of the lower level of generality be carefully distinguished from knowledge of 'this individual' thing as such, it will be realised that the latter kind of knowledge is extremely rare. Rather than agree with nominalists, who maintain that general ideas are never detected by introspection, and that cognition begins with a knowledge of the particular, I should side with those thinkers who hold the particular to be altogether unknowable, and all knowledge to consist solely of general concepts and ideas. This, however, is not the place to examine and criticise the contention in detail. That would need special research, and might form the subject of a monograph concerned with the epistemology of the 'historical' sciences (in the sense in which Windelband and Rickert employ the term). But we are dealing here with the general problems of epistemology, and at the present stage of the development of the sciences it is of more importance to inquire into the way in which knowledge of the universal is attained. It will be sufficient to point to one consideration which suggests that the individual aspects of particular things are knowable—the consideration, namely, that the difference between the universal and the individual is only relative in character. What is universal in relation to particular things and to universals of a lesser degree of generality

is, in relation to other universals that are coordinate with it, an individual reality possessing unique characteristics, not to be met with anywhere else in the universe. In this sense one can speak, for instance, of the individuality of the wolf's or of the fox's nature, meaning not 'this' wolf or 'this' fox, but a wolf or a fox in general. Since such knowledge is possible, it must be possible, too, to know the individuality of a concrete particular thing.

The obstacles that stand in the way of acquiring knowledge of the least and of the most general, as well as of the individual as such, strongly confirm the view that, in an overwhelming majority of cases, the elements which are easily differentiated, observed, and attended to are of the medium degree of generality, and that all the other aspects of the world are discriminated very imperfectly, and with the utmost difficulty. At this point, however, another question arises. If we do start with knowledge of a medium degree of generality, and then gradually pass, on the one hand, to knowledge of the more particular, and, on the other hand, to knowledge of the more universal, how is it that so many people are convinced that we begin with knowledge of particular things, and thence gradually ascend to wider and wider generalisations? In answer, I refer again to the *quaternio terminorum* already indicated: we are confronted with individual things, but discriminate only those aspects of them which are of medium generality. It is not difficult to see how we come to believe ourselves to be concerned with the particular as such. All things, even those whose individual content is as yet unknown, are apprehended by us together with their temporal or their spatial and temporal determinations. These

determinations belong, as a rule, to the individual, and not to the universal, aspects of the discriminated content of a thing. But at the lower stages of knowledge, and especially in everyday life, the object is never sufficiently differentiated to enable that to become apparent. We discriminate only the general aspects of a thing, but, knowing from the spatial and temporal determinations that what is before us is 'this' particular thing, and for practical purposes, being interested in 'this' thing and not in a thing in general, we refer the content discriminated to 'this' thing as individual, and imagine we know it as such. It is possible that another circumstance also goes to strengthen the conviction that in experience we are concerned with unique particular things. If the object, in all the fulness of its reality, be immanent in the process of cognition, there can be no doubt that even before we have any clear knowledge of it as individual, we are vaguely aware of being confronted with something distinct from all other things. If it be maintained that all things in the world are unique and individual (Leibniz, for example, affirms that 'no two substances can be exactly alike and differ only numerically'), this truth will be the result of an intellectual intuition confirmed by a vague feeling of difference between things. Finally, it should be remembered that we are generally inclined to regard as individual everything known which is for us the least general. This is due to the fact that the degree of generality of any piece of knowledge can only be determined by correlating the knowledge in question with corresponding propositions—whether actual or possible—of a more particular kind. If no such correlation be possible, knowledge of the

universal will be taken by us to be knowledge of the particular.

If it be admitted that the most clearly differentiated elements of knowledge—for instance, the elements of visual perception—are of a medium degree of generality, the *psychological* objections to realism, based on the fact that 'general ideas' are not to be observed in consciousness, fall to the ground. The only objections left are *ontological* objections, based upon the contradiction between realism and sense-experience. Sense-experience would seem to convince us that things, in so far as they occupy different positions in time and space, are absolutely separate from one another, and cannot contain a numerically identical basis, for if they did, one and the same numerically identical element would belong to different moments of time, and would, even at one and the same time, occupy different parts of space. With reference to this objection, it must be noted that it does not constitute an *argument* against realism, but merely sets for realism the *task* of constructing such a theory of the spatial and temporal world as would explain how *some* aspects of things may be isolated in time and space while their *other* aspects may be completely identical. A similar problem was indicated in the preceding chapter with reference to the conditions of the self-identity and universality of truth, and there it was pointed out that it must be dealt with by ontology and not by epistemology. Certain conditions, however, which ontology must observe are laid down by epistemology, and if they lead to the overthrow of particular systems of philosophy—of some forms of materialism, for instance—so much the worse for these systems. To

avoid misunderstanding, one further point should be noted. It must not be imagined that because two theories or systems of thought appear to be opposed, they really exclude one another. The opposition frequently turns out to be purely external, due to an awkward use of terms; or even if it does exist, the more valuable features of the theories in question can, at any rate, often be reconciled, and only the non-essentials have to go. It might seem, for instance, that realism and the modern phenomenalistic tendencies in science directly exclude one another. Yet, as a matter of fact, all that is of value in scientific phenomenalism—*e.g.* its careful observation of the ever-changing and fluctuating aspects of things—is quite compatible with a realistic theory, which does not, however, lose sight of the One in the Many. Realism becomes contradictory and absurd only when it is understood in a crudely sensuous way—when it is imagined, for instance, that the content of the generic notion 'horse' constitutes a separate thing—a generic horse—which grazes somewhere on the Himalayas or on the planet Mars.

According to the realistic theory of concepts, the universal in things and in thought is ultimate. If this be true, all theories which attempt to derive the universal from the particular must either conceal a *petitio principii*, or fall into the quagmire of an infinite regress. We have seen that extreme nominalism illustrates both defects. Now, as a final confirmation of realism, we have got to prove that the same is true of all forms of conceptualism and of the less extreme form of nominalism.

According to conceptualism, the universal does not

exist in things, but exists only in thought (general ideas and concepts) and is derived from particulars from individual presentations). Elementary manuals of logic and psychology teach that for the formation of universal ideas from particulars, three cognitive acts are necessary—comparison (discrimination of resemblances and differences), abstraction (concentration of attention on some of the aspects discriminated), and generalisation (the uniting of resembling characteristics). The process is generally described as though the explanation of it presented no difficulty whatsoever. We are told, for instance, that the general idea of 'house' is derived from particular ideas in the following way. However greatly houses may differ in architecture, material, plan, size, etc., yet every house has roof, windows, doors, etc. Abstracting, then, the characteristics common to all houses we obtain the general idea of house. The extreme simplicity of the explanation at once creates the suspicion that there must be some flaw in it, and, indeed, that flaw is not hard to discover. Roof, window, door, etc., as characteristics of all houses are general and not particular ideas. A reference to them, therefore, merely shows how a more complex general idea can be formed out of less complex ideas—it merely shows how a wall can be built of bricks. It does not explain how general ideas were, in the first instance, formed out of particular ideas—or, to continue the simile, it does not explain how the bricks were made. And, indeed, the question cannot be settled in that way, for the argument involves a *petitio principii*. If, to avoid it, the origin of the general ideas, 'roof,' 'window,' etc., is accounted for in the same manner (by reference to

comparison, abstraction, and generalisation) there will be another *petitio principii,* and so on *ad infinitum.*

The ordinary popular expositions of conceptualism disclose its defects, however, in far too crude a manner. The theory may be so formulated that these defects will be to a large extent concealed. Thus, it may be maintained that different things (and ideas) contain elements which are indistinguishably alike (qualitatively identical) but numerically different (in this sense, they are not identical, and there is no One in Many). Abstracting these elements from the particulars, we obtain, it will be said, an idea or concept which is a substitute for or represents many individual ideas. This theory is based on the conception of elements which are indistinguishably alike—*i.e.* qualitatively identical—but numerically different. But the question requires to be asked whether there can be *exact likeness* without *numerical identity* in one or another respect. The conception of exact likeness, or indeed of likeness in general, must either inevitably involve the conception of numerical identity or lead to an infinite regress. This is what Husserl says on the subject in his *Logische Untersuchungen*: "Wherever there is exact likeness, there is also identity, in the strict and the true sense of the term. We cannot say two things are exactly alike without indicating in what respect they are alike. In what respect, I say, and herein lies the identity. Every resemblance has relation to the species under which the things compared are subsumed, and this species is not again merely a resemblance and cannot be—for in that case there would be a most vicious *regressus in infinitum.* In naming the aspect that is being compared we indicate by means of a more

general genus term the sphere of specific differences wherein the identical aspect of the things compared is to be found. If two things are exactly alike in form, it is this particular species of form that is the identical element in them; if they are exactly alike in colour, it is the shade of colour that is identical. True, not every species can be exactly designated by words, and often we cannot find a suitable expression for designating the aspect which is being compared; sometimes it is difficult to indicate it clearly. But, nevertheless, we have it in view, and it determines our statements as to the resemblance in question. To *define* identity, even in regard to the sensuous side alone of perception, as a limiting case of resemblance, is obviously to distort the true state of the case. Identity, although not resemblance, is something absolutely undefinable. Resemblance is the relation between objects subsumed under one and the same species. If we could not speak of the identity of the species, of that in which resemblance consists, there would be no question about resemblance at all." [1]

An attempt may be made to meet this argument by saying that likeness has no relation to identity, because what appears *to us* to be exactly alike contains *in reality* elements of difference. But such a contention is, in respect to an immanent theory of knowledge which does not divide the world into real things and ideas of things, inadmissible. What is perceived as indistinguishable and not-different, *really* is indistinguishable and identical. If further investigation discloses difference where at first we saw nothing but identity, the identity will not cease to be what

[1] Husserl, *Logische Untersuchungen*, ii. p. 112.

it is ; it will simply be supplemented by the differences discriminated.

An argument analogous to that which Husserl uses against Hume's explanation of the distinctions we draw between the attributes of things [1] will bring to light another defect inherent in conceptualism in all its forms. The conceptualist view of the problem of universals must either involve an infinite regress or have recourse to realism. Likeness combined with numerical difference, likeness with no identity, cannot be the ultimate ground of the genesis of a universal concept, simply because every given thing resembles many other things in various respects. Suppose a thing *a* resembles things *b*, *c*, *d* in one respect, and things *k*, *l*, *m* in another respect, so that *abcd* form one class and *aklm* another class. Now, if classes are constituted on the ground of a feeling of resemblance, then in referring thing *a* in one respect to the first class and in another respect to the second, I must already have distinguished two different feelings of resemblance, *two different spheres of resemblance*. That is to say, I must already possess a classification of resemblances. The question must then be asked, how did such a classification come to be made ? If, in answer, we again fall back on a feeling of resemblance, the problem will lead to an infinite regress ; if, to avoid such regress, we bring in, at some point or other, identity, conceptualism will have transformed itself into realism.

Nominalism of the less extreme type and conceptualism both depend on the assumption that the part of universal concepts is played by particular ideas, in so far as we attend only to such characteristics of the

[1] Husserl, *Logische Untersuchungen*, ii. p. 194.

latter as resemble those of other things of the same class. Inasmuch as these theories have recourse to the conception of resemblance they suffer from the defects already noted of extreme conceptualism, and consequently there is no necessity to consider them in detail.

In conclusion, it should again be emphasised that both conceptualism and the less extreme nominalism, in so far as they regard universal concepts as *replacing* or *representing* particular ideas, involve the possibility of transcendent knowledge, and, strictly speaking, ought to be rejected on that ground alone.

I return now to the realistic theory of concepts in order to deduce from it some conclusions that are essential for the theory of knowledge. The universal is *the One in the Many*, and is therefore *related* to many things, processes, and the like. But this does not in any way imply that the universal repeats itself or exists many times over. *The universal is as unique as the individual.* The difference between them consists essentially in the fact that the universal is an individuality embracing many others (a *Gesammtindividualität*), while the individual, in the narrower sense of the term, is a not further divisible part of this many-sided individuality (or a *Gliedindividualität*). Thus, matter is a unique individual entity, but it embraces many other entities, whilst a single crystal of quartz is a unique individual member of that individual entity. In this connection it should be noted that universal laws are emphatically not concerned with events repeated in exactly the same way an infinite number of times. Any event to which a law refers is something unique ; the multiplicity is to be found in *the various concomitant circumstances*

connected with it, in regard to which we can say that *one and the same law* is realised in them.

The view I am taking of the relation between the universal and the particular leads to extremely important methodological conclusions concerning the intension and extension of terms. They will be dealt with in the next chapter, chiefly in the treatment of induction, but here some general points may be noted.

For the nominalists and the conceptualists a universal notion or a universal law is either a summary (a register) of a number of particulars or an extract from them. Accordingly, in all their logical theories and classifications—especially in their doctrine of inference—they put into the foreground the extension of notions, and from the knowledge of the extension, *i.e.* of the species and individual entities subsumed under a notion or a law, ascend to the universal notion or law. But, as it is impossible to embrace *all the particular events* comprised under a general notion or law, their logical theory is beset with irremovable contradictions and perplexities. Of late, there has been manifested a tendency in logic to ascribe greater importance to the intension than to the extension of notions, but the tendency has not, as yet, been adequately followed out. The change can be fully and consistently introduced only on the basis of a realistic theory of concepts. According to the realistic theory, the universal is a real individual entity, an independent whole, a *Gesammtindividualität*, and the species subsumed under it—the extension of the notion—are *parts* of the universal, related to it and to each other by *a real, and not merely a logical, relation of togetherness*; they are not

included *under* the notion but *in* the notion.[1] The parts, too, are individual entities; and, therefore, however much we may direct attention upon the universal, it will not enable us to know them as parts; and conversely, however much we may direct attention upon the parts as such it will not enable us to know the universal. To obtain perfect knowledge, both the universal and the particulars included within it must be taken into account. It is equally an error to sacrifice the universal to the particular, regarding the former as an unreal product of abstraction existing only in the human mind, and to sacrifice the particular to the universal, taking the former to be merely a product of the dialectical development of the notion, merely a consequent of the universal. Indeed, the relation between the two is not correctly described by the terms 'universal' and 'individual,' for there is no opposition between the universal and the individual. But to avoid breaking with ordinary terminology, I will continue to refer to the relation as that of 'universal' and 'particular,' meaning by the universal *the whole*, and understanding the terms in a relative and not in an absolute sense.

Whilst discarding, then, the doctrine of the *absorption* of the particular in the universal, or of the universal in the particular, I do not question the fact of a close and intimate relation between them. Owing to this relation, we naturally and inevitably seek to penetrate into the sphere of the universal after having investigated the particular, and *vice versâ*. It is only

[1] See Lask's *Fichtes Idealismus und die Geschichte*, Einleitung, and generally his presentation of what he calls *emanistische Logik*, pp. 39-51 and 56-68.

this relation that explains why the universal, in spite of its being a single whole, often appears to us as a *class* of things, *i.e.* in so far as has reference to a certain multiplicity. In such cases, in conceiving the universal, we trace in thought its connection with the corresponding species, and perhaps even with particular entities.[1] But it is important to lay stress on the fact that *thinking of a universal* is by no means always *thinking of a class.* It may take the form of thinking of the universal as an independent entity (a '*specifische Einzelheit*,' in contradistinction to an '*individuelle Einzelheit*' in Husserl's terminology), or of thinking of an individual as representative of a class, etc.[2] These different ways of conceiving the universal can only be explained with the help of a realistic theory, which recognises, on the one hand, *the independent content* of the universal and the particular, and, on the other hand, a real connection between them.

I do not propose to pursue further the problems raised in the present chapter. The question as to the various ways in which universals may be thought of belongs to the phenomenology of knowledge. The inquiry into the nature of the real connection between the universal and the particular, and of the different parts played by each in the world as a whole, is an ontological inquiry.

Only the negative results of this chapter are of importance for the theory of knowledge. We

[1] We are in such cases on the way to that intuitive thinking which Volkelt takes to be the ideal realisation of concepts in consciousness. See Volkelt, *Erfahrung und Denken*, p. 346 ff.

[2] Cf. Husserl, *Logische Untersuchungen*, ii. pp. 146-148, 170, and elsewhere.

have seen that so far as the process of thinking is concerned there is no difference between the universal and the particular. Both are equally unique and equally individual; the universal cannot be considered as logical or rational *par excellence.* It is a mistake to draw a sharp line of demarcation between concrete presentations and concepts. Neither concrete presentations nor concepts *mirror* reality: they *contain* it.[1] Both involve existence, and for this reason it is possible, in spite of what Kant has said to the contrary, in thinking synthetically to transcend the limits of notions in exactly the same way as, according to Kant, we can transcend the limits of intuitions (concrete ideas).

These results will be found to be of importance when we come to deal, in the next chapter, with the theory of the methods of thinking, and especially with the theory of induction.

[1] For the opposite view, see Rickert, *Die Grenzen der naturwissenschaftlichen Begriffsbildung*, p. 186.

CHAPTER IX

THE ELEMENTARY METHODS OF KNOWLEDGE

I

Immediate Apprehension of the relation of Ground and Consequent

THE judgment is an act of differentiating the object by means of comparison. When this act has been performed successfully we obtain a predicate P—*i.e.* a discriminated aspect of the object,—a subject —*i.e.* the part of reality under investigation characterised by the property S,—and the necessary relation (the relation of ground and consequent) between the subject and the predicate, since the predicate is an element in or an aspect of the subject.

Through such differentiation by means of comparison, P is singled out as an element of the object S, —that is to say, we are conscious of the two factors as related. Were the relation between P and the object S not retained, and did we not perceive it, there would be no judgment. A theory of judgment must, therefore, assume that we are conscious both of the *elements* of the world and of their *relations*— processes of activity, functional dependences, etc.— as constituting a *real, living unity.* Intuitionalism fulfils this demand, for according to it the world,

with all its contents, all its elements and relations, is immediately given to the knowing subject.

Judgments that result from a simple apprehension of the connection between ground and consequent are judgments of perception. Perception may be of two kinds—direct and indirect. All the elements of the world are connected with one another by the necessary tie of ground and consequent. So that if there is given a part of reality, S, along with it there must likewise be given (though perhaps at another time and in another place) a certain other part of reality, P. Hence, if in and through its acts of perceiving, the knowing mind becomes aware of objects as they really exist, perception may take one of the two following forms. In some cases, we apprehend a certain complex part of reality, S, and, without going beyond it, discriminate, as a necessary aspect of it, an element P. This is direct perception. In other cases, we apprehend a part of reality, S, and then advance beyond it as we trace its necessary connection with some other part of reality P, and apprehend this P in its necessary relation to S. This is indirect perception.

The content of a judgment is invariably an object differentiated in some particular respect by means of comparison. The aspect differentiated is itself always rich in content, and stands in relation to innumerable other objects. Every judgment may, therefore, itself become the material for further knowledge. The construction of a new judgment out of already existing judgments is called *inference*. Like perception, inference may be of two kinds—*direct* and *indirect*. In some cases, we do not go beyond the given judgments, but combine them in such a way

that their subjects form one whole and their predicates another; then we perform a further differentiation of each of these wholes (which can only be done if their parts contain identical elements), and thus obtain a new subject and a new predicate, *i.e.* a new judgment. This is direct inference. In other cases, we combine the given judgments in such a way that their homogeneous elements unite and form a chain (this, too, can only be done if the subjects or the predicates contain identical elements); then, advancing beyond the given links of the chain, we close it—*i.e.* trace a certain new relation which unites the heterogeneous elements of the chain. This is *indirect* or *deductive* inference.

Direct perception and direct inference constitute *the direct methods of knowledge*, and indirect perception and inference *the indirect methods of knowledge*. There are many important points of difference between these two groups, all of which can be traced back to the fact that in the direct methods the whole of the elements of the new judgment are directly seen to be contained in what is actually before us, whilst in the indirect methods one of the elements of the new judgment is discovered indirectly, by going beyond the material given in perception. In other words, since the subject and the predicate of a judgment refer to one another as ground and consequent, in the direct methods both the ground and the consequent are given, and all we require to do is to express their relation in a differentiated form, while in the indirect methods we have to take the given as the ground and first discover its consequent—or, conversely, take the given as the consequent and find its ground—and then proceed to

express the relation between them in a differentiated form.

Both these methods are only possible on the assumption that the elements of the world, as well as the relations between them, including the relation of ground and consequent, are immediately given in experience. The indirect methods further require that the perceived object, with which we start, being veritably present in the act of knowledge, should actually exhibit its grounds, and thus *lead us beyond itself* by forcing us to trace its relation to other elements of the world.

Strictly speaking, all processes of knowledge, inferences included, are, according to intuitionalism, processes of perception. The difference between them consists simply in this, that some judgments are based upon direct and others upon indirect perception, and that some judgments are, and others are not, founded upon other already existing judgments.

The differences between these kinds of knowledge must now be considered in detail, and then, at the end of the chapter, the intuitional theory will be compared with other theories, in order to show that no account can be offered of the way in which judgments are made, except on the assumption that the relation of ground and consequent is given in perception.

II

The Direct Methods

In the case of the simplest of the direct methods, a judgment comes to be made on the strength of a single act of perception, by discriminating the con-

tent that is immediately given in an undifferentiated form. With the help of past experience, a developed mind easily differentiates what is immediately given, and at once advances beyond it, thus passing to indirect perception. Judgments of direct perception, in their pure form, must, therefore, be sought for chiefly at the lower stages of mental life. But, on the other hand, as consciousness develops it is able to embrace at once larger and larger spheres of reality; and, consequently, certain kinds of judgments, which at lower stages of development were indirect, may, at a higher stage, pass into the category of direct judgments. Thus, for instance, in the developed human consciousness the judgments 'it is dark in this room' or 'N. slipped and fell' are judgments of direct perception. According to the theory explained in the last chapter, such judgments may be either particular or general. In many cases, however, judgments are so indefinite—as when a child says, for instance, 'fire angry, hurts'—that it is impossible to decide whether they are universal or singular.

The direct method next in order, more complex than that just referred to, must be classed under the head of inference. It consists in the formation of a new judgment through a differentiation of one or more already existing judgments. As has been said, the several given judgments are, in this case, so combined that their subjects constitute one group and their predicates another, and then these wholes undergo a differentiation which affects each of their parts, so that out of them a new subject and predicate, *i.e.* a new judgment, emerges.

A group of subjects or a group of predicates can be treated as a single whole only when their contents

are in some respects identical and contain a unity in multiplicity—for instance, if as premisses are given the judgments *Sm–nP*, *Sa–cP*, etc. Moreover, having differentiated *S* and *P* out of these judgments, we can form a new judgment *S–P* only when we are conscious that there exists a connection between *S* and *P*, and are aware of *P* as an aspect, a function, or, speaking generally, a consequent of *S*. In other words, it is implied that we discriminate not only objects but also relations between objects, so that the relation *S-P* is already given in the premisses though in an undifferentiated fashion.

The process described brings to light the identical content of many judgments; it results, therefore, in a judgment more general, or at any rate, no less general (when only one premiss has been given), than each of the given judgments. Such a process I propose to call *generalisation*, or *direct inductive inference*, in contradistinction to indirect induction, which will be discussed later. This inductive inference I call direct because in it the connection of *S* and *P* is immediately apparent, not only in the content of all the premisses taken together, but also in the content of each of the premisses taken separately.

In ordinary logic only the process which I am describing as 'indirect induction' is dealt with, and what I am here saying of induction may seem, therefore, somewhat perplexing. To avoid misunderstanding it should be noted that the complex scientific method usually called induction will be discussed later, but it will be pointed out that it is only possible on the basis of a much simpler and more elementary direct inductive inference. Further, the possibility of such direct induction is dependent on the relations

of causality, of functional dependence, etc., or, speaking generally, on the relation of ground and consequent being immediately given in perception. The elements of the real world will thus, as it were, have marks upon them indicating which particular events belong together. And if the realistic view of universals be accepted, it will follow that we can generalise from a single act of perception, for every particular S included in the universal judgment 'all S is P' will contain the whole of the material that forms the content of that judgment. As a rule, however, we generalise only after observing a number of particulars that fall under a general law. A multiplicity of facts is necessary not because repetition *creates* the connection of S and P, but because the relation, given in every separate act of perception, is not, as a rule, clearly differentiated, and the marks on the events are but faintly distinguished from one another. Repetition of the experience furthers the processes of comparison, through which from a chaotic reality the pair of events S and P, and the relation between them, can be differentiated. It is obvious that the cases particularly favourable for the differentiation of relations are those in which the contents of different perceptions vary, either in such a way that S and P remain the same while their concomitants change (this case corresponds to the method of agreement in indirect induction), or that, all the concomitants remaining the same, S disappears or is added or is quantitatively changed, whilst corresponding changes occur in P (this case corresponds to the method of difference in indirect induction). But the perception of functional and causal relations—as indeed of relations generally—is an experience which is of very

much the same character throughout; and, therefore, an exceptional power of discriminating and comparing is needed in order to differentiate relations. A special talent or even genius is often necessary to trace the fine thread which binds two events together. The act of discovery is accompanied by a feeling which shows that the knowing subject has penetrated deeper than usual into the intuitively given objective content of perception. In his article, *Généralisation et Induction*, Fonsegrive truly observes: "It is remarkable that when scientific men tell of their discoveries and do not attempt to make their description fit in with a preconceived methodology, borrowed from philosophy and generally false, they use such expressions as 'an idea came into my mind,' 'I was suddenly struck,' 'it suddenly dawned on me.' They note, too, that the discovery is not made through a slow and gradual accumulation of facts, but unexpectedly, abruptly, all at once; it is like a barrier being all at once removed, a veil lifted; it is like a flash of lightning. Rather than being discovered by him, the object discovers itself to the investigator; and this is in keeping with the Aristotelian doctrine that the mind remains passive in the process of abstraction. One sees, then, why so many discoveries were made on the strength of a single experiment. A second experiment is only necessary when the investigator has not succeeded in detecting what he is in search of in the first." [1] In like manner Claude Bernard remarks that in the experimental investigation of truth "feeling always has the initiative; it engenders an *a priori* idea or intuition"; then reason makes this idea articulate, and experience (that

[1] *Revue Philosophique*, xli. 1896, April, p. 373.

is to say, methodically selected new observations and experiments) controls the conclusions of reason. The *a priori* idea is a kind of "intuitive anticipation of reason, leading to a happy discovery." It "takes the form of a new and unexpected relation which reason discovers between things." The characteristic of genius is "a delicate feeling which rightly anticipates the laws of natural phenomena" (*sentiment délicat qui pressent d'une manière juste des lois des phénomènes de la nature*),[1] but it must be controlled by methodical observation and experiment. Claude Bernard does not, it is true, explain this fact of intuitive insight in the light of our intuitional theory, but rather in the spirit of the pre-Kantian rationalism, which postulated the existence of innate ideas. "An experimental idea," he says, "arises out of a sort of presentiment of the mind which judges that phenomena must happen in a certain way. In this sense it may be said that our mind has an intuition or a feeling of the laws of nature, but we do not know their form and can only discover it by experience." "The human mind has from its very nature a feeling or an idea of the principle which governs particular cases."[2] It is on this ground that Claude Bernard takes induction to be a species of deduction—to consist, that is to say, in a transition from the general to the particular. Liebig's view resembles that of Claude Bernard in so far as Liebig believes all scientific investigation to have a deductive or an *a priori* character, since it is guided by an *a priori* idea.[3] It is noteworthy

[1] Claude Bernard, *Introduction à l'étude de la Médecine expérimentale*, pp. 50, 59, 77. [2] *Ibid.* pp. 61, 83.

[3] J. v. Liebig, *Ueber Francis Bacon von Verulam und die Methode der Naturforschung*, p. 49.

that he expressly denies the necessity of *many* instances for inductive generalisation. "Any one who has any knowledge of nature," he writes, "knows that every natural phenomenon, every event in nature, wholly and entirely contains within itself the law or the laws in accordance with which it has been brought about. A true method starts, therefore, not with a number of instances, as Bacon would have it, but with one single instance. When that instance is explained, all analogous instances are explained along with it. Our method is the old Aristotelian method, only it is used with far greater skill and experience."[1] Criticising Bacon, he ironically remarks that "the method of Bacon is the method of many instances; and, since every unexplained instance is as good as a nought, and since thousands of noughts, in whatever order they may be placed, do not together make a number, his inductive method amounts to an aimless shuffling of indefinite sense-perceptions."[2]

Fonsegrive mentions, along with Claude Bernard and Liebig, Goethe and Tyndall, who use the term 'intuition' to describe the process of scientific discovery.[3] Fonsegrive himself works out in his article a theory of induction which he calls 'intuitive.' He maintains that intuition alone enables us to distinguish the essential features of a given event from its accidental concomitants. Having intuitively determined the type, we subsume under it the concrete cases we come across and—again intuitively—

[1] J. v. Liebig, *Ueber Francis Bacon von Verulam und die Methode der Naturforschung*, p. 47.

[2] *Ibid.* p. 48. Claude Bernard also remarks that the rules laid down by Bacon and similar philosophers "may seem excellent to those who see science from a distance, but not to true scientists." *Op. cit.* p. 394.

[3] *Revue Philosophique*, xli. May, 1896, p. 528.

perceive the possibility of an endless number of such subsumptions. Consequently, induction consists of two acts of intuitive perception and of one act of deductive inference.

Yet, Fonsegrive's view of intuition differs profoundly from the view I am here presenting. I am insisting that what is immediately given in experience is the real external world, whilst Fonsegrive takes all the elements of the cognitive process to be composed of mental states, sensuous or intellectual, of the knowing subject. He affirms, however, that necessary relations may be perceived even in a single instance given by experience, and thus shares our view that experience supplies us not only with the spatial and temporal relations, but also with the more intimate and necessary relations of things.

It is remarkable that even thinkers who refuse to recognise the intuitive character of induction are nevertheless conscious of the significance of intuition for induction, and either admit that a special power of intellectual insight is manifested in the process of inductive reasoning[1] or point out that the theory of induction, which from the time of Aristotle has caused so much trouble to logicians and is far from being satisfactorily presented even now, would be easily explicable could it be supposed that the forces of nature are perceived as such. Thus Hume says that could the mind discover the power or energy inherent in any cause, we should be able to foresee the effect even without the help of experience, and

[1] Thus Jevons writes: "There seems to be an innate power of insight which a few men have possessed pre-eminently, and which enabled them, with no exemption indeed from labour or temporary error, to discover the one in the many." *Principles of Science*, 2nd ed., Ch. xxvii. p. 626.

might judge of it with certainty by dint of thought and reasoning alone.[1] Again, Karinsky, in his book on *The Classification of Inferences*, observes that "could we perceive the actual force which produces an event we should have no need of the inductive methods in order to discover the causal relation between events; we should be able then to arrive at that relation directly, by analysing the events which produce one another."[2]

There is, however, no need to show that induction is readily explained on the assumption that the necessary relations of things are given in perception: so much would probably be granted by everybody. Yet, the objection would be raised that this is a large assumption; and we must, therefore, dwell on the reasons which make the assumption a necessity. The chief reason is that the reality to be known is immanent in the process of cognition, that there is no gulf between the known object and the knowing subject, so that if the world is not a chaotic mass of facts but a necessary unity, the relations which bring about this unity must be given as immediately as the rest of the world. And, indeed, by attending to the objective contents of perceptions and judgments, it is not difficult to discern that they do contain all kinds of relations, not only those of time and space, but relations of causality, of functional dependence, of substantive unity, of motive and action, etc. The fact is not denied even by thinkers like Hume, who question, however, its objective significance, and seek to reduce all relations

[1] *Inquiry*, Sect. v.-Pt. ii.

[2] Karinsky, *Klassifikazija wywodow*, p. 8. As to intuition being the source of induction, see also Lachelier, *Du Fondement de l'Induction*, and other works of his.

to combinations of successive occurrences with various states of feeling of the knowing subject. As a consequence, they are compelled to attach but little value to induction. But, as a matter of fact, no account can be given of induction at all if a perception of the necessary relations of things is denied. I shall endeavour to show that this is so at the end of the present chapter, and I shall use it as a final argument in favour of the view I am here taking.

The objection may be urged that we are discussing the mechanism of inductive reasoning—its ontological side, so to speak—while epistemology should be concerned with a quite different question and should inquire into the validity of inductive inference. This distinction is indeed of first-rate importance for those theories which so conceive of the relation between the knowing subject and the known object that questions concerning the origin of judgment and the validity of judgment can be dealt with separately. But that is not the case with all theories of knowledge. At any rate an intuitional theory, which denies the isolation of the subject from the object, can not allow of the problem being thus divided. In our view, the question of validity involves the question of origin and *vice versâ*. And I shall try to show that the validity of direct inductive inference is established by the account we have given of the mechanism of the process.

Indeed, in order to establish the logical validity of inductive reasoning, it must be proved that we have a right to conclude on the basis of one or more perceptions, first, that the perceived S and P are connected with one another through an objective necessity, and, secondly, that this connection holds good as between 'all S' and P.

With regard to the first point, the criterion of the truth of any piece of knowledge is, according to the intuitional theory, the *presence* of the reality that is being known. The relation between S and P is not produced, or even reproduced, by the knowing subject —it is simply discriminated by him. The actually present object S, without any help from the knowing subject, brings with it the characteristic P. All that is necessary, in order to discriminate the relation in its pure form, is an *analysis* of the perception. In so far as the relation between this particular S and P is of that nature, it forms part of the object known, and we have, therefore, a right to affirm it.

Our right to generalise—to affirm, *i.e.* that *every* S is connected with P, because some S has been observed to be connected with it—can only be established when it is shown that the generalisation refers only to an *actually present* reality, or that, in other words, it contains within itself an immanent knowledge. We have here an exceptionally difficult problem, for at first sight inductive inference appears to assign the characteristics of some things that have been perceived to an endless number of things that have never been perceived. Were that the case, inductive reasoning would have the character of transcendent knowledge, and it is, indeed, regarded by ordinary logic as having that character. But as inductive reasoning would, under such conditions, be entirely without foundation, most modern thinkers justify the transition from the known to the unknown by means of the law of the uniformity of nature. They take every induction to be a syllogism, the major premiss of which is the law of the uniformity

of nature. This view leads, however, to new difficulties instead of solving the old ones. To begin with, it cannot explain how the premiss asserting the uniformity of nature has been acquired. Secondly, reducing, as it does, all reasoning to the deductive type, it cannot, as will be shown later, account for the origin of *all* universal judgments. Thirdly, no appeal to the law of the uniformity of nature will save inductive reasoning from being transcendent in character, if by the uniformity of nature be understood an unending *recurrence* of similar, but *numerically different*, events. Under these circumstances, however often we may have observed the connection between S and P, our assertion that in the future they will likewise always be connected will merely be of the nature of *a remembrance of past perceptions*. It would be absolutely unintelligible how such remembrance could guarantee the future, if the future is a new process and is not brought into being by our memories of the past.

These questions will be dealt with more fully at the end of this chapter, after indirect induction has been discussed. Meanwhile, I want to indicate how the initial difficulties just referred to can, on the intuitional theory, be surmounted. In its account of the process of generalisation the theory will obviously make use of the realistic conception of universals set forth in the last chapter, and on that basis one may say that in induction there is no transition from given instances to *new* and unknown cases. Induction has nothing to do with the number of cases or with the extension of judgments. In induction, as in all other processes of thought, advance is made through alteration in the intension of judgments; and it is

from this that changes in the extension follow, as a *subsidiary process*. Thus, we know from the premisses that *aS–Pm*, *bS–Pn*, etc., and in the conclusion we learn that the presence of *S* alone, without the addition of *a*, *b*, etc., necessarily involves *P*. There is no reference here to the extension, though the extension *may* be increased if *S* should happen to be an individuality that embraces many others [1]—if, while remaining one and the same *S*, it may be combined with *c*, *d*, *e* . . . as well as with *a* and *b*. Our knowledge will, in that case, embrace *c*, *d*, *e* . . . in so far as they are involved in *S* and *P*, but precisely in so far as that is so, we are not concerned with *new* cases. The *S* and *P* here present are absolutely identical with the *S* and *P* which were contained in the premisses *aS–Pm*, *bS–Pn*, and the formula '*S* is *P*' has not anticipated or suggested these other instances merely on the ground of a memory of past experiences, but has directly *contained* them, timelessly including all their endless multiplicity. On the other hand, what is really new in these fresh instances—for instance, the presence of *d* in the case *dS–Pr*—is in no way anticipated by the general formula; it is discovered from some other source at the moment when we apply the formula in a deductive inference and say, *e.g.* '*d* is *S*,' '*S* is *P*,' therefore '*d* is *P*.' As in practice we constantly apply our knowledge in this deductive way to numerous fresh instances, attention is readily confined to the number of combinations of *S* with other elements of reality, and we are then led to emphasise in our formula the extension by the words "all *S*." A derivative characteristic of induction is thus put in the foreground, and the results are, for

[1] See preceding Chapter, pp. 312-14.

the interpretation of the process of thought, highly misleading.

The objection may be pressed that if the necessary relations between the different aspects of the real world are immediately given in perception the attainment of knowledge would present no difficulty, and science would have become long ago a completed whole. In answer, we must repeat what has been said already with reference to the givenness of the external world in knowledge—namely, that we have merely insisted upon a condition without which induction would be absolutely impossible and inexplicable. Yet even conceding that condition, inductive inference is no easy matter. Since reality is inexhaustibly rich in content, an exceptional power of discernment is needed in order to select those aspects of it, such S and P, that it is worth while to inquire into. Further, in order to establish which elements of the real world are the consequents of S, or which, on the other hand, are the ground of P, the relation between S and P must be clearly differentiated, and such differentiation is difficult, for relations do not easily admit of comparison. For this reason, our early generalisations must inevitably be inexact, confused, or even entirely false. The following instances will illustrate my meaning. 'We hear with our ears' is a generalisation which contains a germ of truth, since the occurrence of certain processes in the auditory apparatus is partly the cause of the apprehension of auditory sensations. But in primitive thought this correct perception of the relation between the two events is, on the one hand, thwarted by a thick layer of superfluous ideas (ear as a whole; hearing not merely as a process of apprehending the sensations of sound

but also of apprehending speech, etc.); and, on the other hand, it omits certain elaborations and qualifications which are essential,—as, for instance, that the perception of sound depends also upon processes in the brain and upon mental processes such as attention. Or again, after several experiments we easily observe that 'the nearer a nut lies to the angle of the crackers the easier it is to crack.' Yet, it is much more difficult to perceive that the facility in question depends upon the relation between the distance of the nut and the distance of the point at which pressure is applied from the angle of the crackers. The conditions of comparison between the different contents of experience are not favourable to the differentiation of this particular relation. In the same way, no great effort is required to notice that 'if the hand is opened, the thing held in it falls because of its weight.' It does, however, require effort to observe that the weight depends upon gravitation, for gravitation is a factor constantly present in our experience, and is not, therefore, easily differentiated by means of comparison.

The mistakes which are inevitably made in early generalisations, and which are due to the fact that the elements of the real world and the relations between them are imperfectly differentiated, may be of three kinds. In the first place, the subject or the predicate, or both, may include elements that are superfluous; in the second place, the subject or the predicate, or both, may be lacking in some elements that are necessary; and, in the third place, both these mistakes—*i.e.* the presence of superfluous and the absence of necessary elements—may be combined in one and the same judgment. And our

thinking is still so imperfect that most of our judgments—even those employed in science—betray all the mistakes I have enumerated, as I shall attempt to show later on. Fortunately, however, numerous judgments are not entirely false but merely inexact and undeveloped. It is so, for instance, with respect to judgments in which the subject includes superfluous elements which have not, as yet, been eliminated from it. Sometimes, also, the absence of necessary elements from the subject does not mean that these are absolutely denied, but that, owing to insufficient differentiation, they cannot be definitely indicated or are but vaguely implied. Once more, it often happens that generalisation unites elements S and P which are related very remotely, through a number of intermediate links, or even that it connects elements which are not causally related at all, but are related in time indirectly, both S and P being, for instance, the consequents of some factor R still unknown to us. Judgments of this kind belong to the class of so-called empirical laws. Many of such generalisations are excessively inexact, confused and indefinite; one need only reflect that numbers of superstitions are generalisations of this type. It should be remembered, however, that even superstitions contain, for the most part, a core of truth, so that here, again, inexactness and incompleteness are more often met with than direct and unmitigated error.

To understand how the intuitional theory accounts for generalisations which connect S and P that are not causally related, the reader must be referred to what has been already said concerning the subject of the judgment.[1] The subject of a judgment is not merely

[1] See Ch. vi. pp. 232-4.

a differentiated element of the real world—S, but also all that portion of the reality, infinitely rich in content, to which S immediately belongs, and which is only indicated by the differentiated S and not exhausted by it. When, therefore, we apprehend the connection of P with that portion of reality characterised by the mark S, but as yet unknown to us in so far as it is *immediately* connected with P, we say 'S is P,' although sometimes we are clearly aware that S cannot, as such, be the cause of P.

Finally, a misgiving of quite an opposite character may be felt with respect to the intuitional theory. However hard it may be to differentiate relations, yet in all the endless variety of nature there must be some spheres in which relations have been discriminated with such accuracy that a generalisation can be made on the ground of one single instance, and recognised as scientifically established without the need of being further verified by observation. Does there, then, exist a science which exemplifies such a method of generalisation? The answer must be in the affirmative, and this is in itself an argument in favour of the intuitional theory, since other theories either altogether ignore generalisations from a single instance, or find them difficult to explain. In mathematics and the allied sciences, such as geometry and mechanics, generalisations are constantly being made from a single instance.[1] Examples can be found in the proof of every geometrical proposition. Thus, *e.g.*, the proposition in reference to the sum of the angles of a triangle is proved deductively for some particular triangle, say, an acute-angled triangle; but, since it

[1] As to the place of induction in mathematics, see, *e.g.*, Poincaré's *La Science et l'Hypothèse*, Ch i.

is clear that the magnitude of the angles is conditioned not by all the properties of the given acute-angled triangle, but only by those which are *identical* in all triangles, the proposition proved is affirmed of triangles in general—is generalised, that is, on the ground of one instance only. The generalisation in such cases is so easily effected that we are not aware of it as a separate link in the chain of proof, and the traditional logic still hesitates to admit the existence of that link. Now, the fact of such generalisation is readily explicable from the point of view of the intuitional theory, while from the point of view of other theories it is wholly incomprehensible. And yet, without recognising this type of proof, it is impossible to establish the validity of inferences based upon the examination of some one particular instance.

III

The Indirect Methods

The direct methods are used when the ground S and the consequent P are given in perception, and our task consists simply in discriminating them and their relations to one another. The indirect methods are used when we are given in perception only the ground S and have to find its consequent P (or conversely), and also when, from the given relations of S and P to other elements of reality, we have to determine their relation to one another. In the first case, we have *indirect perception*; in the second, *indirect (or deductive) inference.*

Indirect perception is possible because objects are present in perception as they really are; so that

if the perceived object *S* is the ground of the object *P*, the latter must inevitably come before us; it *arises*, so to speak, before our eyes under the influence of *S*. If now we attend to the transition from *S* to its consequents, we form the judgment '*S* is *P*,' or even a judgment solely about *P* should we be interested in *P* as such, and not in its connection with *S*. Or again, if in perception there is given *P*, and *P* is the consequent of *S*, then it too arises, as it were, out of *S* before our eyes. *S* must, therefore, also be present, and if our attention is turned in that direction, we shall again assert that '*S* is *P*'—or make a judgment about *S* alone if we are interested in *S* only, and not in its relation to *P*. Thus, on observing an approaching gust of wind, we expect the sailing boat to capsize; on coming into a room and finding that the people in it look excited, hardly speak to one another, and glance at each other with hatred, we guess that they have just quarrelled; seeing a child who has been playing quietly, suddenly start, flush, and look before him, his eyes wide open with terror, we turn in the direction in which he is looking and notice a dog approaching. With reference to this last case, it might be said that indirect perception in no way differs from direct. Indeed, since, according to the intuitional theory, all the objective contents of judgments—not only those sensuously perceived but also those thought of and remembered—are present in the act of knowledge as they really are,[1] the first and the second instances would seem not to differ essentially from the third, and all three to

[1] The question as to how the past and the future—and, in general, that which cannot be apprehended sensuously—may be actually given in acts of knowledge is a question for ontology to answer.

be exactly similar to direct perceptions. But closer examination will show that this is not the case. In the first place, in indirect perception we are given, to begin with, only the ground or only the consequent —and that induces us to search for the second link in the chain of events, which *we discover later*. In the second place, even when the element supplementary to the given S or P has been found, it cannot always be sensuously perceived as it would be in the third instance (the child and the dog). It often has a non-sensuous character, as in the first and the second instances (the future capsizing of the boat, the past quarrel); and, as our power of analysing non-sensuous experiences is but small, our guarantee of its existence—even after it has been found—is *rather an indirect than a direct perception.*

It might seem as though, instead of admitting so subtle and peculiar a capacity as indirect perception, it would be much simpler to explain the facts by appealing to the memory of similar cases in the past. And, indeed, it must certainly be granted that experiences differentiated in the past do *facilitate* the differentiation of present experiences, and also that the process of indirect perception is *accompanied* by memories. But it does not in the least follow that, in the instances given, the perception of P (the capsizing of the boat) as necessarily following the given S (the gust of wind), is due solely to memory. Were P simply a content of memory, we should be conscious of it as referring to the past cases, and not as necessarily connected with this S. Thus, in the case of the gust of wind, I might remember that I had once before seen a warship capsize, but this memory-content will not

be identical with the content of the judgment we are seeking to explain. Furthermore, if the *S* actually before us (the gust of wind) which, according to the intuitional theory, is present in the act of knowledge as it really exists—if that *S* can be the ground of a memory, *i.e.* of a non-sensuous perception of *other* cases that have happened before, it seems simpler and more natural to suppose that it is the ground of *an anticipation*, *i.e.* of a non-sensuous perception, of *that very* P *which is just going to appear in the present case.*

It may, perhaps, be contended that the explanation of the judgment in question by memory is based upon the universally accepted law of association, whilst indirect perception would be but a suspicious variety of clairvoyance. But a simple reference to the law of association has long since ceased to satisfy psychologists and epistemologists, who are well aware that association of ideas is a complex phenomenon, based upon certain ultimate characteristics of consciousness, and perhaps of the world as a whole, which, as yet, elude our grasp. It may be that association by contiguity rests upon a relation which holds throughout reality between the present and the past—a relation of ground and consequent which implies that, wherever some elements of a whole are found, its other elements must also really be present in one form or another.[1] In that case, the memories engendered by association would themselves be simply *a species of indirect perception*, a sort of clairvoyance of the past.

[1] See, for instance, the attempt made by Höffding in his *Psychology* to reduce all kinds of association to the association of whole and parts, and to bring it into connection with the unity of consciousness. Ch. v. B § 8.

Finally, it should be noted that there are some judgments which can be explained in no other way than by means of indirect perception. To these belong all judgments referring to absolutely individual events (individual in the narrower sense of the term) that cannot be observed directly. Thus, persons who possess a thorough knowledge of the past and present of a country foresee the particular line of development which its social life is destined to take. Another instance would be furnished by an author who conceives a new individual character, and who, after having given a first sketch of it, is compelled to follow a definite direction in the further elaboration of the events, although they still remain strictly individual. The artistic perception of an author is to some extent shared by his readers, in so far as they realise that his production is taking the right or wrong line of development.

The doctrine of indirect perception, as can be seen from the instances just given, is extremely important for the general methodology of the sciences. A number of sciences which have begun of late to attract the attention of philosophers are only possible on the assumption of indirect perception—the sciences, namely, which are concerned with the individual in the narrower sense of the term as opposed to the sciences concerned with the universal. For although individual events are connected with one another necessarily, yet no repetition of them is, in any intelligible sense, possible. No analogy drawn from past experiences will, therefore, enable us to foretell, to deduce, or even to testify to them (unless we happen to have been eye-witnesses); we can only do so by means of indirect perception.

With regard to so-called recurring events (the capsizing of the boat, etc.), it may be urged that knowledge of them is derived by deductive inference and not by indirect perception (if a gust of wind overtakes a boat under certain conditions, the boat will capsize ; such a gust of wind is actually approaching, therefore, the boat will capsize). No exception can be taken to the first part of this contention ; indeed, it in no way conflicts with our view, according to which deductive inference is intimately related to indirect perception. But it is clear that in the instance before us the deductive reasoning takes place only after the *surmise* as to the capsizing of the boat has been made on the ground of indirect perception. Otherwise, it would be quite incomprehensible why we should have thought of a general rule at all ('if a gust of wind comes, etc., the boat will capsize') and precisely of this general rule rather than of any other. The deductive inference is, therefore,—at any rate, in the case under consideration—simply *a verification of an act of judgment which has already taken place.* This is the reason why it consists almost entirely of differentiated elements that can be easily detected and controlled, and why the connection between the premisses and the conclusion seems not to require any further proof or investigation, but to be so self-evident that when we succeed in bringing a judgment under the form of the syllogism, we consider it to be proved κατ' ἐξοχήν. It is no wonder, then, that logic is still almost exclusively concerned with deductive inferences, and that it strives to reduce all the more elementary modes of thought to the deductive type. As is always the case, the indirect or the derivative, being clearly differentiated, is the

first to attract attention and to be made the subject of inquiry. Yet, in its developed form, it largely consists of the crystallised products of the original living and creative activity. Logic overlooks these more elementary activities, and thus gives a purely formal character to deductive inference. Since deductive inference is a derivative process, logic, in analysing it, is bound sooner or later to arrive at elements, or premisses, which cannot by any device be deduced from anything else. Unable to account for their validity, and oblivious of the living source from which they spring, it simply accepts them as lifeless ready-made products. Nevertheless, it is obvious that the vaunted certainty and clearness of deductive inference depends on the trustworthiness of the premisses, and that if the origin of the premisses is uncertain, we have to be content with a clearness and certainty borrowed from an unknown source.

Deductive inference acquires quite a different character if it is brought into connection with the processes of direct perception, direct induction, and indirect perception, as possible sources of the premisses. It transpires then that deductive inference, though a derivative process, is yet creative, and can be used not only for verification but also for discovery. Moreover, it is then found to consist not simply of a fruitless, even though faultless, unfolding of premisses, but to contain in the conclusion a real advance, namely, the indirect perception of a new aspect of reality. In this sense, deductive inference is no other than a mode of indirect perception based upon already existing judgments, in the same way as direct induction is a mode of direct perception based upon already existing judgments.

The intuitive element of indirect perception is not difficult to discover, either in immediate (consisting of one premiss) or in mediate deductive inference (consisting of two or more premisses). In immediate inference we start with a knowledge of some one relation between *S* and *P*, and from it we discern the existence of a certain *other* relation between the same, or a somewhat more individualised, *S* and *P*, taken in either an affirmative or a negative form. Thus, in conversion, from a proposition that establishes the relation between *S* and *P*, we discern the relation between *P* and *S*. At first glance it might appear as though the conclusion of such an inference contained nothing new as compared with the original premiss, and that, therefore, in order to obtain it, no intuitive perception of new relations was needed. This, however, is not the case. The relation of *P* to *S* is not by any means identical with the relation of *S* to *P* (thus the proposition ' all *S* is *P* ' is convertible into ' some *P* is *S* ') ; in some cases the relation of *S* to *P* is known, whilst the converse relation remains altogether undetermined (*e.g.* in particular negative propositions ' some *S* are not *P* '). In order, therefore, to obtain the conclusion, we must clearly apprehend the relation of *S* to *P*, and then, without losing sight of it, trace the same content in the direction of *P* to *S*, if we are to discover its new properties. The process is essentially similar to that of indirect perception : in both, new aspects of reality are connected with already known aspects through means of the necessary relation of ground and consequent or of functional dependence. The difference consists only in this, that in deductive inference the real elements *S* and *P* present

in the conclusion have already been differentiated in the premisses, while in propositions obtained by indirect perception either the subject or the predicate —or both—have not, to begin with, been given in the direct perception from which the judgment took its start.

Mediate deductive inference also involves indirect perception. In mediate inference we have before the mind a reality *M*, two distinct aspects of which have been differentiated, and we express its content by means of two propositions, one of which contains *S* and the other *P*; we then scrutinise that reality, and in it discriminate a new property, namely, the relation of *S* to *P*.

Traditional logic concerns itself only with the simplest of such inferences,—those, namely, in which the premisses are composed of the concepts *S*, *M*, and *P*, and the conclusion of the concepts *S* and *P*, the only difference between the premisses and the conclusion being that in the conclusion *M* is omitted and the relation of ground and consequent between *S* and *P* is introduced. The other forms of deductive reasoning traditional logic either leaves altogether out of account or tries to force them into the syllogistic form, whilst modern logic is more and more inclined to admit their independent character. Here are some typical instances of the arguments in question:— "Thales lived before Anaximander; Anaximander lived before Anaximenes; therefore, Thales lived before Anaximenes." "Kant never left Königsberg; Schelling never went to Königsberg; therefore, Kant never saw Schelling." "*A* equals *D*; *B* equals *D*; therefore, *A* equals *B*." In all these inferences the conclusion differs from the premisses by the absence of three

elements present in the premisses—namely, of *M*, of the relation (temporal, spatial, etc.) of *S* to *M*, and of the relation (temporal, spatial, etc.) of *P* to *M* —and the relation of ground and consequent is established, not between bare *S* and *P*, but between *S* with its temporal, spatial, etc., relations and *P*, which relations were not contained in the premisses at all. The nature of such inferences may be made clearer by the following comparison. If we are given a point *M* and the spatial relation of the points *S* and *P* to it, these data enable us to picture the spatial whole, to which *S*, *M*, and *P* belong, with such distinctness that by immediately examining *S* and *P* we are able to trace their relation to one another, although it is in no way the same as their relation to *M*. An exactly similar process of perceiving an entirely new relation takes place in all the arguments just referred to, but, of course, it is only possible where the elements of reality and the functional dependence between them have been already clearly differentiated. Hitherto, such arguments have been used chiefly to determine temporal and spatial relations, the relations of equality, the properties of an aggregate on the ground of the properties of its parts, etc. But, as our ideas of the world become more and more differentiated, there will probably turn out to be other and new varieties of these arguments. The reason why most well-founded inferences of the kind in question refer to spatial and temporal relations and to relations of equality is a question for metaphysics to answer by rendering clear the nature of these aspects of reality. It is sufficient here to indicate the principle that lies at the root of all deductive inference. It is the same principle as that of indirect perception; from the

ground (given in the premisses) we arrive at the consequent (in the conclusion), or conversely, from the consequent (given in the premisses) we arrive at the ground (in the conclusion). The process is possible because the objects that form the content of the premisses are present in the act of knowledge as they really exist; their grounds must, therefore, also be present, and their consequents must arise out of them, as it were, before our eyes.

As against the intuitional theory, the traditional logic may attempt to bring all deductive reasoning under the formulae of the four figures of the syllogism and, presuming the other three figures to be reducible to the first,[1] to maintain that for the first figure no intuition is necessary, since nothing is brought forward in the conclusion which was not already contained in the premisses.

I will not dispute as to whether it is possible to reduce all mediate deductive inferences to the syllogistic form. At any rate, there is no doubt that this result can only be obtained through a highly artificial procedure.[2] There is, however, no need to go into the question. The truth of our contention can be exhibited in a different way, by showing, namely, that even in the first figure the conclusion rests upon an intuitive perception of other aspects of reality than those contained in the premisses. Inference, according to the first figure of the syllogism, is based upon the principle that the ground of the ground is the ground of the consequent (and

[1] For instance, the inference $A=D$, $B=D$, $\therefore A=B$, can be reduced to the first figure of the syllogism in the following way: two magnitudes each of which is equal to a third are equal; A and B are magnitudes each of which is equal to a third; hence A and B are equal.

[2] See Karinsky, *op. cit.* pp. 64-76.

also that the consequent of the consequent is the consequent of the ground): if S is the ground of M, and M the ground of P, S is the ground of P. The relation of S and P, disclosed in the conclusion, is not identical with the relation of S to M and of M to P: in the premisses the relation of S to P is mediated by the link M, whilst in the conclusion we discern that the reality to which S, M, and P belong is, in so far, a single whole, that if S is given, P is also given. The only difference between the first figure of the syllogism and other mediate deductive inferences is that in it the relation between S and P, disclosed in the conclusion, differs least in content from the relations given in the premisses. Schematically this difference might be expressed as follows: in inferences according to the first figure we have to trace the line $S \overset{M}{—|—} P$, whose parts SM and MP are given in the premisses, whilst in other deductive inferences (of the type $\overset{S}{\underset{P}{|}} > M$) we have to trace in the conclusion the line from S to P, which is not given in the premisses either wholly or in part. This scheme shows clearly how little of what is new is contained in the conclusion of an inference according to the first figure as compared with the premisses. But a new element *is*, nevertheless, present in the conclusion; and it cannot, therefore, be said that inferences according to the first figure are based exclusively on *the law of identity*.

The principle upon which our theory of the indirect methods of the formation of judgments is founded is that the ground and the consequent must necessarily be given together: given the ground, the consequent

arises before our eyes; given the consequent, it can be traced to its ground. In the same way the absence of the ground indicates the absence of the consequent, and the absence of the consequent indicates the absence of the ground. We thus obtain four methods of passing in thought from ground to consequent, and conversely, from consequent to ground.

This view is in direct opposition to the teaching of traditional logic, which takes only two of these methods to be valid, namely, the inference from the assertion of the ground to the assertion of the consequent and from the denial of the consequent to the denial of the ground. In so doing, it is influenced by a peculiar conception of the relation of cause and effect,—a conception which is combined with the assumption generally known as 'the law of the plurality of causes.' According to this law, one and the same cause necessarily produces always one and the same effect, but one and the same effect may, in different cases, be due to various causes. For example, friction necessarily produces heat, yet heat may be caused not only by friction but by chemical reaction, by the proximity of a body of a higher temperature, etc. Dynamite necessarily explodes under the influence of a strong impact, but an explosion may also be caused by benzine, by gunpowder, etc. The relation, then, between effect and cause is not logically equivalent to the relation between cause and effect—and this has an important bearing upon inference. The postulate that the same cause always produces the same effect allows us to infer the presence of the consequent from the presence of the ground and the absence of the ground from the absence of the consequent. But,

since the same effect is not always produced by the same cause, we cannot infer the presence of the ground from the presence of the consequent, or the absence of the consequent from the absence of the ground. The fact that the traditional theory does in some cases allow us to infer from the consequent to the ground—to infer, namely, from the absence of the former to the absence of the latter—is but of small significance. Such inferences have not the same value as inferences from the presence of the ground—in the first place, because generally they have a negative character, and, in the second place, because in some very important cases they are of no practical use, as the truth of the minor premiss cannot be established. The minor premiss of these inferences is as a rule a negative proposition, and to establish its truth—to prove, that is, the absence of a certain event—is often impossible, and, indeed, actually is so in the cases which are of most importance to science.

The traditional logic does not, however, wholly reject inferences from the presence of the consequent. It admits their validity as probable inferences. They may be used in science, and can be of help, for instance, in the construction of hypotheses. But it should be noted that if the plurality of causes be a fact, no hypothesis, however strongly it may be confirmed by experience, can ever be established—for not even an endless number of consequents can prove the presence of some one definite ground. According to this view, a hypothesis can only become an established theory if we succeed in directly observing the cause of the event we are seeking to explain, or, at any rate, the cause of its cause.

The traditional logic is little troubled about the low value it ascribes to inferences from the presence of the consequent or about the absence of a postulate asserting that one and the same effect is always produced by the same cause. It takes for granted that inferences from the presence of the ground to that of the consequent are sufficient for the purposes of science. This, however, is an error. Science stands in need of inferences from the presence of the consequent just as much as of inferences from the presence of the ground. Its need of these will become clear at once if we consider those sciences concerned with what is irrevocably past. When from the increasing or the decreasing size of the particles in different layers of one and the same stratum a geologist seeks to determine whether that stratum was formed at the bottom of the sea by the drying-up or by the deepening of the surface which was once covered by water, or when he explains the formation of a valley by the action of water, he uses at every step inferences from the presence of the consequent to that of the ground. If such inferences be merely probable, almost the whole science of geology becomes a system of hypotheses, the truth of which can never be established by any progress in knowledge. Exactly the same would have to be said of history when it re-creates the past from the ruins of old towns, from inscriptions, coins, etc. Even when a historian describes the past from the trustworthy memories of an eye-witness, he, too, infers the presence of the ground from the presence of the consequent, for the memories are themselves only consequents of the events described. Indeed, even a scientist concerned with present data,—a zoologist, for instance—in so far as he is compelled

to make use of the investigations, drawings, and photographs made by other people, as well as of his own personal observations, must admit that his scientific conceptions are far more often based upon inferences from the presence of the consequent than upon inferences from the presence of the ground. In practical life it is obvious that we cannot move a step without making inferences from the presence of the consequent. A judge, for instance, is constantly using this method in order to reconstruct the past when investigating the circumstances of a crime. And the reader will find numerous instances of this kind of inference in the adventures of Sherlock Holmes, Conan Doyle's well-known character.

From the above examples it is evident that, if the so-called law of the plurality of causes be admitted, the trustworthiness of inferences from the presence of the consequent is rendered doubtful, and therewith the trustworthiness of much of our knowledge. A result of that sort is in itself sufficient to induce us to revise the traditional view. Not only so. Inferences from the presence of the consequent—especially the more complex ones, often met with in practical life,—are accompanied by an immediate feeling of self-evidence which in itself indicates that they cannot be regarded as of less value than inferences from the presence of the ground. But since, so soon as we pronounce them to be of equal worth, we are at once reminded of the law of the plurality of causes, the first thing to do is to show that this law is invalid. That is not, indeed, a difficult task. I do not propose to refute it directly; I shall content myself with showing that it is absolutely devoid of proof. References to particular cases, such as the impossibility of inferring

the presence of dynamite from the fact of an explosion, which might have been caused by benzine, gunpowder, etc., are not convincing, for in all such cases the consequent is never taken in all its concreteness, but in an abstract form. If it be taken in a more individualised form—if, *e.g.*, the sound, the shape of the metallic fragments, etc., be taken into account—all possible causes with the exception of dynamite will have to be excluded. If it be requisite to determine what quantity of dynamite caused the explosion, the effect must be inquired into yet more minutely and regarded in a more concrete form still. It is conceivable that if the effect were known in sufficient detail, we should be able to determine whether the explosion was caused by the dynamite receiving an impact or being chemically acted upon, etc. In fine, when the effect is taken in all the fulness and concreteness of its individuality, it cannot be denied that its cause can be only some one definite, absolutely individual complex of events.

It should be observed that the effect taken in its more abstract form—for instance, explosion in general—can also serve as a starting-point for inference. But, obviously, since the consequent is stated thus indefinitely the ground likewise can only be determined in correspondingly abstract fashion. From explosion in general there can be inferred an enormous surplus of pressure produced by some one body on its environment, as compared with the pressure of that environment upon the body. Since many universal aspects of events are still unknown to us, and universal concepts expressing them have not yet been framed, such inferences sometimes present a difficulty, but this does not mean that they are logically impossible.

For instance, it is highly probable that all the various causes of heat—friction, chemical reaction, the propagation of an electric current through a resisting medium, etc.—contain some identical universal element which is the true cause of heat; but as science has not yet succeeded in framing the concept which would give expression to that element, we cannot make the corresponding inference from the consequent to the ground (for inferring in a quite general way the presence of some kind of energy, etc., does not answer to this requirement).

Our analysis of these instances proves, then, that inference is impossible when from the consequent taken in an abstract form we want to pass to the ground understood in a more concrete sense. A consequent taken thus abstractly is merely a part of the total consequent that follows from a concrete and definite ground. It may, accordingly, be said that the examples used to prove the impossibility of inferring the presence of the ground from the presence of the consequent merely show that *it is impossible to argue from a part of the consequent to the complete ground.* They do not show that it is illegitimate to argue from a consequent in its totality to an equally concrete ground, or from a consequent abstractly conceived to a ground abstract to a like extent. The reason, then, that the traditional logic rejects inferences from the presence of the consequent is simply that it expects too much from them. Did it require as much from inferences from the presence of the ground, they too would be found to be impossible. It is illegitimate to infer the whole of the consequent from a part of the ground, or, speaking generally, to argue from an abstract ground to a

more concrete consequent. If I know, for instance, that some chemically pure water has been heated to 100° C., I cannot infer that it is boiling, for boiling depends upon pressure as well as upon temperature. A series of such examples would not prove that inferences from the presence of the ground are untrustworthy, and similarly the examples usually chosen do not prove that inferences from the presence of the consequent are invalid.

So far we have been trying to show that the traditional logic has no reason to regard inferences from the presence of the consequent as less trustworthy than inferences from the presence of the ground. That, however, is not sufficient; some positive proof must be brought forward to vindicate the validity of such inferences. We must, namely, seek to vindicate, as corresponding to the postulate that the same cause always produces the same effect,[1] the postulate that the same effect is always produced by the same cause. A postulate requires two kinds of proof—theoretical, usually speculative (the meaning of 'speculative' will be discussed at the end of this chapter), and practical. If the realistic theory of universals be accepted, the theoretical proof of the postulate in question will be very simple: the same act of intellectual intuition by means of which we became aware that every event has a cause guarantees that the same cause always has the same effect and that, conversely, the same effect always has one and the same cause. For, according to the realistic

[1] It should be remembered that, according to the doctrine of the immanence of objects in the process of knowing, the terms 'ground' and 'consequent' signify not only a logical but also a real relation—namely, any relation between elements of reality—which consists in one element being necessarily given if the other is also given.

theory of universals, the consequent (or the ground) which is exactly alike in various cases is literally one and the same, numerically identical, and cannot therefore have now one and now another ground (or consequent). The practical proof of the postulate is, from that point of view, also clear: without it science would be just as impossible as without the postulate that the same cause always produces the same effect. We can leave it for psychology and the history of science to determine why the traditional logic has not yet recognised the fact and has been content with one of these postulates only.

The postulate that the same effect has always the same cause leads to many consequences, all of which are of logical importance. Here I will refer only to two of them. The majority of *probable* inferences are inferences from part of the consequent to a more complete ground or from a part of the ground to a more complete consequent. All hypotheses are based upon inferences from a part of the consequent to a more complete ground, and in that sense a hypothesis is only probable. But every hypothesis contains elements that are absolutely certain, since inferences from a part of the consequent to a part of the ground are perfectly legitimate. As new information is acquired, a greater and greater number of elements of the ground become known with certainty, and thus, in time, the hypothesis may become an established theory.

In conclusion, I would add certain considerations in defence of the traditional logic. Granting all that has here been said, it might still be maintained that a distinction may be, and usually is, drawn between the *real* ground and the *logical* ground, and

that the rules of logic refer to the latter and not to the former. It makes no difference whatever to logic whether *A* and *B* refer to one another as effect to cause or as cause to effect; the rules of traditional logic merely assert that from the propositions 'if there is *A*, there is *B*,' 'there is *B*,' the presence of *A* cannot be inferred with certainty. But logic does not deny that the converse of the proposition, 'if there is *A*, there is *B*,' may sometimes be true, and that, in that case, by introducing the proposition 'there is *B*' we do obtain the conclusion 'there is *A*.' Logic cannot deny the possibility of such arguments, be it only because they are used at every step in mathematics. Take for example such propositions as 'the angles at the base of an isosceles triangle are equal to one another' and 'all triangles that have their angles at the base equal are isosceles.'

No exception can be taken to what is thus contended on behalf of the traditional view. The present writer is far from imagining that he has discovered a group of inferences which, in spite of their being extremely important for, and constantly used by, science, have been overlooked or rejected by logic. Logic has recognised them, but has offered a different interpretation of them. Our object is to modify the traditional interpretation; and, if that modification be justified, the result will be that the process of inference will acquire a more intelligible meaning. The ordinary interpretation must be modified, because from the point of view of an immanent theory of knowledge the *logical ground* is the *real ground* of its consequent; and, therefore, a transition can be made both from the ground to the consequent, and from the consequent (taken in its totality) to the ground.

Indeed, even for those theories that sharply distinguish the notion of a logical ground from that of a real ground, the modification I am proposing will have its value. There is a natural tendency to identify the *logical* connection of ground and consequent with the *real* connection of ground and consequent, and more especially with one species of it, namely, the connection of cause and effect. And influenced by the traditional rejection of inferences from the presence of the consequent to that of the ground, we are led to believe that the alleged illegitimacy is due to a discrepancy between the real cause and the real effect, and thus become involved in innumerable perplexities and misunderstandings. Moreover, the doctrine is generally so ambiguously stated in logical text-books that one cannot tell whether the real or the logical relation is meant. Sometimes, indeed, there is no ambiguity but obvious error, as for instance[1] in Mill's *Logic*, where an attempt is made to prove the law of the plurality of causes and to apply it to the theory of inference.

It may be contended that if the ground and the consequent have absolutely the same value for knowledge, it would be better to avoid the use of these terms altogether. It is a perfectly fair criticism. Such difference as does subsist between the two members of the necessary relation of ground and consequent is of metaphysical but not of epistemological importance. Were we to give up the traditional terminology, we ought in our theory of knowledge to speak, not of the relation of ground and consequent, but of the relation of functional

[1] For a recent illustration of the logical views in question in philosophical literature, see Gomperz, *Griechische Denker*, vol. i. p. 3.

dependence, and to consider the rules of inference, on the one hand, for cases in which one member of the functional relation is asserted or denied in full, and, on the other hand, for cases in which it is asserted or denied in part. Again, in dealing with judgment, we ought not to speak of the subject as the ground and the predicate as the consequent, for from the epistemological point of view the only difference between subject and predicate is that in a true judgment the subject is always a complete member of the functional relation, while the predicate may be an incomplete member of it. From this it follows, among other things, that for purely practical purposes—as a matter of convenience and of being able to decide at once from what premisses a conclusion may be inferred—the formulae of the traditional logic have been perfectly constructed. Correct inference from the presence of the consequent—*i.e.* an argument according to the second figure with two affirmative premisses—is only possible when the consequent is a complete member of a functional relation, that is to say, when the major premiss is convertible and the argument can be transformed into an inference from the presence of the ground, or, in other words, reduced to the first figure. It is useful thus to transform the argument in accordance with the traditional formula, for then it becomes evident that the consequent in question is a complete member of the functional relation: if it were not, it could not be made the subject of the judgment. Such verification is so important that it is not by any means advisable to venture, without further reflection, upon drawing inferences according to the second figure with two affirmative premisses,

even when the premisses are such as 'every equilateral triangle has the angles at the base equal' and 'the triangle *ABC* has equal angles at the base.' *Mutatis mutandis* the same considerations are applicable to inferences from the absence of the ground, *i.e.* to inferences according to the first figure with a negative minor premiss. Though such inferences are possible under certain conditions, it is not advisable to make them without first ascertaining that these conditions are really fulfilled.

IV

Indirect Inductive Inferences

I shall not consider all the various kinds of mediate deductive inferences, but only one very important group, which I propose to call that of indirect inductive inferences.

It is obvious that not all inductive proof can be based upon direct inductive inference, which rests on an immediate perception of the relation of ground and consequent. Empirical science encounters at every step relations so undifferentiated and so far-reaching that they cannot be detected by means of direct perception. How, for instance, could it be directly seen that in certain bodies there exists a relation between their specific heat and their atomic weight (the law of Dulong and Petit); or that, if a conductor recede rapidly from an electric current, a direct current will be produced in the conductor, whilst if it rapidly approach it, an inverse current will be generated? A man of genius may be capable of directly perceiving the relation in cases

such as these, but ordinary men, as a rule, fail altogether to notice it. Hence it is necessary for science to devise a method which can replace direct induction where the latter is impossible, and by which it can be controlled where it is possible. This method must of necessity be indirect, and consist in establishing the relation of ground and consequent between S and P on the strength of certain derivative properties of that relation—properties, for the detection of which no special talent is necessary, and which can be observed by anyone. A derivative characteristic of the relation of ground and consequent that will serve the purpose is not difficult to find: for example, the connection in time. Two groups of events that invariably co-exist (or one of which succeeds the other) in time, or that appear and disappear together in time, are related to one another as ground and consequent. It is sufficient to take one of these propositions as the major premiss, and, as the minor, a series of observations or experiments[1] which show that the given pair of events possesses the temporal characteristics required by the major premiss, and it follows deductively that the events in question really are related as ground and consequent.

Since here the connection between the S and P of the conclusion is not perceived immediately, the inference must be called *indirect*; since the minor premiss consists of observations or experiments similar to those which are present in direct induction, the inference must be called *inductive*. In general, these

[1] Selected in accordance with the method of agreement or the method of difference which corresponds to Mill's methods of difference and of concomitant variations.

inferences are simply a modification of mediate deductive inferences. Indeed, the circumstance that they can be reduced to the deductive type leads many logicians to imagine that no other elementary inductive methods are necessary, and on this ground they will reject the method of direct induction described in this chapter. But it should be specially noted that, in the vast majority of cases, indirect induction is only possible on the basis of what we have called direct induction. Not to speak of the major premiss, the origin of which will be discussed in the next section, even the minor premiss of an indirect inductive inference is usually established more or less by the help of direct induction. If the process of indirect inductive reasoning be expressed schematically, it will run thus: an event P is preceded by the complex of events ABS; to discover what elements of this complex are necessarily connected with the event P we must, by means of observation or experiment, find other instances, and so on. The complexes of the events that precede P, and answer to the requirements of the methods of agreement and of difference, are always very carefully selected when the inference is schematically represented on the blackboard of a lecture-room. The question is, however, how is that complex of events discovered in the actual investigation of nature? Every event P is preceded by the boundless multiplicity of events in the whole universe, and not by some one definite group of ABS.[1] Now, to examine all the events of the world is both impossible and quite superfluous, for one cannot experiment with the whole universe according to the method of difference, or discover in it a cause

[1] See, *e.g.*, Jevons, *Principles of Science*, pp. 739 ff.

according to the method of agreement. We must, then, pursue a different course, and, selecting from the whole universe a limited complex of events, investigate that complex in accordance with the requirements of scientific method. The world, however, is infinitely rich in content, and that complex cannot be chosen at random. Our purpose can only be attained if events which have obviously or apparently no connection with P are left out of account, and only such complexes are scrutinised which we *suppose* to contain the cause we are in search of. A clear perception of the absence of relation between some elements of the world, and, at the same time, a surmise about certain other elements being related, are *the necessary preliminary conditions* of indirect inductive inference, but they can only arise either from direct perception or from direct induction. It is useless to appeal to indirect induction in order to explain the minor premiss, for in that way the problem would not be solved but merely pushed a stage further back; and, indeed, that is not what most logicians do. As a rule, they admit that scientific inductive research is only possible on the basis of an already existing hypothesis or surmise in regard to the connection between the events;[1] but they do not inquire into the origin of this surmise. Nevertheless, Whewell had already asked how the cases required by Mill's inductive methods can be obtained, and Fonsegrive gives to this question very much the answer we are giving. This is what he says: "Every state of the universe consists of a complex group of events, not one of

[1] See, for instance, Sigwart, *Logik*, 3rd ed. vol. ii. p. 434 ff. Jevons, *Principles of Science*, p. 228 ff.

which may be left out of account by an observer who wishes to pursue the objective method of investigation so much praised and recommended by Bacon. It he overlooks or neglects any one element—for instance, if, when seeking to determine the cause of boiling, he takes no notice of the positions of Saturn and of Sirius, it means that he considers these positions to be irrelevant to the question upon which he is engaged. And yet, who knows but that Hume was right when he said that any one thing may produce any other thing? All the same, no one, I take it, would maintain that any man of science has ever considered all the objective elements to be of equal importance to his investigation. But the distinction thus drawn between the relevant and the irrelevant implies that all men of science consider their mind to be capable of immediately perceiving the distinction —which capacity, if rightly regarded, in no way differs from the process of abstraction necessary for the formation of concepts." [1]

V

Intellectual Intuition

The methods by means of which most of the various judgments that form the contents of human knowledge have been attained are not difficult to discover. There remains, however, a small group of propositions, chiefly consisting of the axioms and postulates, the origin of which may still occasion some misgiving. In point of fact, they, too, may be explained by the methods

[1] Fonsegrive, "Généralisation et Induction," *Revue Phil.* vol. xli. May, p. 530 ff.

already referred to, but the explanation requires that stress be laid on a certain peculiarity of the processes of knowing which has not hitherto been sufficiently emphasised.

All knowledge is based upon experience, *i.e.* on facts that are immediately given. These data are of two kinds—sensuous and non-sensuous; accordingly experience, and with it knowledge, may be either sensuous or non-sensuous (supersensuous) in character. As we have already insisted,[1] sensuous knowledge invariably contains non-sensuous elements; but at the primitive stages of cognition these are submerged by the sensuous data, which chiefly elicit attention. The more we seek to know the external reality as it is in itself, and not in its effects upon our body, the more we strive to abstract from the sensuous data and to let the non-sensuous elements of experience enter into the foreground. The *knowledge which consists in apprehension of the non-sensuous* I propose to call *speculative knowledge, or intellectual intuition* (the justification of this term will appear later). Since sensuous data, in so far as they are known, are always combined with non-sensuous elements, all knowledge and every method of thought is to a certain extent speculative. But I reserve the terms 'intellectual intuition,' 'speculative method,' 'speculative knowledge,' for denoting those cases in which knowledge requires complete abstraction from sensuous experience, and is positively hindered by it, and especially for indicating the cases in which knowledge is acquired by a kind of speculative experiment.

It follows from what has been said that each of the direct or of the indirect methods we have enum-

[1] See Pt. i. ch. iii. p. 95 *seq.*

erated may be speculative in character. Thus, for instance, knowledge of the Absolute or of God may be attained by means of direct speculative perception. The knowledge that a straight line is the shortest distance between two points is obtained by means of direct speculative induction, and the knowledge that two parallel lines never meet by means of indirect speculative perception.

Deduction has always been regarded as *the* speculative method. The reason is clear. In deductive inference the conclusion is obviously obtained without the help of the senses, and the speculative character of deduction is, therefore, specially apparent. But since more thorough analysis shows that speculative elements enter into every act of thought, we will not speak of all deductive inferences as speculative but of those only in which the whole content of the premisses, so far as it is significant for the conclusion, has a non-sensuous character; such, for example, as the deductive inferences of pure mathematics.

The best instances of intellectual intuition,—namely, of direct speculative induction and indirect speculative perception,—are afforded by the axioms and postulates.[1] These cannot be deduced from any other truths, for they possess far too general a character. Nor can they be proved, like ordinary judgments of direct induction, by reference to concrete particular cases, since the concrete and the specifically sensuous details prevent us from grasping truths of their generality. The way to convince

[1] I give the name of postulates to propositions that belong to the ultimate grounds of knowledge, and which are as necessary for the development of knowledge as the axioms, but which do not possess the same degree of self-evidence.

a person of the truth of an axiom or of a postulate is to avoid concrete examples, and to bring it before his mind in an abstract form, simply trying *to make it clear and to banish all misunderstandings* due to the circumstance that in concrete reality the true connection of events is concealed by a multiplicity of detail. The result of such explanation is an *immediate intellectual vision, or intuition,* by which the truth is apprehended with perfect clearness. Not unfrequently the apprehension is of the nature, so to speak, of a speculative experiment which brings to light aspects of reality that cannot be detected in sensuous experience—such as the truth that two straight lines bisect each other at one point only, or that parallel lines do not bisect each other at all even though produced to infinity. Even such truths as the law of causality, 'every event has a cause,' are recognised by us in all their universality only after an attempt has been made to think of 'an event in general,' as self-caused, as spontaneously arising in time without relation to the continuous stream of other events, and the utter impossibility of doing so has been realised.

The next chapter, which is concerned with the ultimate grounds of knowledge, will deal with the questions as to how far truths obtained in this way can be trusted, the errors to which they may readily enough be liable, and the criterion of their validity.

VI

Intuitionalism, Empiricism, and the Critical Philosophy in their relation to the Elementary Methods of Knowledge

The most difficult problem that a theory of the elementary methods of knowledge has to solve is that concerning the origin of universal and necessary propositions. The simplest and the most obvious way of obtaining such propositions is by means of the indirect method—namely, through deductive inference. But to do so one must already possess two universal and necessary propositions which require to be of the same degree of generality as the proposition to be deduced, and one of which most frequently has to be of greater generality than the conclusion. Hence it is clear that the ultimate origin of universal propositions cannot be explained by an appeal to deduction. Indeed, deduction can itself have no secure foundation, unless we can discover the source of some at least of the more universal propositions from which other propositions can be deduced.

The problem can only be solved in one of two ways. In the last resort, universal propositions must either be derived from experience by means of the direct methods of knowledge (direct perception and direct induction) or they must be present in consciousness previously to all experience, *i.e.* they must be *a priori* (logically if not chronologically). The first answer is that given by empiricism, the second—in modern times—by the critical philosophy. It has, however,

to be remembered that empiricism may be either individualistic or universalistic (intuitionalism), and that the account offered of the formation of universal propositions by means of the direct methods differs profoundly in the two cases. According to intuitionalism, universals have real being and are given in perception; the necessary relations between things likewise really subsist and are given in perception. Absolutely trustworthy necessary propositions can, therefore, be obtained by means of the direct methods. According to individualistic empiricism, on the contrary, universals have no real being, and all the data of experience are individual in the narrower sense of the term; the necessary relations between things are not given in perception, and the only relations that can be observed are temporal relations. Hence, it follows that there are no universal and necessary propositions in the strict sense of the term. Their place is taken by *registers*, based on direct perception, of the cases in which the connection between S and P has been observed, and on the habit, more or less established, of connecting the idea of new S's with the idea of P. Thus, it may be said that three answers have been given to the question as to the origin of universals:—(1) Universal necessary propositions are in the last resort obtained by means of the direct methods, more especially by direct induction (universalistic empiricism). (2) There are no universal and necessary propositions, but the illusion that there are such is due to the use of the direct methods—helped out, indeed, by a process of simple enumeration. (3) Ultimate universal and necessary propositions are given *a priori* (the critical philosophy).

The critical philosophy institutes a dualism, charac-

teristic of the traditional logic throughout, between the particular and the universal. Individualistic empiricism avoids this dualism, and cuts the Gordian knot by simply denying the possibility of universal propositions. Finally, universalistic empiricism removes the opposition between particular and universal propositions by showing that they both arise in a similar manner. The theories in question also differ profoundly in their account of inference. The critical philosophy does not recognise the independence of inductive inference, and reduces all inference to the deductive type. Individualistic empiricism (Mill's, for example) does not recognise the independence of deductive inference, and reduces all inference to the inductive type. Universalistic empiricism (intuitionalism) recognises the independence of both inductive and deductive inferences, admitting, however, that there is a variety of inferences which appear to resemble the inductive type, but which, as a matter of fact, are deductive in character (indirect inductive inferences).

Let us now examine somewhat more in detail the accounts offered by individualistic empiricism and by the critical philosophy of the formation of judgments and note their weaknesses.

In the opinion of Mill, experience consists entirely of subjective sensations, of individual mental states of the knowing subject, which are brought about by the action of external things upon the mind. He supposes, therefore, that the only relations between the empirical data that can be perceived are relations of coexistence, succession, and resemblance (the connection of ground and consequent being apprehended only in the form of temporal sequence). From

his point of view, there can certainly be no perception of the necessary relation of ground and consequent as such. And yet Mill is well aware that the aim of scientific inquiry is precisely to ascertain the necessary relations between phenomena, the relations of cause and effect. But if these relations are not given in perception, how are we to find the pairs of events that are necessarily related? Mill's answer is well known. The necessary relation must evince itself from the definite way in which the events are ordered in time (according to the rules of the four experimental methods), and can, therefore, be discovered indirectly from the temporal characteristics by means of indirect induction.

Mill's theory, then, completely ignores the necessity which attaches to singular judgments, *even on the occasion of the initial act of perception*,—the necessity which connects into kindred groups events individual in the narrower sense of the term, such as a chain of developing historical occurrences. It is, indeed, true that logic had hitherto generally ignored the problem of the ultimate origin of singular judgments, and had sought to account for the necessary relation between events only in so far as it appears as a law, and is expressible in a general proposition. Mill followed the same course, not only because he was chiefly interested in the *laws* of phenomena, but also because he was led to it by his theory of perception. Any thinker who denies that the necessary relations between things can be immediately perceived is inclined to suppose that this relation is manifested as a uniform repetition in time—*i.e.* in the form of a law—and that, therefore, even an individual event is nothing but a particular complex of simple pheno-

mena related in a uniform fashion. Let us, then, face this problem and ask whether Mill has succeeded in accounting, by means of indirect induction, for the validity of the laws of phenomena.

At the outset, be it observed, it was long ago recognised that the major premiss of every indirect induction, the law of the uniformity of nature, cannot itself be obtained by means of indirect induction. In order to account for its origin, Mill has to fall back upon the contention that previous to all scientific induction we come through habit into possession of a number of generalisations based upon the law of association of ideas,[1] and that they all lead to the generalisation that nature is uniform. All our knowledge of the laws of nature—even that obtained through scientific induction—turns out, then, to be no more than a system of habits which at best confirm one another, but at no point rest on anything more certain than habit. Mill's view leads, it is clear enough, to scepticism, and to scepticism of the most absolute and hopeless kind.

This side of Mill's theory has often been brought to light.[2] I should like, however, to add that not only does Mill's indirect induction hang in the air because the validity of the major premiss cannot be proved, but that it is utterly inapplicable because his theory precludes all possibility of making such particular observations and experiments as are necessary in order to establish the truth of the minor premiss.

[1] The reader must again be reminded that it is dangerous to appeal to habit and the law of association without being clear as to what is meant by habit and without knowing what the mechanism of association is.

[2] See, *e.g.*, Lopatin, *Die positiven Aufgaben der Philosophie*, vol. i. ch. 1.

In point of fact, as I have said already, every event is preceded by and is coexistent with the whole universe. A thinker who insists that the only relations given in perception are temporal relations cannot, therefore, possibly explain the reason why in making particular observations—*i.e.* in forming singular judgments—we select with such comparative ease out of the infinite complexity of the world just those groups of events which are really more or less related to one another. It is futile to fall back here again upon habit, for a habit can only announce itself when such a mode of selection has already become established, and when, through every new repetition of the event, attention is once more directed upon *what was selected in the first instance.* So far, however, the question as to the ultimate origin of singular judgments has been passed by unheeded, and our contention that the immediate perception of necessary relations is essential for the understanding of indirect induction will, on that account, probably not meet with acceptance. But there is no doubt that under the influence of the work of Windelband and Rickert on the historical sciences, the logic of the future will be forced to deal with the question.

There is no need to say much about the Kantian theory in this connection. Strange as it may seem, that theory suffers from most of the defects of the individualistic empiricism of Mill.[1] In order to vindicate the validity of scientific knowledge, Kant admits that there are judgments in which the necessary connection between the subject and the predicate

[1] Some interesting points of resemblance between the empirical and the Kantian conception of knowledge are noted by Lopatin, *Op. cit.* vol. ii. p. 141 ff.

is perceived; these are, however, only judgments expressing the *a priori* forms of our own cognitive activity, which are applicable to the most diverse empirical sense-data. Necessary judgments are, therefore, always either *universal* judgments or such particular judgments as are subsumed under them. According to Kant, then, necessity always appears likewise as a law, and it attaches, moreover, only to the *a priori* form, and not to the empirically given material. It is, thus, implied that we could, on the basis of immediate perception, form a necessary judgment about an empirically given content only if we could be immediately aware of the precise elements that are subject to such and such an *a priori* form. This would only be possible if not merely the universal forms of cognitive activity but also the concrete cases of their application were determined *a priori*. Had Kant recognised this, his conception of the elementary methods of knowledge would have differed in no essential way from that for which I am contending except in one respect,—according to the latter objective relations inhere in the things themselves, while according to Kant they have their source in the understanding. But, it has to be remembered, Kant did not venture to affirm that the whole structure of the phenomenal world was determined *a priori*. He was compelled, therefore, either to admit that the application of *a priori* syntheses to some rather than to other groups of phenomena must be determined *a posteriori* by the sensuous data themselves, or to connect the materials of sense and the *a priori* forms in some indirect way. We have seen [1] that Kant was constrained to follow the latter course and to connect

[1] See more fully Pt. i. ch. iv. pp. 151-6.

the data of sense with the *a priori* notions of the understanding through the form of time. In apprehending the empirical data, we are assured that they are necessarily related to one another in accordance with the categories, but we do not immediately perceive which elements are thus connected. In order to ascertain this, the temporal connection between events must be taken into account. Thus, for instance, in order to discover what empirical elements are connected causally, we must determine which of them fall under the schema of causality—and of it Kant says that "the schema of cause and of the causality of a thing is the real, which, whenever it is posited, is always (*jederzeit*) followed by something else."[1] Hence, the empirical judgments that are of value to science can be obtained only indirectly—by means of deduction—by showing, namely, that the temporal relations perceived correspond to the schema of this or of that category. Scientific judgments must, therefore, be obtained either *a priori* or deductively. Scientific induction is, accordingly, regarded by the Kantians as a mode of deduction,—that is to say, as an inference, the major premiss of which is the temporal schema of causality and the minor premiss of which is derived from observations and experiments which show that the given pair of events falls under the schema. So that Kant's view of scientific inductive inference will be seen to resemble in nearly every respect that of Mill, the chief difference being that the major premiss is taken to be not the result of habit, but an absolutely unalterable law of the understanding. By this, however, the theory of induction gains but little. A minor

[1] Kant, *Kritik der reinen Vernunft*, A 144 = B 183, Max Müller, p. 118.

as well as a major premiss is required for inference, but, as I have already shown, a thinker who denies the immediate perception of necessary relations cannot explain how, out of the infinite complexity of the real world, a selection is made of that particular complex which is to become the subject of the observations and experiments that furnish the minor premiss of an indirect inductive inference.

The penalty of disregarding the direct methods and the question as to the ultimate origin of singular judgments is that no real explanation of the indirect methods can be given. One of the strongest arguments in favour of our position is that it does account for the origin of singular judgments by showing that in the first instance they can only be formed through an immediate perception of the necessary relations between the elements of reality.

CHAPTER X

THE ULTIMATE PRINCIPLES OF KNOWLEDGE

At first sight it might appear as though the intuitional theory unduly simplified the process of knowing,—so much so, that were that theory true, all scientific problems ought to have been settled long ago, and science ought to have become a completed whole. In truth, however, as already indicated, this objection misses the mark. The intuitional theory merely calls in question the existence of such conditions as would render both scientific and practical knowledge utterly impossible (namely, the isolation of the self from the not-self, the impossibility of apprehending necessary relations and universals). Yet, even so, the process of knowing remains according to the theory no less difficult than it really is, for it consists in a differentiation of objects by means of comparison, and the differentiation is no light matter. The first judgments of perception, as likewise the first judgments of direct induction, possess so little scientific value that they cannot be classed under scientific knowledge. The usual content of these judgments is that ' something complex ' or ' this complex ' (the ' this ' being defined by external, spatial, and temporal characteristics) which has the property S, is P. Thus, a school-boy, watching certain experiments in the

physics class-room, notices that 'these elder-pith balls repel one another.' A peasant maintains that 'in windy weather the roads dry quicker than in still weather.' In such judgments, the aspects of the subject which furnish the necessary and immediate ground of the predicate are either wrongly ('elder-pith balls') or insufficiently differentiated out of the unlimited fulness of the subject's content.[1] In other words, in these judgments the connection between the predicate and the discriminated part of the subject is either too remote, *i.e.* derivative, or too incomplete. The knowledge they supply of the particular is too vague to satisfy us; and we certainly cannot take them to yield knowledge of the universal, for it is impossible to tell whether they have a general application. They have, therefore, hardly any scientific value. And yet, in so far as they give expression to particular facts, they are no less necessary than the axioms of mathematics.

These same judgments may attain greater clearness, and some of them may undoubtedly be ranked with universal judgments, if all the intermediary links between S and P, or all the elements which must be added to S in order to furnish the sufficient ground of P, become differentiated. In the first case, the judgment S–P appears as 'S–M . . .–P' (S is M, M is P), and in the second case as 'SA. . .–P'; the most satisfactory case being the case in which it can be shown that P is equivalent to a certain BC, so that 'SA is BC,'—that is to say, 'S is B' and 'A is C.'

Judgments become more and more complete as their objects are more and more differentiated. As a

[1] Concerning *the ideal of judgment*, see *supra*, pp. 264-8.

result of the process we are able—in a way that can be seen from the above scheme—to obtain deductively judgments which were at first established through direct perception or through induction. Thus we get 'these elder-pith balls are charged with the same kind of electricity; bodies that are charged with the same kind of electricity repel one another; therefore, these balls must repel one another.' 'In windy weather, the air saturated with moisture that rises from the road is driven away and replaced by drier air; in drier air evaporation is more rapid; in windy weather, therefore, roads dry more quickly.' After such a deduction the thesis attains greater clearness than before, and is, at the same time, more convincing and trustworthy. Strange as it may seem, even particular judgments, constituted originally through direct perception, undergo this mode of transformation and become thereby more convincing, so that it would seem we sometimes rely more upon deduction than upon our senses. For example, if water begins to boil at an ordinary temperature, we may not believe our own eyes until we are told that this water is under a pressure of twenty millimetres. When, therefore, science passes from the inductive to the deductive stage, it may be said to pass to a higher stage of development in the sense that its statements become more scientific, more reliable. If a science—such as physiology—cannot yet attain to that stage of development in the same way as, for example, astronomy has done, attempts are made to render it more deductive in character by introducing those methods of inductive research which in the last resort turn out to be a species of deduction (indirect induction). Hence, we are easily led to suppose that deduction is the

only right method of logically establishing the validity of judgments, and that only what is proved deductively is proved logically.

The pre-eminently trustworthy and logical character of deduction is usually explained as follows. Deductive inference (at any rate in the first figure of the syllogism) is based, it is urged, solely upon the logical laws of thought. Knowing that '*S* is *M*' and that '*M* is *P*,' we are led by the law of excluded middle to seek the truth only in one of the two judgments, '*S* is *P*' or '*S* is not *P*'; in accordance with the law of non-contradiction we seek it in one only of these judgments, and, following the law of identity, find it ultimately in the judgment '*S* is *P*.' The whole force of the compulsion exerted by the logical laws of thought, and that force alone, compels us to recognise the conclusion as true;[1] it follows from the premisses with analytical necessity. This is the reason, it will be contended, why a thesis proved deductively is more certain and even, it would seem, of greater clearness than the same thesis obtained by direct induction or even (sometimes) by direct perception.

Did this explanation correspond with the truth, it would mean, from our point of view, that the indirect methods which are based upon an indirect perception of relations are more convincing than the direct methods which are based upon a direct perception of relations. A consequence so paradoxical would furnish a strong argument against the intuitional theory. We must, therefore, inquire more closely why it is that a thesis proved inductively or

[1] This view of deduction has already been criticised in the preceding chapter.

by direct perception is less clear and certain than when proved deductively. The answer to this question has been already indicated. If *one and the same thesis* can be proved both deductively and by means of the direct methods, there is a presumption that in it the connection between S and P is not ultimate but derivative, either in the sense that S gives rise immediately to M, which is the cause of P, or in the sense that the events S and P are complex ($S=AB$, $P=CD$) and the connection between them can be resolved into the relations between their elements (A–C, B–D). Accordingly, when such judgments are attained by the direct methods what it comes to is that only the extreme links of a more or less long chain of events have been grasped, or that the connection between the complex wholes has been apprehended but vaguely, because their component parts were not distinguished. It is obvious, then, why, after deductive proof, such judgments acquire greater certainty; to deduce them means to follow up all the intermediate links between S and P, and to exhibit all the connections of the parts of S and P, so that for judgments of this kind deduction is, so to speak, *a more direct method* than induction. In deducing them we do not omit any of the stages, but trace the relation gradually and obtain a more comprehensive description of the reality than could be given by a direct statement of the presence of S and P. But it should, of course, be remembered that the relations into which in induction we ultimately resolve the judgment S–P, are, *in the last resort*, always established by the direct methods, so that the convincing and certain character of the deduction is *derivative*. It depends wholly upon the

trustworthiness of the direct perception of the ultimate, *i.e.* of the simplest and most immediate, relations between the events, which relations cannot be deduced from anything else.

The objection will no doubt be pressed that, although the analysis of a complex event into its simple components in deductive inference renders the conclusion clearer, it does not make it more certain. The greater certainty of the conclusion depends, it will be said, upon the logical structure of deduction; it is due to the fact that the conclusion follows from the premisses with analytic necessity. And the premisses in their turn, it will be urged, in order to be quite trustworthy, must have been obtained in a like manner, or belong to the class of judgments in which the predicate follows from the subject with analytic necessity.

The conviction that analytic necessity is the supreme test of truth is still firmly rooted in the traditional logic, and it is precisely this conviction that I am concerned to call in question. Expressed in other words, it amounts to this: *the logical ground* for recognising a judgment as necessary lies solely in the compulsion exercised by the logical laws of identity, contradiction, and excluded middle. The compulsion arises when a given judgment cannot be denied without violating the logical laws of thought, but can be affirmed in full accordance with them. Here it is evident that the only element of thought recognised as specifically logical is the perception of identity or of difference, and that, therefore, the logical ground is found solely in identity or difference. Reason itself turns out to be merely a function of discerning identity or difference.

The profound difference between this, the rationalistic, way of conceiving knowledge and the intuitional view will come to light in the next chapter, where the results of our whole inquiry will be drawn to a head. At present I am only trying to show the untenability of the rationalistic position in respect to the ultimate criterion of truth.

I do not dispute the primary importance of the logical laws of thought as a criterion of falsity. But as a criterion of truth they are only applicable in the case of those judgments in which the predicate follows from the subject (or from the premisses) with analytic necessity. This is the reason why Kant confined the significance of the law of contradiction as a positive criterion of truth to the sphere of analytic knowledge.[1] Yet if it be recognised, and I do recognise, that every judgment has a *synthetic aspect*,[2] the significance of the logical laws of thought will evince itself as still more limited. Indeed, it is not hard to show that they are altogether an insufficient criterion of truth, for they require a starting-point in order to possess any force at all. That is to say, they can only be applied where an already established truth is present—a truth which must, therefore, be recognised as such on the strength of some other, more fundamental, and really supreme criterion. The identity and the absence of contradiction *which compel us to accept* a given judgment can only be constituted in relation to a truth which has been already firmly established. Hence it is clear that an ultimate truth or ultimate truths cannot be discovered simply by means of perceiving identity or absence of contradiction.

[1] Kant, *Kritik der reinen Vernunft*, A 59 = B 84, Max Müller, p. 47.
[2] Cf. *supra*, pp. 238-40.

The ultimate truths, to which the new truths must conform in accordance with the laws of identity and contradiction, are, in the last resort, the axioms (and postulates), the definitions and the judgments of direct perception. When we demonstrate, for instance, the theorem that the sum of the angles of a triangle is equal to two right angles, we conclude that this proposition must be true, because the denial of it would contradict the axiom that 'things which are equal to the same thing are equal to one another.' Yet, it is indisputable, that the law of contradiction is not in this case the supreme test of truth. Taken along with the other logical laws of thought it merely tells us that we cannot at the same time affirm the axiom and assert that the sum of the angles of a triangle is not equal to two right angles. We must accept either the first of these positions (and then the sum of the angles of a triangle is equal to two right angles) or the second (and then things which are equal to the same thing are not equal, or, at any rate, not always equal to one another). There is contradiction only so long as we take both assertions to be true, but the contradiction disappears when we either deny the axiom or the proposition that the sum of the angles of a triangle is not equal to two right angles. Hence, it is clear that although the laws of identity, contradiction, and excluded middle *compel us to choose* between the two assertions, they are *unable to indicate which assertion we must adopt.* To determine where the truth lies, another and more ultimate criterion is needed. In the particular case before us its deliverance is so obvious that we at once elect to abide by the axiom. We take the truth of the axiom for granted; and, therefore, imagine

that in the course of our thinking we have used no other test than the three logical laws of thought.

What is it, then, that compels us in the case of a conflict to side with the axioms ? It will perhaps be contended that the truth of the axioms is also determined by the three laws of thought, seeing that the denial of an axiom inevitably leads to *contradiction with the data of experience* obtained by direct perception. There is no need to examine this contention in detail, for it commits the fallacy just indicated. Contradiction between a proposition which denies an axiom and the judgments of direct perception compels us to side with the one or the other, but does not in any way show *which* side we ought to choose. For that a higher criterion is needed. In the case of a conflict between propositions which deny the witness of perception and propositions which give expression to it, this supreme criterion speaks so decidedly in favour of the judgments of perception that we accept them as true without any hesitation and *without asking even what makes us do so.* But what is it that compels us in the case of a conflict between a judgment of perception and the denial of such a judgment to side with the judgment of perception ?

Furthermore, those who believe the logical laws of thought to be the supreme test of truth may maintain that not only must the conclusions follow from the premisses with analytic necessity, but that the premisses themselves must, in the last resort, be analytic judgments which cannot be denied without self-contradiction. Their denial would mean a conflict between two propositions, one of which violates the laws of thought and is, therefore, absurd, and

the other of which, in virtue of those very laws, is true.

As against this contention, it must once more be emphasised that every judgment without exception is, on the one hand, analytic and, on the other hand, synthetic (in relation, namely, to the differentiated aspects of the subject).[1] In so far as all judgments are synthetic in character, their truth cannot be established by the logical laws of thought. In so far as they are, in our sense of the term, analytic in character (understanding by the subject all the fulness of reality given in perception and still undifferentiated), the law of identity is, to a certain extent, a criterion of their truth. To this we will recur later, when our view of the criterion of truth has been fully stated. Meanwhile, let it be granted, for the sake of argument, that our opponents are right and that purely analytic judgments as opposed to synthetic judgments are possible. Even in that case, it would be necessary to admit, in addition to the logical laws of thought, the existence of some other criterion of truth. Analytic judgments cannot lead to synthetic conclusions. Yet, as Kant has shown, synthetic judgments undoubtedly constitute part of our knowledge; so that, at any rate, for them there must exist a criterion of truth other than the logical laws of thought. Moreover, such a criterion is necessary for analytic judgments themselves when they are categorical and not hypothetical. The subject of every categorical judgment '*S* is *P*' comprises within it two judgments. One of them (an existential judgment) affirms the reality (and not merely the hypothetical character) of a certain object

[1] See *supra*, pp. 238-40.

not yet defined ('something is'), and the other (an impersonal judgment) characterises this object as *S*. A similar character must be possessed by the subjects of categorical analytic judgments. The predicate of these judgments is confirmed by the laws of identity, of contradiction, and of excluded middle, in the sense that it must be identical with, and not contradictory of, *the subject*. And this implies that these laws can only come into operation and supply us with a categorical proposition when the subject has already been determined as actually (and not hypothetically) existing, and existing in this or that particular way. The procedure entails, however, the implicit recognition of some criterion of truth other than the logical laws of thought. It is only for hypothetical analytic judgments, such as 'if *AB* exists, it is *B*,' that no test of truth is necessary beyond the logical laws of thought. And it is obvious that merely a hypothetical system of knowledge could be based upon judgments such as these.

The question then arises, what is the criterion of the truth of analytic judgments (it being granted that purely analytic judgments are possible), if these judgments are to be categorical and not merely hypothetical? The question would not be of much importance were it not for the fact that the ultimate grounds of knowledge include definitions as well as axioms and judgments of direct perception. The two latter are undoubtedly in the vast majority of cases synthetic propositions, but definitions can be advantageously treated as purely analytic propositions. Yet categorical definitions which alone can lead to categorical conclusions, even if they are purely analytic, must, as has just been shown, rest upon a

basis different from the logical laws of thought. We have, then, to ask what is the criterion of the truth of definitions, if they are to lead to categorical and not merely to hypothetical knowledge ?

It should be noted that those thinkers who take deductive inference to be the sole strictly logical method of proof have likewise to face the three questions we are here pressing,—the questions, namely, concerning the criterion of the truth of axioms, of judgments of direct perception, and of definitions. We have, however, to determine, further, the criterion of truth which lies at the basis of direct induction and of indirect perception.

To all these questions we have already returned an answer : our whole treatise, from the first chapter to the last, is but an attempt to work out the answer in detail. We need now simply recapitulate our results. If truth be neither *a copy* of the real world, nor a *symbolic* reproduction of it, nor an *appearance* of the real world determined by the laws of cognitive activity, if it be the *reality itself* in so far as it is discriminated, there can be no other criterion of truth than the *presence* in the act of knowing *of the reality to be known.* There can be no doubt of its being present if the content of knowledge is ' given ' to me and is not produced by an activity felt by me to be ' my ' own subjective effort,[1] if the content of knowledge develops of itself in the act of knowing and I merely *follow it,* concentrate my attention upon it and discriminate it by means of comparison.

Since we are not in a position to grasp the whole of reality at once, but invariably discern only some one or other of the aspects necessarily belonging to it,

[1] See *supra*, p. 228.

our knowledge inevitably takes the form of the judgment, *i.e.* the form of a predicate connected with a subject in accordance with the law of sufficient reason. The criterion that the subject really does furnish a sufficient reason for the predicate is again the presence of the necessary connection between them, given in the act of knowing.

The validity of all judgments—whether obtained by direct perception or by direct induction, by indirect perception or by deduction—depends upon the presence in the judgment of the reality to be known; universal judgments being, from this point of view, only possible on the assumption that universals exist (conceptual realism). The structure of knowledge presupposes that reality is one interconnected whole of such a character as to render it necessary for ontology to frame a conception of time and space that will render explicable how the world can be a unity in spite of its events being temporally and spatially external to one another.

If the presence of reality in knowledge is indeed the supreme test of truth, it might have been expected that philosophers would have discovered its presence there long ago, although different thinkers would interpret and describe it differently in accordance with their conceptions of truth and of knowledge. As a matter of fact, the expectation can be said to be fulfilled. What is the *self-evidence* which Descartes took to be the supreme test of truth other than the criterion we have been contending for? But although Descartes had in view the same fact, his *theory* deprived it of all its epistemological value. Since truth, as he conceived it, is a *copy* of reality, made up of the mental states of the knowing subject, he was compelled

to regard self-evidence as *subjective feeling*. Yet no subjective feeling can ever guarantee that the subject's judgments are *correct copies* of a reality external to him.

In the same way, Spencer's criterion of 'the inconceivability of the opposite,' if it is to be consistent and to have epistemological value, must be taken to mean the actual presence of reality in experience. If I see that 'a book is on the table,' I can still conceive or imagine that 'there is no book on the table.' But I do not accept the latter as a true judgment because I am conscious that it is arbitrary, a product of my subjective activity. So that the test of truth in this case is not merely 'the inconceivability of the opposite,' but the inconceivability of an opposite which could have any *objective significance* and stand over against me as something independent of my *subjective activity*. And this implies that we have not only a negative but also a positive criterion of truth, which latter is exemplified in the first judgment previous to any denial of that judgment —namely, the presence of the content of the judgment independently of 'my' subjective activity.

The criterion of truth of the neo-Kantians, Windelband and Rickert, which consists "in the obligation (*Sollen*) to unite the presentations in a certain way," has been dealt with in a former chapter,[1] and there is no need to discuss it further.

We possess an infallible test of truth, and yet what we call our knowledge is full of errors. The fault is our own. Under the influence of emotions, habits, thoughtlessness, etc., we repeatedly accept propositions (or, rather, combinations of ideas) as true which are in obvious conflict with the criterion of truth.

[1] See *supra*, p. 246 *sqq*.

Or, at other times, we do not refrain from forming a judgment, although, owing to the content being still undifferentiated, the criterion gives no definite indication as to the truth of such judgment, or at any rate as to the truth of some part of it. If these are the sources of error, it may be said with certainty that honest seeking almost always leads us ultimately to the truth, although it may not be the complete truth. In order to become perfectly true, our judgments usually stand in need of much correction, or, more frequently, of limitation or expansion. And the history of science entirely confirms these reflexions.

Especially when the content of a judgment is complex it may readily happen that some superfluous element is added to it, or that, on the contrary, some necessary element is overlooked. Particularly troublesome are the cases—very often met with—when one and the same verbal expression of a complex proposition stands in the mind of one person for some one definite content and in the mind of another for a content somewhat different. In such cases, the one person will often affirm the proposition with a full sense of the objectivity of his affirmation, whilst the other will deny it with an equally clear consciousness of the objectivity of his denial. The possibility of such a conflict in no way detracts from the value of the universal criterion of truth. For the opponents are not talking about one and the same thing, but about two different things. Were they to analyse the complex content of their judgments they would see that they were both right—or that one of them was wrong in the sense of speaking of what was not in any way relevant to the matter under discussion.

This source of error in complex judgments is familiar

enough. But as it throws a great deal of light on the nature of axioms and on the process of their evolution, we will linger on the subject a little longer and cite the case of a conflict which has long ago been settled by science and which has been handled in philosophical literature. In the time of Columbus some persons admitted the existence of the antipodes and others denied their existence. To us the denial is perfectly intelligible. In speaking of the antipodes the opponents of Columbus imagined men subject to the action of a force which pulled them away from the earth's surface and which, therefore, made their remaining on the earth impossible. It is obvious that *such* antipodes are as unthinkable now as they were then, for the fall of the people from the earth's surface clearly arises before the mind's eye and is an inevitable consequence of the premisses assumed at the start.[1] And indeed, strictly speaking, many persons of the present day, who cannot help imagining the people at the antipodes as men who are underneath us, have not really grasped the new conception. If they were true to the content of their ideas, they ought to return to the denial of the antipodes. Only those who clearly realise that the feet of the people at the antipodes cling to the earth, so to speak, with the same force as our feet do, can be said to hold the scientific view and to have banished the idea that the people at the antipodes walk with their heads downward. In this case, again, the representation we form of the antipodes is the inevitably present consequence of the premisses on which we have been proceeding.

[1] Cf. Lopatin: *Die positiven Aufgaben der Philosophie*, vol. i. pt. B, p. 71.

It is, then, clear that when there is a conflict between two complex conceptions, the criterion of truth cannot give us any definite indication so long as each concept is taken as a whole, in a rough and undifferentiated form. But if the concepts in question are analysed into their elements, it will be seen that in the one case the force of gravitation is thought of as directed towards the surface and the centre of the earth (the vague idea of ' below ' being thus differentiated), and in the other as directed outwards from the earth's surface. And it becomes at once apparent that the content of the first idea is *objectively present*, whilst the content of the second has been *arbitrarily* brought by us into relation with the given facts. The consequence of this second idea is therefore (to some extent) a result of *our own* activity and not of the reality itself which is there to be known.

From the same instance it is likewise evident why judgments of direct perception are not alone sufficient for knowledge. In most cases the content of the reality apprehended turns out to be so complex that we cannot clearly discriminate all the elements and relations of it at once,[1] and we run the risk of taking for objective reality the products of our own creative imagination and subjective relating activity. If, then, even judgments of direct perception cannot, without further elaboration, be relied upon, predictions based solely upon them must be still more untrustworthy, although, in the form of an indirect perception which anticipates what lies beyond the directly apprehended reality, they are quite possible. In order, therefore, to discriminate with perfect definiteness what elements of the real world are actually

[1] Cf. Introduction, pp. 6-13.

before us, and in what relation, it is necessary to analyse reality to its inmost depths, making the differentiation more and more complete, and thus helping to free the objectively given content from subjective additions. A differentiation of the contents of direct perception results in the judgments of direct perception being broken up into simpler judgments (those of direct induction). In this way we ascend from particular judgments to judgments that are more and more universal. When a considerable number of universal judgments have been accumulated, we can work back again to the particular judgments, and reconstitute them out of the universal judgments, *i.e.* deduce them. Thus, our differentiated knowledge arises out of the undifferentiated and serves, in its turn, as a means of verifying the latter in accordance with the laws of identity, contradiction, and excluded middle. Such verification is easy in the case of those sciences which possess a sufficient number of propositions of a high degree of generality, the contents of which are clearly differentiated, sharply distinguished from all superfluous additions, and recognised as unquestionably real. Axioms are of this nature. Owing to the last-mentioned characteristic, they afford a reliable means of verification, and owing to the first (their high degree of generality) they possess a wide sphere of application ; expressing as they do an extremely comprehensive aspect of the real world, they form a component part of innumerable particular judgments.

It is often necessary to limit the sphere of reality under investigation as well as to analyse the complex contents of perception. Finding that every single aspect of the world—the aspect of its spatial relations,

for instance—is infinitely rich in content, we select for detailed study certain strictly defined complexes only. Thus, for example, we set out to consider spatial forms which possess the characteristics *abc*—plane figures inclosed by a curve, all the points of which are at an equal distance from a certain point within the curve. Propositions which express the characteristics of a group of facts constituting the single whole selected for investigation are called *definitions*. Of course, the definitions here referred to are those which form the starting-point of scientific research, and not its final result. Along with the judgments of direct perception and the axioms, they belong to the ultimate principles of knowledge. If some result of our investigation turns out to be, according to the laws of identity, contradiction, or excluded middle, incompatible with our definition, we discard that result in exactly the same way as if it had conflicted with an axiom. Now, what is it that gives such force to definitions—why are we so certain that truth is on the side of the definition and that whatever contradicts it must be rejected? A special treatise might be devoted to this question, but as the answer to it follows directly from all that has gone before, I venture briefly to summarise it.

Definitions are laid at the basis of a science either when we know for certain, from direct perception, that *there are* things possessing the characteristics *abc*, and we intend to inquire into their other aspects, or when we *arbitrarily assume* the existence of a thing *abc* and want to ascertain the necessary consequences of that assumption. In both cases we naturally reject everything that contradicts the definition. In the first case, the truth of the definition is proved by

the actual *presence of the reality*. In the second, it is *the purpose* we have in view that compels us to side with the definition—the interest, namely, in the consequences that follow from our supposition rather than from any other. It is obvious that a science which is founded upon such arbitrary definitions bears a *hypothetical* character.

The criterion of the truth of the ultimate principles of knowledge is not, then, their analytic necessity but the actual presence (the givenness) of reality in their content. This may perhaps be granted so far as judgments of direct perception and definitions (excluding the hypothetical ones) are concerned, but some doubt may be felt in regard to the axioms. It seems impossible that axioms should arise in a way similar to and in as simple a manner as all other judgments. But, according to the view we are taking, axioms are not *a priori* laws or innate truths implanted in our souls by God. They differ from other judgments of direct induction or of indirect perception merely by the fact that their content, in spite of its extreme generality, stands out before our mental eye with perfect definiteness, freed from all foreign admixture; if we fix attention on the subject of the axiomatic proposition, the predicate is at once, without the help of any particular instances, clearly seen to follow from it actually and necessarily.

We may be told that in that case axioms contain no absolutely certain knowledge and may suffer from the defects and even errors usually found in judgments of direct induction and of indirect perception; and that, indeed, axioms cannot then be sharply distinguished from other judgments, since there must be many forms of transition between

them which would render the drawing of a clear line of separation impossible.

The objection, however, entirely supports our position. Axioms are, as a matter of fact, in no sense free from the defects and errors characteristic of judgments of direct induction and indirect perception. It is also true that no sharp line of demarcation can be drawn between axioms and other judgments. Let us first consider the former point. As we have seen, the mistakes most frequently met with in judgments of direct induction and of indirect perception are mainly of two kinds. Either the subject is incomplete and the judgment is, therefore, much too general in character, or, on the contrary, the subject contains superfluous elements and the judgment is, therefore, too narrow. The first kind of mistake arises as follows. Suppose that every real entity, in so far as it contains the elements SK, possesses the property P, so that the truth is expressed by the judgment 'every SK is P.' Suppose, further, that owing to certain conditions of the process of comparing, K is one of those aspects of reality which are specially difficult to discriminate. In that case, it may well happen that in thinking of the reality SK we shall characterise it by the property S only, *i.e.* we shall form too wide a judgment, 'every S is P.' And yet this judgment will appear to be absolutely convincing, for, in making S the subject we add K to it in an undifferentiated form; and from the union of S and K, P really does follow of necessity. The second kind of mistake arises in the following way. Suppose that every real entity, in so far as it contains the element S, possesses the property P, so that the truth is expressed by the judgment

'every S is P.' Suppose, further, that in our experience S is almost always found in conjunction with K. In that case, we are in danger of overlooking the fact that K is a superfluous element and of insisting that 'only SK is P.'

It is much easier to observe that a superfluous element has been added to a judgment than to notice that a necessary element has been conceived only in an undifferentiated form. A mistake of the second kind is, therefore, not likely to be often found in axioms, whilst mistakes of the first kind are extremely prevalent. *It is doubtful, indeed, if there exists a single axiom, and more especially a single postulate, that is free from them.* In support of this assertion, I will quote one instance of the defect in question which the progress of science has brought to light. The axioms which lie at the basis of Euclid's geometry were for a long time stated without any reservations; but at the present day it is necessary to state them with the qualification that they hold only for a three dimensional space with a constant curvature $=0$. This reservation, which renders our knowledge more exact, is not of merely formal significance. Indicating, as it does, the limited character of our knowledge, it has opened out wide spheres for fresh investigation, the result of which constitutes the content of new sciences which may in their turn be transcended, so that the geometry of Euclid ranks among them only as a particular branch of a much more general science.

Similar changes are even more likely to arise in the case of the complex postulates of physics and chemistry,—of the laws, namely, of the conservation of matter and of the conservation of energy. These laws do not possess the same degree of self-evidence

as the mathematical axioms, and are, therefore, better described as postulates. But in the physical sciences they play the same part as the axioms, and they can only be established in the same way as the latter,—that is to say, by means of direct speculative induction or indirect speculative perception. Consider from this point of view the postulate, for instance, of the conservation of matter.

Superficial unscientific observation, guided by the sensuous properties of things, does not in any way confirm this postulate. To vision or touch, matter often seems to disappear or to arise *de novo*. Scientific investigation, guided by the derivative indications of the conservation of matter, is also unable to prove this postulate, simply because in each particular instance the conservation of a material substance *A* cannot be established by means of weighing, unless the conservation of some other material substance *B* be presupposed.[1] And yet the postulate is almost as ancient as philosophy itself. How, then, did human reason hit upon it, and what is the ground of its certainty ? Further consideration of the question clearly shows that the truth of the postulate has come to be realised by means of intellectual intuition. Particular instances, such as the fact that the material substance of a burnt tree is preserved in the form of gases, vapours, and ashes, merely help us to disregard the evidence to the contrary obtained from touch and vision. But the certainty that the postulate is universal and necessary does not arise until, after a thorough differentiation of the real world, we represent generally to ourselves material substance as such, *i.e.* as something impenetrable

[1] Cf. Spencer, *First Principles*, Pt. ii. ch. v.

or resisting, and follow out its properties. It then becomes manifest that, whatever forces may act upon this substance, it will always remain *real*, although it may disappear from *a given place*, or be split up into parts. And if pressure is applied to it on all sides and it is impossible to move it elsewhere, its power of self-maintenance, *i.e.* its resistance, appears to be immeasurable.

The intuition by means of which a judgment of this sort is obtained is of a very crude and elementary kind: it operates with the help of complex undifferentiated ideas,[1] and some elements that are of importance may likely enough be overlooked. The confidence we have in the postulate certainly shows that the intuition possesses some degree of truth—as, according to our theory, almost all intellectual intuitions do—but it may require to be supplemented, *i.e.* limited. And, indeed, when we call to mind the various practical, scientific, and philosophical arguments which convince us of the indestructibility of matter, we notice that they always imply *physical* forces *external* to the particle of matter upon which these forces act. But, under such circumstances, we are only entitled to affirm a much narrower truth than the postulate

[1] Spencer in *First Principles*, Pt. ii. ch. v., propounds a very artificial theory of the basis of this postulate. He connects, namely, the law of the conservation of matter with the law of the relativity of thought. This, I take it, is palpably a false step, for consciousness and the material world are certainly not connected with any such degree of immediacy as he supposes. At all events, the error in Spencer's argument is obvious. He maintains it is inconceivable that the one member of the correlation should disappear, because in that case thought could no longer exist. But he does not see that the material member of the correlation might become spiritual, and that then the correlation, and, with it, thought, would be preserved, although matter would disappear.

usually accepted in science—to affirm, namely, that a particle of matter is indestructible by the force of other material particles external to it. In that case, there is not the least contradiction in conceding at the same time the destructibility of material substance, especially if one is committed to a dynamic theory of matter. It is conceivable, for instance, that at a certain stage in the evolution of matter, the activity of repulsion, of the exclusive self-maintenance that produces spatial externality, may either spontaneously or under the influence of external non-material forces be replaced by other activities. The spatial world, or a part of it, would then disappear and exhibit itself as merely a phase in the evolution of the universe. The speculative intuition which convinces us that matter cannot be destroyed by means of impact or pressure bears no witness to the impossibility of matter being destroyed in other ways. I do not mean, of course, that matter may be replaced by mere *non-being*, but simply that material forces may be *transformed* into some other mode of reality. In other words, the rejection of the postulate of the indestructibility of material substance by no means involves a rejection of the far more general postulate of the indestructibility of reality in general. So that if, in time, the law of the conservation of matter comes to be rejected, it will not wholly disappear; it will be replaced by two other postulates—one more particular and the other more general—both of which were already contained in it in an undifferentiated form. It is not to be wondered at that at a certain stage of scientific development it should have been taken to be an adequate expression of the truth. At the stage when the scientific consciousness supposed

all reality to be material, it was, indeed, inevitable that the postulate of the indestructibility of reality should take the form of the law that ' material reality is indestructible.'

The instances given are sufficient to indicate the defects which are undoubtedly to be found in the scientific axioms of the present day. Other instances need not be cited. But, in conclusion, let me refer the reader to the axioms of mechanics,[1] which may undergo an evolution similar to that undergone by the axioms of geometry,—a surmise which is strengthened if it be remembered that *external* forces of impact and pressure can only act in a certain relation to the *inner* forces of the body upon which they exert influence.

An evolution of the axioms is, then, both possible and even necessary. Opening out before us wide vistas of a similar evolution in the sphere of science, it justifies our hope in the possibility of a scientific knowledge of ' other worlds ' than the world in which we are now living, and of the gradual adaptation of our individuality to that wider whole.

[1] Cf., for instance, the formulation of the law of inertia in an article by G. Kleinpeter, in the *Archiv für Philosophie*, ii. Abt., vi. B., 4. Heft, 1900.

CHAPTER XI

THE CHARACTERISTIC FEATURES OF THE INTUITIONAL THEORY

THE intuitional theory rejects the false assumption that lies at the basis of the empirical, the rationalistic and the critical theories of knowledge,—the assumption, namely, that the knowing subject is isolated from the known object. This assumption, ignoring, as it does, the source from which most of the materials of knowledge are derived, leads to one-sided views, which, in order to solve the problem of knowledge, exaggerate the importance now of one, now of another, subjective activity. Thus, empiricism exaggerates the importance of sense, rationalism of reason, the critical philosophy of the structure of the cognitive faculty as a whole (sensibility, understanding and reason). The intuitional theory would discard the false assumption and thus liberate epistemology from these one-sided views. In relation to the older ways of thought, our theory is chiefly characterised by the fact that it rejects their negations, but preserves their positive contentions, and seeks to supplement the latter by new truths. It would not, then, overthrow the old systems, but aim rather at bringing them to life again in a new form; it would free them from the old exclusiveness, and so prepare a way for their reconciliation and union.

The intuitional theory does not, in fact, attempt to solve the questions in dispute in favour of this or that particular theory. It goes further. It attempts to remove the very ground of dispute by showing that it is based on a misunderstanding, and that each of the disputants is partly right and partly wrong. Among the more important points of dissension thus dismissed are the antitheses between knowledge and existence, the rational and the non-rational, the *a priori* and the *a posteriori*, the universal and the particular, the analytic and the synthetic. Let us look at each of these in turn.

Individualistic empiricism, pre-Kantian rationalism, and the critical philosophy institute an impassable gulf between knowledge and existence. The critical philosophy, it is true, closely connects phenomenal reality with the process of cognition, but it does so at the expense of subordinating existence to knowledge, —that is to say, by resolving phenomena, or the world of our experience, into processes of knowledge.[1] The post-Kantian idealism reconciles knowledge and existence in a similar manner: it either directly maintains or is inclined to maintain that existence is nothing else than an evolution of thought. Now, according to the intuitional theory, knowledge is neither a copy, nor a symbol, nor a phenomenal appearance of the real world in the knowing subject, but is *reality itself*, life itself, which has simply become differentiated by means of comparison. The antithesis between knowledge and existence is thus removed, without in any way detracting from the rights of existence. In common with other theories, the intuitional theory recognises that *knowing* as a

[1] Cf. Pt. i. Ch. iv.

process is an existence in the sense that it is an actual fact. But, in contradistinction to other theories, it affirms, in addition, that knowledge *contains* within itself *existence* as an element, which as such, *i.e.* apart from the discriminating process directed upon it, is not knowledge at all. In other words, the reconciliation is reached through the contention that knowing which is an existence contains within it as an element an existence which is not knowledge.

Thus knowledge has assigned to it by the intuitional theory a far greater significance than is assigned to it by empiricism and rationalism, but a less significance than is assigned to it by post-Kantian idealism. Knowledge is more than a mere shadow (or copy, etc.) of reality, but at the same time it is not the only mode of real being, for although it *contains*, it does not *create*, real existence. As compared with the critical theory, the intuitional theory ascribes on the one hand a greater and on the other hand a less significance to knowledge: it does not take phenomena to be mere presentations, and it refuses to regard the bonds of relation in the phenomenal world as due to the cognitive activity. The last-mentioned contention does not prevent us from describing the world of finite things as phenomenal, but obviously the term must be understood in a sense quite different from the way in which it was understood in the critical philosophy. The term, in truth, indicates a certain relation of the world of finite things not to the individual knowing subject but to the Absolute. The whole question of the relation of the phenomenal to the real is, therefore, according to the intuitional view, a metaphysical and not an epistemological question.

The entire content of knowledge is composed of

elements of the real world. The cognitive activity merely subjects this content to a process of discrimination and comparison; it does not introduce any qualitatively new elements into the content known. It neither creates nor reproduces the real world, for in knowledge reality is given as it is in itself. There is, therefore, no ground for exaggerating the significance in knowledge of sensations, as is done by empiricism, nor for exaggerating the significance of the subjective reason as is done by rationalism. The activity of thought is responsible only for the results of the process of comparison,—namely, for the discernment of likeness and difference, of identity and contradiction. The intimate connection of these aspects of the real world with the activity of thought has in logical science never been questioned. It has not been in vain that the laws of identity, contradiction, and excluded middle have been regarded as the specifically logical laws of thought, and the analytic necessity of the predicate following from the subject or of the conclusion from the premisses as the specifically logical necessity, so that that alone can claim to be logically valid knowledge which is analytically necessary. Yet, from the point of view of the intuitional theory, these two contentions cannot, as we have tried to show, be sustained. We have insisted that *logical* identity and contradiction are only found by thought where there is *real* identity or *real* exclusion of one thing by another.[1] The necessity of the laws of identity, contradiction, and excluded middle is, therefore, no less a real than it is a logical necessity. Further, we have shown that knowledge cannot be based upon analytic necessity alone. The latter can

[1] Cf. Pt. ii. Chs. vii. and viii.

only serve as a test of truth where we already possess truths established in some other way,—truths, that is to say, founded purely upon a real synthetic necessity, or the necessity of the actually present reality with its synthetic relations of real ground and real consequent.

A profound difference subsists between analytic and synthetic necessity. There is something dead and lifeless about analytic necessity. It consists in a certain reality which, having already arisen and asserted itself,[1] remains for ever identical and for ever refrains from contradicting itself. And there is nothing surprising in analytic necessity being of this nature. Analytic necessity is characteristic of the real world in so far as the latter is conceived as a *finished product*, apart from the causes that produced it or the effects to which it gives rise. So conceived even the most living of entities teeming with creative forces will stand before us as a lifeless thing, as something which, after existing perhaps only for one second, remains for ever identical with itself in the timeless whole of the universe of reality. Synthetic necessity possesses an altogether different character. It evinces itself in the fact that a certain reality A compels me, in the first place, to admit its presence, and, in the second place, leads me beyond itself—compels me, namely, also to admit the presence of a certain other reality B, which is not contained in A as an element of it, but which *arises* from A or *follows* from it. This necessity represents nothing short of a revelation of force,[2]

[1] It should be remembered that the realistic theory of universals necessitates that these expressions should not be understood in a chronological sense.

[2] See Lopatin, *Op. cit.* i. p. 199 *sqq.*

and has a free and creative character. It is free in so far as it is conditioned by the peculiar nature of the known reality itself; it is creative in so far as from one real entity there necessarily follows another, distinct in content from the first.

Real synthetic necessity is the *ultimate* criterion of truth. It is precisely when we use it as our guide that we make discoveries, for to perceive real necessity means to follow the course of the real life of nature which is perpetually evolving one new form of existence after another. Moreover, we *understand* the reality revealed to us precisely because its presence in the process of knowledge enables us to follow the actual flow of its life. All *new* knowledge consists in discerning that A is necessarily followed by B, which is new as compared with A, and is not contained in it. The laws of identity, contradiction, and excluded middle cannot help us to grasp the meaning of such a revelation, because they declare neither for nor against it. And yet the knowing subject may be said to *understand* the relation in question whenever he succeeds in separating out of the chaos of reality a complex of conditions A, which furnishes a sufficient ground for B, and is able actually to trace the appearance of B therefrom. Such understanding is simply an *actual coming to be* of the thing in the process of judgment, and not a mere *identification* of one thing with another.

This process of understanding may be said, then, to possess the characteristics which, both by empiricism and by rationalism, were regarded as requisite for knowledge. According to rationalism, we understand the connection between A and B only if B is present in A, so that after a simple examination

of *A* we can anticipate the course of events and foretell the coming of *B*. According to empiricism, on the other hand, a mere analysis of *A* does not as yet tell us anything about *B*: to have the right to assert that *B* is subsequent in time to *A* one must first go to experience and actually observe *B* coming after *A*. The intuitional theory reconciles the two positions, which at first sight appear to be contradictory, in such a way as to render their opposition meaningless. A mere examination of *A* does enable us to foretell the coming of *B*, but the prediction is at the same time the real *coming to be* of *B*, and consequently also the immediate apprehension of *B* in experience. Thus, the notions of *a priori* (in the sense of innateness) and of *a posteriori* lose all their significance for the theory of knowledge. It may well be that, owing to the inherited characteristics of our body (*e.g.* of the organs of sense), and owing to inherited interests, propensities, etc., we chiefly attend to some aspects of reality and discriminate them with greater facility than others (*e.g.* the quantitative aspect of things). But an inquiry into this kind of innateness is a problem for psychology, psychophysics, or the history of culture, and is certainly not a problem for epistemology.

By connecting knowledge and existence so closely that the process of understanding existence is seen to comprise the process of the real actually coming into existence, our theory transcends, at any rate from the epistemological point of view, the opposition between the rational and the non-rational,—an opposition which has divided different schools of philosophy. Since, according to our way of regarding it, the process of thinking is, as such, merely an activity of

comparing exercised upon a material that is given to it but not created by it, it is clear that, from the point of view of cognition, there can subsist between the contents of reality and the contents of knowledge no such distinction as would warrant us in describing the one as rational and the other as non-rational.

In the first place, the term rational ought to denote knowledge and existence which have a purely logical ground and which contain in general merely logical relations. If, however, thinking is simply an activity of comparing, logical relations can be no other than the relations of identity and contradiction, and analytic necessity becomes no other than the logical ground. These relations are characteristic of *all* knowledge and *all* existence when taken in isolation; but no knowledge and no existence can be determined by them in so far as they are related to other modes of existence and knowledge. There is, therefore, no meaning in drawing a distinction between the rational and the non-rational in this sense, for everything evinces itself as on the one side rational and as on the other side non-rational. Further, the term rational might denote existence and knowledge which are revealed through the activity of pure thought, through purely intellectual intuition. But although, according to the intuitional theory, there is one kind of knowledge which can be described as intellectual intuition, yet intellectual intuition must be interpreted in quite a different way than it would be interpreted by rationalism. Thinking is a comparing activity and cannot create anything; indeed, it cannot so much as begin until some material has been given to it from without. And when the material is given, it is always—whatever its nature—treated in the same

way; it is always subjected, namely, to comparison. Different kinds of knowledge cannot, then, differ in the sense that some of them are given through a purer activity of thought than others. The term 'intellectual intuition' is intended by us to bear an altogether different significance—that, namely, of indicating the distinction between sensuous knowledge and knowledge that is most free from sensuous admixture. Yet since, according to the intuitional theory, the non-sensuous elements of knowledge—no less than the sensuous—are intuitively given in experience and are not produced by pure thought, intellectual intuition in no way differs from other kinds of empirical knowledge, so far as its relation to thinking is concerned.

Finally, it should be noted that there is a tendency both in logic and in epistemology to oppose the universal to the individual, and to regard universal concepts and concrete presentations as incommensurable, the former alone being taken to furnish logically grounded knowledge. Thus, there arises a kind of dualism between universal and particular judgments.[1] This tendency is natural enough, because the logical process of discerning identity and the part it plays in the establishment and verification of truth is particularly noticeable when we are concerned with universal knowledge. But, in developing a realistic theory of universals, we have shown that the *universal* is, in a certain sense, *singular and individual*, that there is no antithesis between universal concepts and concrete presentations, and that there is no dualism between universal and particular judgments, either from the point of view of their logical value

[1] See, for instance, Volkelt, *Erfahrung und Denken*, p. 370 *sqq.*

or of their origin. Consequently, this fulcrum of support for the antithesis between the rational and the non-rational likewise disappears, and the belief in the non-rational character of the individual[1] evinces itself as baseless. Not only so. Since the processes of thinking and of concrete perception are the same in kind, there can be no essential contrast between *description* and *explanation*, or between the so-called descriptive and explanatory sciences. An explanation is no other than a description which gives in a differentiated form the chain of grounds and consequents.

In banishing the antithesis between the rational and the non-rational from the theory of knowledge, we prejudge in no way the question as to whether it ought, in like manner, to be banished from the sphere of metaphysics. It may well be that some aspects of the real world satisfy the requirements of reason, whilst others stand above or below those requirements. In saying this, we have not, indeed, the thinking faculty in our mind's eye. Both in philosophy and in every-day life the word 'reason' is used to indicate a specifically high mental faculty, perhaps the highest we possess. If, however, the faculty of thinking is solely a faculty of discriminating and comparing, it evidently ought not to be described by so significant a term as reason. It will readily be noticed that we are specially inclined to describe as rational all those activities, and generally all those aspects of reality, which we believe to possess a higher meaning, a high super-individual significance—*i.e.* a significance, to a greater or less degree, for the world as a whole. But significance and meaning are only possible where there is purpose ; and, if so, individual

[1] Cf. Lask, *Fichtes Idealismus und die Geschichte*, p. 54.

things can have a super-individual universal significance only if there is purpose in the universe as a whole. Consequently, the word *reason* ought to denote the *faculty of putting before the mind and of realising these supreme or highest purposes.* If man possessed this faculty in its developed form, *all* his activities, *that of knowing among them,* would acquire a peculiarly lofty and significant—*i.e.* throughout a purposive—character.

The tendency to completely identify reason with the knowing faculty in its highest manifestations is widely current in philosophy. Although this tendency is a mistaken one, it is a natural tendency—in the first place, because knowledge is one of the most powerful of the instruments of reason in realising its purposes, and in the second place, because the highest kinds of knowledge are clearly seen to depend upon the characteristic of the world which lies at the basis of reason. That characteristic is the complete unity of the universe which renders it possible for the individual both to represent to himself cosmic purposes and to apprehend intuitively the contents not only of his own life but of other lives in the world. Such unity can only be possible if the ground of the world be a super-individual Reason that coordinates with one another all the various aspects of the life of the universe.

The possibility of a knowing faculty and of all that characterises it is no doubt in the last resort to be explained by the nature and purposes of the Absolute Reason. But these problems belong to the province of metaphysics, and to that particular section of it which I should be inclined to describe as metaphysical epistemology. Another question that would fall

within its scope is that concerning the nature of such aspects of the world as causality, substantiality, likeness, difference, etc.—which for the cognitive activity are the more important aspects. In the present work we have simply been taking them for granted without any searching analysis, for our aim here has been to present a *propaedeutic epistemology*,—to investigate, namely, the process of knowledge as it takes place not in the universal Reason but in man as a knowing subject, that is to say, through his modest activity of discriminating and comparing. In so far as we assign to the cognitive activity this limited function and regard the whole material of knowledge as *given* in immediate experience, our theory is an *empirical* theory. It looks upon the cognitive activity itself as *least of all creative*, based more than any other activity upon *data passively received*—the passivity being a most important condition for the acquisition of an adequate knowledge of the world. But that does not prevent us from recognising that the human mind may in its other activities, and, indeed, in their connection with the activity of thought, be creative. Extreme originality and a power of reconstructing the world is often necessary for a thinker if he is to put himself into a situation which would render a right mode of judgment possible (for instance, in order to choose in experimenting appropriate methods and points of view, and also suitable material for investigation).

In contradistinction to individualistic empiricism and in agreement with rationalism, the intuitional theory lays particular stress upon the organic living unity of the world. Consequently, a metaphysic based upon that theory will be akin to the rationalistic

metaphysic of the ancient and modern type. But a metaphysic resting upon an *empirical* theory of knowledge must be of a more modest and more sceptical character than the rationalistic systems of metaphysic were wont to be. A metaphysician who realises that even in the axioms defects are to be found will not claim for his system that it is a complete and exhaustive representation of reality. Yet he may cherish the hope that as our knowledge develops it will lead in the end to the whole truth.

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