THE DEGREES OF KNOWLEDGE

JACQUES MARITAIN

THE DEGREES OF KNOWLEDGE

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TRANSLATOR'S NOTE

IN THE original M. Maritain makes considerable use of the close kindred which exists between the actual forms of certain French words and that of Scholastic Latin. This involves considerable difficulties in translation into a tongue not so closely related. At times, rather than risk a misunderstanding of a philosopher who naturally lays great stress on verbal exactitude, I have followed this angle of the sense rather than smoothness in the English. Philosophy can never make easy reading, and Gavin Douglas' plea is as pertinent to-day as in his time:

For there be Latin wordis many ane
That in our tongue ganand translation's nane
Les than we mynis thar sentence and gravity;
And yet scant weill exponit...
For objectum and subjectum also
He war expect culd find me termis two....

In particular I would draw the reader's attention to the opposition between *rational* and *real* being, corresponding to that between *ens rationis* and *ens reale*; and that, in general, it is in this sense that the word *rational* should primarily be understood.

In the original the main text, which is here integrally translated, is followed by nine Appendices: these, owing to their great length and highly technical character, have here been omitted. I have given a brief summary of their content. No new matter is introduced in them, and in the main they consist of critical and technical discussions of points treated in the text, with long quotations in support and enlargement of individual stages in the argument.

BERNARD WALL

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PREFACE

THE TITLE of this book sufficiently declares its design. The disparate and the confused are alike alien to the nature of the mind. 'No one', says Tauler, 'knows better the true meaning of distinction than they who have entered into unity,' and in the same way no one can be aware of the real meaning of unity without an equal grasp of the sense of distinction. Thus every attempt at metaphysical synthesis, particularly in relation to the complex riches of knowledge and the mind, must distinguish in order to unite. And it is exactly towards such a discernment of the various degrees of knowledge, their organisation and internal differentiation, that reflective and critical philosophy is primarily directed.

Idealist philosophers usually choose some particular class of sciences as a generic type of the universe of knowledge and construct in relation to this type their entire epistemology. Not only does this entail the systematic neglect of vast regions of apprehension, but it tends also to reduce the diversity of the life of the spirit to a noetic monism, which is certainly more sterile, if less pardonable, than the ontological monism of the first philosophers. (For, after all, the mind, they claim, does know itself, and what excuse can idealism offer if it despises the very structure of thought itself?)

In revenge many realists seem disposed to pay for their possession of things by an abandonment of the problems proper to the mind, and we see to-day a new 'cultural' dogmatism identifying with dialectic materialism the anti-idealism which it professes.

I hope to show here that Thomist realism, while saving by a truly critical method the values of the knowledge of things, allows of an intimate exploration of the universe of reflection, and the establishment, if I may say so, of a metaphysical topology: thus 'the philosophy of being' is at the same time and *par excellence* a 'philosophy of the spirit'.

More even than the physical universe and corporeal organisms, the

spirit possesses—though immaterially—dimensions, a structure, and internal hierarchy, of causality and values. Contemporary idealism, which ends by refusing to acknowledge any nature or proper structure in the spirit, in order to make of it either a pure movement or a pure liberty, in reality only achieves flattening it out in its entirety on one single level of intellection, as if in a two-dimensional universe, a world of infinite platitude. Nevertheless we have justification for thinking that the four dimensions of which St. Paul speaks—*quae sit latitudo, et longitudo, et sublimitas, et profundum*[1]—concern not only the sphere or hypersphere of the contemplation of the saints, but generally the whole organisation and fundamental structure of the things of the spirit, in the natural or supernatural orders.

Taken from the noetic angle which I have chosen, we may say that *length* symbolises for us the way in which the formal light which characterises a type of knowledge falls on things and determines in them a certain line of intelligibility; *breadth* corresponds to the ceaselessly growing sum of objects thus known; *height* to the difference of level created among the various forms of knowledge by the degrees of intelligibility and immateriality in the object, from which follow, for each object, its typical and original manner of procedure; as to the fourth dimension, *depth*, it presents to us those more hidden diversities which depend on the way in which the spirit, in its liberty, diversifies still more its objects and its manner of conforming to reality according to their final ends. The difference between speculative and practical philosophy is the simplest example of this diversification, but it is not the only one.

But it is not only the structure, it is the movement also and the élan of the spirit which need to be brought to light, and that admirable law of dissatisfaction with the very security of acquired certitudes by which, starting from the experience of the senses, the mind enlarges, raises, transforms itself from stage to stage, absorbing itself in contradictory and yet united spheres of knowledge, while testifying to the fact that the striving of an immaterial life for its perfection is a striving towards an infinite amplitude, that is to say, in the last resort, towards an object, an infinite reality which it must needs in some manner possess.

[1]Eph. III, 18.

In this book I have endeavoured to indicate the reasons for this movement and these transitions and the main phases through which they pass.

. . .

It is obvious, therefore, why this book must explore very varied fields of enquiry. After a form of general introduction, whose theme is at once the grandeur and the misery of metaphysics, the first problems to be dealt with are those which concern the experimental sciences and the degrees of knowledge which they represent. At this point, before going further, it becomes necessary to turn to knowledge as such, and to establish (chapter ii) the principles of a philosophy of the intelligence; so we enter into the dominion of that critical metaphysic, on whose foundation the whole body of the book is based. The two following chapters have as their subject the philosophy of nature considered particularly in its relations with the sciences, notably with physics, and metaphysical knowledge, particularly with regard to its noetic structure and its relations with negative theology. With knowledge by faith and the 'super-analogy' which is proper to it, we pass on to the degrees of supra-rational knowledge, whose highest form is mystical experience. Chapter v is consecrated to these problems, while chapters vi and vii deal with two eminent cases of what has just been described as 'the depth' of the things of the spirit: the question of the nature of Augustinian wisdom and the distinctive features and proper perspective of the 'practically practical' science of contemplation as it is found in St. John of the Cross. The last chapter forms the conclusion to the whole book and deals with that doctrine of *All and Nothing* set out by the Mystical Doctor, and with the supreme degree both of knowledge and of wisdom which is accessible to man in this life.

It is by design that I have endeavoured to cover so wide a field of problems and sketched the outline of a synthesis which starts with the experience of the physicist and ends with that of the contemplative, whose philosophic stability is guaranteed by the rational certitudes of metaphysics and critical philosophy. Only in this way is it possible to exhibit the organic diversity and the essential compatibility of the zones of knowledge traversed by the mind in this great movement in quest of being, to which each one of us can only contribute a tiny fragment and

inconvenience of these forms of work, where many indications and many alluring distractions ask to be taken up and pursued, is that they need, in order to bring forth their full fruit, a spirit of collaboration and philosophical continuity in the reader on which it is generally vain to reckon. Be that as it may, such work is in the spiritual tradition of Thomism, a doctrine which is essentially progressive and apt in the assimilation of fresh material—does it not proffer a singular proof of its irrepressible vitality in having resisted for centuries that pedagogy industriously charged with the desire to force it into some ready-made framework?

Matchless in its coherence, closely knit in all its parts as it is, Thomism is nevertheless not what we call 'a system'. When one says that it is distinguished from all other philosophical doctrines by its universalism, this must not be taken as a simple differentiation of extent, but rather as one of nature. The word system evokes the idea of a mechanical connection or of a more or less spatial assemblage of component parts, and consequently a choice which, if not arbitrary, is at least personal, as it is in all artificial constructions. A system unfolds or progresses from piece to piece, starting from its initial elements. On the other hand, it is the essential demand of Thomism that all construction and mechanism should be rigorously subordinated to the immanent activity and vital movement of intellection: it is not a system, an *artefactum*, it is a spiritual organism. Its internal links are the vital connections by which each part lives by the life of the whole. The principal parts are not the initial ones, rather those which are dominant or central, each of which is already virtually the whole.[1] Thought does not there make a personal

[1]Such for example are the *tria principia* on which Reginald the Dominican wrote in the seventeenth century a remarkable book (which is unfinished): *ens est transcendens; Deus solus est actus purus; absoluta specificantur a se, relativa ab alio*. These three principles contain all Thomism: but all Thomism is necessary to comprehend them. Thus Reginald's book, with its inevitable didactic dissections, is itself in relation to the doctrine that it expounds like an anatomical plate beside a living body. Doubtless it is the same in a certain measure with every great philosophical doctrine: none are exclusively and by nature a system, an *artefactum*; thought in itself tends to the vital and the organic. But in all of them the price paid for unity and coherence is that the aspect of a 'system' prevails over that of 'living organism'. What I should hold as most remarkable in Thomism and should call its particular privilege is that, while being sovereignly close-knit and a whole, with it on the contrary the character of a living organism prevails over its systematic aspect. It follows from this that in no other case is the difference so deep or so sensible between the doctrine itself and its didactic exposition.

choice among the elements of the real, it is an unlimited openness to them all.

The truth is that Thomism is a universal work. One is not a thomist because one has chosen it in the emporium of systems as one among several others, as one may tentatively choose a pair of shoes at a boot-maker's until one sees another brand more suited to one's feet. On those lines it would be more stimulating to fabricate one's own system, made to one's own measure. One is a thomist because one has abandoned the attempt to find in a system fabricated by one individual, that individual who is called *Ego*, philosophical truth, and because one intends to seek for the truth—albeit by oneself and by one's own reason—learning from every form of human thought, so that nothing that is may be neglected. Aristotle and St. Thomas only hold for us their privileged positions because, in their supreme susceptibility to the lessons of the real, we find in them principles and a scale of values thanks to which, with no risk of eclecticism or confusion, the whole effort of universal thought may be saved.

How can those philosophers for whom the category of the out-of-date is a metaphysical criterion, for whom thought must necessarily grow old and be forgotten, understand that if we consult the ancients it is to recover a freshness of observation which to-day is lost? None of the treasures of experience, none of the advantages and graces of the latter age of thought, can replace the rightful grace of its youth, that virginity of observation, that intuitive uprush of the intelligence as yet unwearied by the spiced novelties of the real.

Distinguishing between the *per se* and the *per accidens*, thomists believe that the progress of philosophy advances not only in the heart of the doctrine which they hold for surely based, but also, as though by accident, through the proliferations of all those unstable systems, whose uncertain structure allows them to fling themselves more rapidly (and perish in the so doing) on the novel aspects of truth which the march of time brings to light.

Nevertheless, such an advance can only by nature be at most a becoming, a movement or a potentiality, incapable of being grasped in its entirety at any moment of its progress, since there is no moment when it is not out hunting among opposed formulations and contrary systems, drawn by that modicum of truth which they all contain.

Is philosophy only this, and can it only know this state of virtuality? If it so happens that there exists among men a doctrinal organism founded on the vital assurance of true principles, this will, after greater or less delay, incorporate into itself, progressively *realise in itself*, this virtual philosophy, which will become by the same act and just to that extent capable of being grasped, demonstrated, livingly formed and organically activated. It is in this way, in my opinion, that Thomism is destined in the course of its own progress to actualise the progress of philosophy.

11th June, 1932.

POSTSCRIPT TO THE SECOND EDITION

The text of this second edition is practically a reproduction of that of the first. Certain additions and modifications have been made in the notes. Certain bibliographic references in the notes to books which have appeared since the publication of the first edition are indicated by an asterisk.

With regard to the theory of judgment (cp. *infra*, chap. ii), I would not wish to fail to draw attention to Mgr. Sentroul's *Kant et Aristote* (Paris, Alcan, 1913, a new, revised and augmented edition of his thesis of 1905 on *L'Objet de la métaphysique selon Kant et Aristote*), which rightly insists (pp. 61-73, 291-306) on the fact that a true judgment is an identification in the mind which responds to an identity in the thing, or 'the conformity of an identification with an identity'. The same ideas are put forward in an article on 'La Vérité et le progrès de savoir' (*Revue néo-scholastique de philosophie*, May-Aug., 1911).

With regard to my definition of the philosophy of nature, I should mention that, in his little book *De subjecto naturalis philosophiae*, Cajetan has shown very clearly why it is necessary to assign as the proper subject of the philosophy of nature (which is neither part of metaphysics nor a form of knowledge rightly 'subordinate to' metaphysics) *being* taken under the formal reason of *mutability*, which restrains it without depriving it of its analogical character; and why the expression *ens sensibile*, though legitimate in itself, is less

formal and less philosophic than the expression *ens mobile*: this in effect 'liberates at one stroke the philosophy of nature from the enterprises of Parmenides and Melissa'.

Finally, in order to avoid a possible misunderstanding of the subject of chapters i and iii, it is perhaps not unuseful to emphasise that in the course of the allusions there made to the new physics, I have adhered to the standpoint of those critical and philosophic problems which are the object of this book. If we were considering them from the point of view of the history of science and were endeavouring to characterise from that angle the evolution of the contemporary theories of physics, without doubt it would have been necessary to emphasise the name of Planck and the physics of the Quanta, rather than that of Einstein and the theory of Relativity.

In fact we have a right to think that if Einstein has overpassed and powerfully renewed Newtonian and classical physics, he has nevertheless remained, like Lorenz and Poincaré, on the same path of progress,[1] so that the relativist revolution is, in regard to the development of physics, less radical and less essentially an innovation than the discovery by Planck of radiation by *quanta*. It is in its abandonment of the macroscopic point of view and its entry into the world of the Quantum theory of the atom that the new physics has most decidedly broken away from the physics and mechanics of the ancient world. Hence the exceptional historical importance of the theories of Louis de Broglie, Schrödinger and Heisenberg.

But here we are only considering the new physics in regard to the noetic structure of the physico-mathematical knowledge of nature, and the relations and distinctions which it is necessary to mark between it

[1] 'The theory of Relativity constitutes, in short, the apotheosis of the old macroscopic physics, while, on the other hand, the Quantum theory has arisen from the study of the corpuscular and atomic world.' (Louis de Broglie, 'Relativité et Quanta', *Revue de métaphysique et de la morale*, July-Sept., 1933). In these very suggestive pages M. Louis de Broglie recalls how the theories of Relativity and of the Quantum now confront one another after having grown up almost independently, and points out the difficulties of any reconciliation between them. The philosopher will keep in mind with particular interest his words on the necessity which the physicist finds of recognising 'the existence of a privileged sense of temporal variability and the persistence of physical unities in time': there follows from this, even in *non-quantic* relativity, a certain dissymmetry between time and space.

and the philosophy of nature. Moreover it is necessary to attach particular importance to the physics of Relativity, because they bring into question notions which, since they play a fundamental part in the philosophy of nature, such as those of space and of time, are, by that very fact, particularly subject to and in particular danger of any confusion between the two mental disciplines.

1*st May*, 1934.

INTRODUCTION

THE GRANDEUR AND MISERY OF METAPHYSICS

ONE MIGHT have thought that, in epochs of speculative incompetence, metaphysics would at least shine out by its modesty. But the same period which ignores its grandeur, ignores alike its misery. Its grandeur is that it is wisdom: its misery, that it is human.

It is true that it utters the name of God. But it does not know His name. For we cannot describe God like a tree or a conic section. Truly Thou art a hidden God, Thou the true God of Israel! So Jacob asked in the morning of the angel: 'Tell me, what is thy name? And he received the answer: Why askest thou my name?'[1] 'It is impossible to utter this truly wonderful name, which is above every other name in this age and in all the ages to come.'[2]

Whether they be neo-Kantians or neo-positivists, idealists, Bergsonians, logistics, pragmatists or neo-Spinozists, or neo-mysticists, one ancient sin works in the roots of all modern philosophies—the old error of *nominalism*. Under varied forms, with more or less perception, they all criticise knowledge by concepts for not being a supra-sensible intuition of the uniquely existent, like the *scientia intuitiva* of Spinoza or the theosophical visions of a Boehme or a Swedenborg which Kant—with so much regret—denounced as illusory. They cannot forgive it for the fact that it does not, like the senses, know an immediate contact with existence: but only with essences and possibilities, and only attains actual existence by falling back upon the senses. They fundamentally misconceive the value of the abstract, that immateriality more enduring than all outward things, for all that it is impalpable and unimaginable,

[1] Gen. xxxii, 29.

[2] Pseudo-Dionysus, *De Divinis Nominibus*, i, 6 (St. Thomas, lesson 3. Cp. St. Paul, Eph. i. 21).

which the spirit seeks for at the heart of things. What is the cause of this incurable nominalism? Because with a taste for the real they lack the sense of being. Being as such, detached from the matter in which it is incorporated, being with its pure objective necessities, its laws which do not weigh, its constraints which do not bind, its invisible evidences, is for them—only a word.

How can one speculate about geometry in space if one does not *see* the figure in space? How is it possible to dissertate on metaphysics if one does not *see* the quiddities in the intelligible? This difficult feat of mental gymnastics is undoubtedly necessary for the poet; it is no less so for the metaphysician. In both cases nothing can be attempted without a certain original talent. A Jesuit friend of mine asserts that man, since Adam's fall, has become so inapt in his intelligence that the intellectual perception of being ought to be regarded like a mystical gift supernaturally accorded to certain privileged persons. This of course is truly a pious exaggeration. Nevertheless it remains the fact that this intuition is for us an awakening from dreams, a sudden step out of sleep and its dreaming milky way. For man can sleep in many fashions. Each morning he wakes from animal sleep; from human sleep when the intelligence strips off its bonds (and from divine sleep at the touch of God). The birthright of the metaphysician as of the poet is a grace of the natural order. The one, who throws his heart into things like an arrow or a lighted match, sees by divination—in the very stuff of the sensible, inseparable from it—the flash of the spiritual light which shines for him with the glance of God. The other, turning away from the sensible, sees by science, in the intelligible detached from perishing things, that same spiritual light held captive in some idea. Abstraction, which is death for the one, is the breath of the other's nostrils; imagination, the discontinuous, the unverifiable, by which he perishes, are the other's life. Both living by the rays which fall from the creative Night, the one feeds on a linked intelligibility multiform as the reflection of God in the world, the other on a like intelligibility only divested and determined by the very being of things. They play see-saw together, each rising to heaven by turns. The spectators mock at this game; they are sitting on the solid earth.

'You are like a dabbler in black magic,' it has been said to me, 'who

commands us to fly with our arms.' No, I ask you to fly with wings. But we have no wings! Arms? Atrophied wings, which is quite another matter. They would spring again if you only had a little courage, if you understood that the earth is not the only foothold and that the air is not a void.

To invoke against a philosopher a mere factual impossibility, a particular historical condition of the intelligence, to say, 'what you offer us is possibly the truth, but our mental structure has become such that we can no longer think in the terms of your truth, for our minds "have changed like our bodies"[1]' is no argument at all. It is nevertheless the best that can be opposed to the present rebirth of metaphysics. It is only too true that eternal metaphysic does not fit in with the modern mind, or more exactly that the latter does not fit in with the former. Three centuries of mathematical empiricism have so bent the modern mind to a single interest in the invention of engines for the control of phenomena —a conceptual network, which procures for the mind a certain practical domination over and a deceptive understanding of nature, where thought is not resolved in being but in the sensible itself. Thus progressing, not by adding fresh truths to those already acquired, but by the substitution of new engines for engines grown out of date; manipulating things without understanding them; gaining over the real, pettily, patiently, conquests which are always partial, always provisional; acquiring a secret relish for the matter which it seeks to trap, the modern mind has developed in this lower order of scientific demiurgy, a form of multiple and marvellously specialised sensitiveness, and admirable hunting instincts. But, at the same time, it has become miserably enfeebled and defenceless in regard to the proper objects of the intellect which it has basely renounced, and has become incapable of appreciating the universe of rational evidence otherwise than as a system of well-oiled cogs. Hence it must necessarily be opposed to all metaphysics—the old positivist game—or take up with some pseudo-metaphysic—the new form of positivism—one of those metaphysical counterfeits where the experimental method, in its grossest form, as with the pragmatists and the pluralists, or more subtly, as in Bergsonian intuition, or more

[1]Ramon Fernandez, 'L'Intelligence et M. Maritain', *Nouvelle revue française*, 1st June, 1925.

religiously, as in the integral action of the Blondelians with their attempt to experience everything mystically, invades the domain of pure intellection.

All this is true. The current of the modern mind runs against us. Oh well, hills are there for the climbing! The intellect has not changed, it has only drifted into habits. Habits can be corrected. They have become second nature, you say? Nevertheless, the first nature is always there; and the syllogism will endure as long as mankind.

It is less difficult for the philosopher than for the artist to be in disagreement with his period. There is little parallel between the two cases. The one pours his spirit into a creative work, the other ponders on the real with the understanding mind. It is in the first case by depending on the intellect of his time and pressing it to the limit, in the concentration of all his languor and all his fire, that the artist has a chance of reshaping the whole mass. But for the philosopher the first question is to grip hold of the object first of all, to cling on to it, lost to everything else, with such tenacity that a break is at last affected in the opposing mass, making possible a new alignment of forces and a new orientation.

It is equally true that metaphysics brings no harvest to the yield of experimental science. It can boast of no discoveries and no inventions in the world of phenomena. Its heuristic value, as the phrase goes, is entirely nil. Nothing can be expected of it from that point of view. One does not do manual work in heaven.

Here exactly is its greatness: have we not known it for a thousand years? Metaphysics is useless, as old Aristotle said, it serves no purpose for it is above all servitude; useless because *supra-utile*, good in itself and by itself. For, let it be understood, if it could serve the science of phenomena, could yield for its harvest, it would be vanity by that very fact, in wishing to go beyond that science while not in itself surpassing it. Every metaphysic, be it that of Descartes, of Spinoza or of Kant, which measures itself, not against the mystery of being, but only by the state of positive science at any given moment, is radically false in principle. True metaphysics, in its own way and aware of its own limitations, can also say: my kingdom is not of this world. It holds to its axioms in despite of the world, which strives to hide them from it: for

what says the phenomenal, the lying flood of the brutally empiric, if not that what is is not and that there is more in the effect than in the cause? It contemplates its conclusions as it ascends from the visible to the invisible, it suspends them in a realm of intelligible causation, which is implicit in this world and which nevertheless transcends it, in no wise contradictory to the system of sensible sequences studied by experimental science, but which remains strictly different: the movement of my pen over the paper—my hand—the imagination and internal sense —the will—the intellect—and the First Cause, without whose motion nothing created could act; such a series is in no way opposed to, though it in no way assists, the determination of vasomotor modifications or the associations of images which are in play while I write. Metaphysics demands a certain purification of the intellect; it also presupposes a certain purification of the will, and the strength to devote oneself to what serves no object, to useless Truth.

Nothing nevertheless is more necessary to man than this useless thing. What we need is not truths which will serve us, but a truth which we may serve. For this is the food of the mind, and the mind is the best part of ourselves. Unuseful metaphysics brings order—not the so-called law and order of a policeman, but the order which springs from eternity—into the speculative and practical intelligence. It gives his equilibrium and his motion back to man, which are, as we know, to gravitate towards the stars with his head while hooked on to the earth by his two legs. It reveals to him the hierarchy of authentic values through all the extent of being. It gives a centre to his ethics. It maintains justice in the universe of knowledge, making clear the natural limits, the harmony and subordination of the various sciences: and this is far more important for human beings than the most luxuriant proliferation of the mathematics of phenomena: for what is the use of gaining the world and losing right reason? We are so weakly that the limpid peace dispensed by a sane metaphysic may perhaps be less favourable to experimental discovery than the dreams or the sharpness of a spirit submerged in the sensible; it may be that the natural sciences prefer to fish in troubled waters. Perhaps we have also the right to hold ourselves sufficiently burdened with the benefits of the dispersion.

Metaphysics places us in the world of the eternal and the absolute,

makes us pass from the spectacle of things to the knowledge of reason—more sure in itself and more clear than the certitudes of mathematics, though less easily grasped—to the science of the invisible world of the divine perfections discovered in their created reflections.

Metaphysics is not a means, it is an end, a fruit, a true and delectable good, the knowledge of a free man, the most free and most natively royal knowledge, the entry into the large leisure of that great activity, speculation, where the intelligence alone can breathe, on the mountain-top of causation.

For all that it is still not even the roughest sketch of the joy of our rightful home. This wisdom is won by the methods of science: and therein is great travail and vexation of spirit. For the ancient malediction, *maledicta terra in opere tuo*, weighs more tragically on our reason than on our hands. Forward! Unless by some blessed chance of that Fortune on whom the pagans were not wrong to meditate, the exploration of the supremely intelligible promises most of all a lot of useless labour, and the terrible sadness of the vision of gashed and mutilated truths.

The gods are jealous of metaphysical wisdom—that heritage of doctrines to which we are alone able to attain without too great an intermingling of error is itself constantly misunderstood—man's grasp on it is ever precarious—and how could it be otherwise? Is there a more splendid paradox than this of a divine science won by human means, a free exercise of liberty, such as is proper to spirits, culled by a nature 'in every sense enslaved'?

Metaphysical wisdom possesses the most pure degree of abstraction because it is at the farthest remove from the senses; it opens out onto the immaterial, on a world of realities which exist and can only exist in separation from matter. But our means of ascension mark also our limits. Of necessity and by its nature, abstraction, the condition of all human science, involves, with its multiplicity of partial and complementary views, its slow elaboration of concepts, all the complications and the immense machinery, which are so much heavier than the air, of the winged apparatus of discourse. Metaphysics wishes purely to contemplate, to overpass reason and enter into pure intellection, aspires to the unity of a simple gaze. It approaches it like an asymptote, and cannot

achieve. What metaphysician, not to speak of the ancient Brahmins, has felt more keenly than Plotinus this burning desire for the supreme unity? But the ecstasy of Plotinus is not this supreme act, rather is it the vanishing point of metaphysics, and metaphysics alone does not suffice to procure it. The good fortune which Plotinus knew four times during the six years that Porphyry lived with him suggests a brief contact with an intellectual light in its nature of greater force, the spasm of a human mind in contact with a pure spirit. If we believe Porphyry when he says that his master was born in the thirteenth year of the reign of Severus, that he heard Ammonius at Alexandria, that he came to Rome when he was forty, that he died in the Campagna, and when he describes to us his state of health and way of life, his kindness to the orphans committed to his care, his way of teaching, of composing, of pronouncing Greek, his handwriting, etc., why do we not believe him when he says that the philosopher was inspired by a daemon who lived with him, and which showed itself, in a sensible form, at his death? 'At that moment a serpent passed under the bed in which he was lying and glided into a hole in the wall; and Plotinus gave up his soul in death.'[1] What would be astonishing would be if the metaphysical *eros*, there where Christ does not dwell, did *not* call forth some form of collusion with superhuman intellectual natures, *rectores hujus mundi*.

But let us return to our theme. I said that metaphysics suffered not only from the common necessity of abstraction and discourse: it suffers also from an infirmity proper to itself. It is a natural theology, whose object *par excellence* is the Cause of all causes. The Principle of everything that is, this is what it would know. And how can it fail to desire that this knowledge should be perfect and complete, the absolute and

[1]Porphyry, *Life of Plotinus*, ii, 25. Later (chap. x), Porphyry tells us how an Egyptian priest who had come to Rome proposed to make visible to Plotinus the spirit who dwelt within him, and evoked this daemon, who turned out to be a god. 'It was not possible', he continues, 'to interrogate this daemon or hold him for any long time visible to the sight, because one of his friends, a witness of this scene to whom the birds had been confided and who was holding them in his hands, stifled them from jealousy or perhaps terror. Thus Plotinus was assisted by one of the most godlike daemons: constantly he directed thither the sublime glance of his spirit. This was the cause of his writing his treatise, *On the Daemon in whom we have received participation*, where he endeavours to give the reasons for the differences among the beings who come to the assistance of man.'

fulfilling knowledge whereby it may know him in his essence, in that which makes the substance of his actual life? If the desire to see the First Cause is natural to man—while all the while 'conditional' and 'ineffectual', for this desire precisely lacks in us any natural proportion with its object—it is specially natural to the metaphysician, who cannot, if he is worthy of the name, fail to feel the sharpness of its sting. But metaphysics can only enable us to know God by analogy, not by what He is in Himself, in the community of the transcendental perfections which are found—in infinitely different ways—at once in Him and in things: a true, a certain, an absolute knowledge, the highest delight of the reason, and one which it is worth the pain of being a man to know, but which remains infinitely far from being vision, and which only accentuates the burden of the mystery. *Per speculum in aenigmate.* We understand only too well how the most perfect fruit of the intellectual life leaves man still unsatisfied.

In fact, stated in the most general terms, the intellectual life does not suffice for us. It demands a complement. Knowledge brings to our souls all forms and all good things, but stripped of their proper existence and reduced to the condition of objects of thought. Present, as though grafted in us, but in a mode of being which is essentially incomplete, they cry out to be completed, they engender in us a driving force, the desire to reunite them with their rightful and real existence, to possess them not in idea, but in reality. The love thus roused projects the soul towards a union which will be real, which the intellect alone, except in the extreme case of the vision of God,[1] is incapable of procuring. Our intellectual life is thus fated—unless by some inhuman deviation—to end by avowing its indigence, and one day pour itself out in desire. It is the problem of Faust. If human wisdom does not upset into heaven and the love of God, it will relapse on Marguerite. Mystical possession of the most holy God in eternal charity, or physical possession of the poor flesh in the fleetingness of time, one or the other must be the end

[1]By the beatific vision the soul becomes God 'intentionally' (*secundum esse intelligibile*), not substantially, but it is united with him in a *real* union (*unio secundum rem*), since it is *by the infinite essence of God himself* immediately actuating the intellect in the intelligible order that it holds this union and that it sees. Thus the intelligence supernaturalised by the light of glory is like the hand whereby the blessed lay hold on God.

and be the sorcerer never so adept he cannot escape the horns of this dilemma.

This then is the misery of metaphysics (and also its greatness). It rouses the desire for the supreme union, spiritual possession consummated in the very order of reality, and not only in idea. And it cannot satisfy it.

It is another wisdom that we preach, to the Jews a scandal and to the Greeks madness. Exceeding all human effort, the gift of deifying grace and the free largess of the uncreated Wisdom, it has its origin in the *insane love* of that Wisdom for each one of us, its end in the unity of the spirit with Him. One alone gives us access thither, Jesus the crucified, the Mediator raised between heaven and earth. When, alike crucified upon a gibbet, with his hands and his feet cut off, they asked al Hallaj, 'What is mysticism?' he replied, 'You see here its lowest degree.' 'And its highest?' 'Thou canst not come thither: yet to-morrow thou shalt see what cometh. For it is to the divine mystery, where it is, that I bear witness, and that remains hidden from thee.'[1] Mystical wisdom is not beatitude, the perfect spiritual possession of divine reality; but it is its beginning. It is an entrance here below into the incomprehensible light, a taste, a touch, a sweetness of God which will not pass away, for what the seven gifts of the Holy Ghost began in faith they will continue in the wisdom of beatitude.

We cannot pardon those who deny or who corrupt this; gone astray in inexcusable metaphysical presumption, since they know the divine transcendence and yet will not adore it.

The doctrines which certain Westerners offer us as the wisdom of the East—I am not referring to oriental thought itself, whose exegesis demands a multitude of distinctions and the finest discrimination—in

[1]Louis Massignon, *Al Hallaj martyr mystique de l'Islam, exécuté à Bagdad, le 26 mars, 922*: Paris, 1922. I cite the case of al Hallaj here because, in so far we may risk conjecturing the secret of hearts, everything leads one to think that this great Moslem mystic, who was condemned for teaching the union of love with God, and who witnessed to the last point to his desire to follow Jesus, was possessed of both grace and the infused gifts (that he belonged to 'the soul' of the Church) and so was able to be raised to authentic mystical contemplation. This is the view reached by the R.P. Maréchal, in his review of M. Massignon's admirable book (J. Maréchal, *Recherches de science religieuse*, May-Aug., 1923). Cp. *infra*, chap. v, p. .

themselves arrogant and facile, present a radical negation of the wisdom of the saints. Claiming to reach the height of contemplation by metaphysics alone, seeking for the perfection of the soul apart from charity, whose mystery is to them impenetrable, substituting for supernatural faith and the revelation of God by the Incarnate Word—*unigenitus Filius, qui est in sinu Patris, ipse ennaravit*—a self-styled secret tradition inherited from unknown masters of knowledge, they lie: for they say to man that he can add to his stature, can enter by his own power into the superhuman. Their esoteric hyper-intellectualism is nothing but a specious and pernicious mirage. It reduces reason to absurdity and the soul to the second death.

There is another way in which vain philosophy can be the foe of wisdom: not by subjecting the wisdom of the saints to metaphysics, but in more or less confusing them, and, in the worst cases, cleverly confounding it with a metaphysic which is corrupt to the core. It is in this way that an attentive and penetrating mind, after fifteen years of fervent research and all the effort of the most minute and impassioned erudition, has been led to a tragic disfiguration of the very mystical hero whose inward drama he had desired to retrace. Alas! As though a philosopher, assisted by even the most exhaustive historical information or the most intuitive of Bergsonian sympathies, could penetrate to the heart of the life of a saint, relive by himself the soul of St. John of the Cross! Here all the false keys of philosophy break, for the simple reason that there is no keyhole; the only entry here is through the wall. Whatever my friendship for you, my dear Baruzi, I must own that in attempting to illuminate St. John of the Cross with a Leibnitzian glow, in wrenching from his contemplation what for him was the life of his life —infused grace and the work of God in his soul—in making of him I know not what lame giant of the metaphysics of the future, still held by 'extrinsic' superstitions, but living above all to procure for himself, by a process of detachment in which the spirit of man does all the work, a more and more delicate intellectual comprehension of God, and succeeding so well in this that he leads us 'in some manner beyond christianity',[1] you have drawn an image of the saint which he himself would

[1]Jean Baruzi, *Saint Jean de la Croix et le problème de l'expérience mystique*, second edition, p. 230.

have held in abomination, and whose crying falsity, combined with so much zeal, is for the rest of us a subject of astonishment and sorrow.[1] It is not *by faith*, Baruzi, that this *'just man'* of yours lives. This 'theopath' is not suffering from God, but from the sickness of the Sorbonne.

The contemplation of the saints is not in line with metaphysics, it is in line with religion. This supreme wisdom does not depend on the effort of the intellect in quest of the perfection of knowledge, but on the gift of the whole man in quest of a perfect rectitude with regard to his End. It has nothing to do with that 'stultification' which Pascal

[1]Dom. Phil. Chevalier, *Vie spirituelle*, May 1925, and R. Garrigou-Lagrange, *ibid.*, July-Aug., 1925; and the little book of Roland Dalbiez, *Saint Jean de la Croix après M. Baruzi.*

In the second edition of his book Jean Baruzi has had the merit of suppressing some shocking passages and the preface indicates that he is more appreciative to-day of the scale and difficulty of the problems on which he touches. Nevertheless, at the bottom, his thought has in no way developed. Does he not still say (p. 674) that 'when the mystic has attained a certain noetic purity, he separates himself from what Leon Brunschvieg, with profound observation . . . calls "naturalistic psychism" and adopts instead "intellectualist idealism" '? Misunderstanding the very essence of the mysticism of St. John of the Cross, it is not surprising that he likens it (by certain superficial analogies taken for basic ones, pp. 676-7) to the mysticism of Plotinus (which in itself is sufficiently distant from what M. Leon Brunschvieg calls 'intellectualist idealism'), and that he should hold that, independent of any question of influence, John of the Cross unites with neo-Platonism 'by the most intimate movement of his thought' (p. 677).

In the preface to the second edition, he defends himself against ever having had any intention of 'transposing from the mystical to the metaphysical plane', or of representing 'John of the Cross as absorbed in a God opposed to the living God of Christianity'. I myself have never criticised his intentions; but his philosophy and the interpretations which it inevitably suggests.

If he has loyally underlined that 'this divine birth takes place in the heart of Christianity' (p. 656), the whole of his book has been conceived on the theme that it is *contingently* (with regard to the very mysticism of St. John of the Cross) that this is so: in point of fact this experience is christian, but by a combination, a synthesis between what is essentially mystical and what is essentially christian. 'The soul is nevertheless without limits and God himself is boundless. But the naked soul, the God without mode, here combines for the soul touched by mystical grace, with the God in three Persons of theological Christianity. . . . This *synthesis* is accomplished in him, more livingly than perhaps in any other catholic mystic, because to an intense love of a God who is Father, Son and Holy Spirit *is joined* the pure adhesion to the essential Divinity, to the "Deity", and, although the term does not figure in his language—to the One' (p. 674-5. The italics are mine). Cp. *infra*, chap. viii, pp. 464-9.

It is a dangerous temptation for a philosopher, when retracing and rethinking the history of another mind, to believe that it is his office to lead that mind to the full truth

recommended to the proud (its presence is a sign that pride has already fallen); but it knows so well that it no longer dreams of knowing. This highest knowledge presupposes the renunciation of knowledge.

The saints do not contemplate in order to know, but to love. And they love not for the sake of loving but for the love of Him that they love. It is because they are in love with God that they aspire to that union with God which love desires, loving themselves only for his sake.[1] Their aim is not to exult in their own intelligence or nature and so

of its nature, to which in itself it is supposedly unable to come. History reminds the philosopher than there is no other God than God, and that it is not in our power to re-engender the creative Ideas. There is also an equal risk of imposing on the hero of one's imagination obedience to one's own gods. In Baruzi's eyes the most authentic spiritual flight of St. John tends to a pure knowledge, which by infinitely surpassing, by an incessant auto-destruction of knowing, every mental condition and every perceptible datum, makes us transcend our nature not indeed by entering into the depth of *supernatural realities* mystically attainable in their own proper mode, but only by entering into a *mode* (without modes) of knowledge, into a realm of non-knowledge higher than our manner of experience and comprehension, and where we can know better the same realities as are the objects of metaphysics and philosophy, 'Being' (p. 448), 'things' (p. 584), 'the universe' (pp. 585, 685), 'the divine One' (p. 675). (On p. 639 and p. 645 it is a question of 'cosmic ecstasy' and 'cosmic discovery'.) Baruzi severs 'mystical faith' from 'dogmatic faith' (p. 448, cp. pp. 510–11, 600–1, 659), which is directly contradictory to the thought and the experience of John of the Cross; and if he does not ignore the part played by love in his mysticism, he singularly reduces its rôle and does not show its bearing; his exposition invincibly gives the impression that love in this form of mysticism, as in neo-Platonism, is a sort of metaphysical *nisus* destined to make us 'enter into a new world' (p. 611), simply the means of a transcendent 'noetic'; whereby he exhibits a complete misunderstanding of the most central and most personal stuff of St. John of the Cross, his sovereign and vital certitude of the primacy of love.

Some lines of Jean Baruzi (*Final Note* to the second edition, p. 727) obliged me to give these precise details. If I have criticised him sharply it is because in my eyes the problems upon which he touches, and which for him also are of capital importance, do not belong to the regions of pure erudition, but involve essential truths; and also the esteem with which, despite all my charges, I regard Baruzi's great endeavour, makes me deplore that so much human labour makes him run the risk of concealing from himself the message of the very saint he intended to honour.

[1]Then the love of self *secundum rationem proprii boni* does not disappear, but its act gives place to that of the love of charity where a man loves himself *propter Deum et in Deo* (*Sum. theol.*, II-II, 19, 6; 19, 8 ad. 2; 19, 10), and which, in fulfilling and raising it up, contains in itself the natural love which each bears to his own being and, more than to his own being, to God (I. 60, 5; II-II, 25, 4).

abide in themselves: it is to do the will of Another and contribute to the good of Goodness.[1] They do not seek for their soul. They lose it, they have it no more. If in entering into the mystery of divine sonship, in becoming *somewhat of God himself* they gain a transcendent personality, an independence and a liberty which nothing in this world can touch, it is by forgetting all this so that not they but their Beloved lives in them.

As for the antinomies which the 'new mystics'[2] discover in traditional mysticism—because they have made for themselves an artificial idea of it, vitiated by solemn modern prejudices about the life of the spirit—I freely grant that indeed they characterise a great deal of philosophical pseudo-mysticism. (And the neo-mystics themselves will have some difficulty in escaping from them!) Brought into contact with authentic mystical life they lose all their significance. This is no 'creative will' in search of the direct exaltation of pure adventure and an infinite surpassing, no 'magic will' seeking the exaltation of itself in mastery of the world and achieved possession. Here love (our philosophers always forget it and yet it is key of it all), here charity makes use of knowledge—which it itself, under the action of the Spirit of God, makes savourous and present—to adhere more utterly to the Beloved. Here the soul seeks neither self-exaltation nor abolition; it seeks to be united with Him who first loved it. For here God is not a word but a reality, a Reality, rather a Super-reality, which exists from the beginning, before us, without us: not humanly, not angelically, but only divinely comprehensible, and who makes us divine for that end; a Super-spirit whose seizure does not limit but makes illimitable the finite spirit, Thou living God, our Creator. One question, John Brown, before you begin any discussion of mysticism: your Mr. Peter Morhange, is he created?

The contemplation of the saints does not proceed from the spirit of

[1]Cp. St. Thomas Aquinas, *Sum. theol.*, ii-ii, 26, 3 ad. 3: 'Hoc quod aliquis velit frui Deo, pertinet ad amorem, quo Deus amatur amore concupiscentiae; magis autem amamus Deum amore amicitiae, quam amore concupiscentiae; quia majus est in se bonum Dei, quam bonum, quod participare possumus fruendo ipso; et ideo simpliciter homo magis diligit Deum ex charitate, quam seipsum.' Cp. also Cajetan, *In II-II*, 17, 5.

[2]Cp. Henri Lefebvre, 'Positions d'attaque et de défense du nouveau mysticisme', *Philosophies*, March 1925.

conceptual formulas of dogma communicate to our human intellects, how can it not surpass all distinct notions, every sign which can be expressed, to cling in the experience of love to that very reality which is the first object of faith? Here we are at the antipodes of Plotinus. Here is no question of an intellectual elevation above the intelligible, of rising by metaphysics with its careful ladder of dialectic regulations to the abolition—which is still itself natural—of natural intellection in a super-intelligibility of angelic ecstasies. This is a question of a loving self-elevation above the created, of self-renunciation and renunciation of all other things in order to be borne on by charity, in the trans-luminous night of faith, under divine direction, to a sovereign supernatural knowledge of the boundlessly supernatural, where love will transform us into God. For, 'indeed, indeed we have only been created for this love.'[1]

No, metaphysics is not the doorway into mystical contemplation. That door is the humanity of Christ, by which grace and truth have been given unto us. 'I am the door,' he has said himself, 'if any man enters in by me he shall be saved, and he shall go in and out and he shall find pasture.' Entering through him the soul mounts and penetrates into the obscure and naked contemplation of the pure Godhead, and descends again in the contemplation of the divine Humanity. And here, as there, the soul finds pasture, and feeds upon its God.

In every sign, concept or name, there are two things to consider: the object itself which is made known and the manner in which it is made known. In all the signs used by our intelligence in order to know God, the *manner* of significance is both deficient and unworthy of God, being proportionate, not to God, but to what is not God, in the degree to which the perfections which pre-exist in a pure state in God exist also in things. In the same imperfect manner in which created things show forth God from whom they proceed, our ideas, which attain first of all and directly created things, make God known to us. The perfection which they signify, and which can—in a transcendental order—exist in an uncreated as in a created state, has essentially to be signified by them as it exists under limited, imperfect and created conditions. In the same way, all the names by which we name God, while all signifying one and the same unutterably one and simple reality, are nevertheless not

[1]St. John of the Cross, *Spiritual Canticle* (second redaction), str. 28.

synonyms, since they signify, in the way in which they are divided up and shared among creatures, the perfections which pre-exist in God in a state of sovereign simplicity. God is subsistent Goodness as He is subsistent Truth and subsistent Being itself, but the Idea of Goodness, of Truth and of Being, if it subsisted in a pure state, would not be God.

It follows from this that the names and concepts which properly belong to God keep all their intelligible value and significance in being applied to him: what they signify is *completely* in God, with all that it constitutes for our intelligence ('formally' is the phrase of the philosophers); in saying that God is good we intrinsically qualify the divine nature, and we know that it contains all that goodness necessarily implies. But in that perfection in pure act—which is God Himself—there is infinitely *more* than our concept or our name can conceive. It is in a mode which infinitely overflows our manner of conceiving that it exists in God ('eminently' is the philosophical phrase). In knowing that God is good we yet remain ignorant of the divine Goodness, for it is good as nothing else is good, true as nothing else is true; he is like nothing that we can know. 'Thus', says St. Thomas, 'the word wise, when it is applied to a man, *describes* and encloses in some manner the thing signified: but not when it is applied to God; then the signifying word remains uninclusive and uncircumscribing, and he exceeds the significance of the name'.[1]

All knowledge of God by ideas or concepts, whether acquired, as in metaphysics and speculative theology, or infused, as in prophecy—all purely intellectual knowledge of God this side of the beatific vision, though it may be absolutely true, absolutely certain, and may constitute an authentic and supremely desirable form of knowing, remains irremediably deficient, disproportionate by its very mode of grasping and signifying the object signified and known.

It is clear that if it can't be given to us to know God, not yet *sicuti est*, by his essence and in sight, but at least in the very transcendence of his deity, making use of a manner of knowing appropriate to the object known, such knowledge cannot be obtained purely intellectually. To transcend all ways of conceiving while remaining on the plane of

[1] *Sum. theol.*, i, 13, 5.

the intelligence, and thus of the concept, is a contradiction in terms. Progress beyond must be by love. Love alone, I mean supernatural love, can effect this transition. The mind here on earth can only overleap all modes in a renunciation-of-knowing, where the Spirit of God, making use of the connaturality of charity and the effects produced in the affections by the divine union, gives to the soul by love the experience of exactly that which no notion either can or may approach. 'Thus, delivered from the sensible world and the intellectual alike, the soul enters into the mysterious obscurity of a holy ignorance and, renouncing all the gifts of science, loses itself in Him who can neither be seen nor seized; wholly given to this sovereign object, belonging neither to itself nor to others; united to the unknown by the most noble part of itself and by reason of its renouncement of all science; finally, drawing from this absolute ignorance a comprehension which the understanding could never have won.'[1]

It seems that the whole of the modern epoch is set under the sign of the disunity of the flesh and the spirit, a progressive dislocation of the human form. It is only too clear that the passage of humanity under the dominion of Money and Technics[2] is marked by a progressive materialisation of the intellect and the general world alike. On the other hand, the spirit, with which our social and discursive activities dispense more and more, can itself claim to be dispensed from directing the fortunes of the organic functions of human life, and enjoy a sort of deliverance—at least, virtually. Jean Cocteau's phrase, 'Photography has delivered painting' can be applied all round. Printing has freed the plastic arts from the pedagogic functions which were incumbent on them in the age of the

[1]Pseudo-Dionysus, *Mystical Theology*, chap. i, 3.

[2]In themselves technical inventions ought to open the way to a life less preoccupied by the material, but by the fault of man they tend rather to the oppression of the spiritual. Does this mean that we ought to renounce technical discoveries or else give ourselves up to vain regrets? That has never been my opinion. But reason must assert her human regulative power. And if it can, without having recourse to purely despotic, and as such inhuman, solutions, that materialisation of which I have spoken may be surmounted, at least for a time. I am in no way claiming to plot out the curve of necessity for events, but merely endeavouring to disengage, in regard to the actual point in time where we are, the significant tendencies of the curve followed up to the present, and pointing out the fact that human liberty *can* change it.

cathedrals. The phenomenological sciences have freed metaphysics from the necessity of explaining the stuff of sensible nature and from many illusions pursued by the optimism of the Greeks. We can certainly congratulate ourselves on this purification of metaphysics. There are less grounds for rejoicing in the observation of this fact that, in the practical order of the government of things, in the very degree to which heavier material work is demanded of the intelligence, it has divided itself from the life which it has outside time. The earth has no longer need of an angelic mover, man drives it forward with the strength of his own arms. Spirit is gone up into heaven.

Man, for all that, is flesh and spirit, not bound together, but united in one substance. If human things cease to be shaped in human fashion, either seeking their shape in the energies of matter or in the exigencies of a disincarnate spirituality, it implies for man a terrifying metaphysical dismemberment. We may well believe that the shape of this world will pass away on the day when this tension will have reached such a point that it breaks our hearts in pieces.

As to the things of the spirit, their 'liberation' runs the risk of being an illusion—a much worse state than servitude. The constraints implied by the service of men were good for them; though burdensome, they endowed them with their natural weight. What is this supposed 'angel-transformation' of art and knowledge? Is it not more than possible that all this 'purity' will end by losing itself in frenetic brutality? It can only discover itself, only truly be, in the fold of the Holy Spirit. There where the Body is the eagles will gather. If the Christianity of yesterday is in defeat, the Church of Christ continues advancing; little by little she also is delivered, freed from the care of the cities which reject her, from the temporal providence which she exercised according to her rights, for the healing of our wounds. Stripped, dispossessed, when she flies into the wilderness she will take along with her all that remains in this world, not only of faith and charity, but of philosophy, poetry and virtue, which then will be fairer than ever before.

The powerful interest of the present crisis arises from the fact that it is more universal than any other, and lays each one of us under the obligation of a decisive choice. We have come to the parting of the

ways. The West by its prevarications, because it has abused divine grace and let fall the gifts which it should have made fruitful for God, having failed to maintain the order of charity, finds that it has lost also that of reason, which is everywhere corrupted, and which no longer suffices for anything. The malady of rationalism has brought about a discord between nature and *the shape of reason*. Nowadays it is becoming very difficult to remain human. We must take our stand either above reason and so for it, or below reason and against it. But the theological virtues and the supernatural gifts are the only things which are above reason. On every side—among the new humanists as from the partizans of dialectic materialism (as yesterday from the followers of Barrès)—we hear the cry: spiritual ideals, spiritual things! But, gentlemen, what spirit are you invoking? If it is not the Holy Spirit, you might just as well invoke the spirit of wood alcohol or the spirit of wine. All this self-styled spirituality, all these super-rational claims, if they are not rooted in charity, only lead in the end to animalism. Hatred of reason will never be anything but the insurrection of the tribe against specific differentiation. Dreaming is the exact opposite of contemplation. If purity consists in a perfect abandonment to life according to the senses and the mechanism of the senses, there is more of it in a brute beast than in a saint.

The world, that world for which Christ would not pray, has made its choice in advance. To deliver himself from the *forma rationis*, to flee far from God, in an impossible metaphysical suicide from the cruel and saving order of the eternal Law, is the vow which twists the flesh of the old man, as it was that of the eldest son of the morning when he fell like lightning from heaven. To express this absolutely, as fully as is possible for a being who, for the greater part of his time, does not know what he is doing, needs a form of heroism. (The Devil also has his martyrs.) It is an honour without future, rendered to one more than dead... As for the mass of mankind, to judge by the ordinary conditions of human nature, one might well believe that they were riding for the same fall, but with neither will nor courage, anaesthetised by the ideal. That fall is so terribly easy!

But is it always an error to judge only according to nature. Grace is there, and has surprises in store for us. While the old world continues

its glissade, the truly new is already with us, that secret invincible urge of the divine sap in the veins of the Mystical Body, which endures and does not grow old, the blessed awakening of souls under the signs of Our Lady and the Holy Spirit. O Wisdom stretching from one horizon of the world to the other, who bringest together in one the farthest extremes! O Promise bringing beauty to these times of our misery, who fills our hearts with joy! Unfaithful as they have been to their vocation, turning from the Church of their baptism, everywhere blaspheming the name of Christ in giving the name of 'christian civilisation' to that which is only its corpse, the Church loves the nations without need of them, who have such need of her. It is for their good that the Church, making use of the only culture in which human reason has almost achieved success, has tried for so long to impose a divine form on earthly matter, and to rouse and so maintain in perfection, in the gentle order of grace, human life and that of the reason. If European culture is in danger, she will save the essentials and know well how to raise up to Christ all that can be saved of other cultures. She harkens stirring in the heart of history another world, which no doubt will persecute her as the old one has done (is it not her mission to suffer persecution?) but in which she will discover the possibilities of new action.

Understood in the sense that Europe would be nothing without the Faith and that its *raison d'être* has been and remains to give the Faith to the world, Hilaire Belloc is right when he says that Europe is the Faith. But in the absolute sense, no. Europe is not the faith and the faith is not Europe; Europe is not the Church and the Church is not Europe. Rome is not the capital of the Latin world, but of the world. *Urbs caput orbis.* The Church is universal because she is born of God, with her all the nations of the world are at home: the arms of Her Master extended on the cross are extended over all races and all civilisations. She does not bring 'the benefits of civilisation', but the Blood of Christ and supernatural Beatitude. A marvellous epiphany of her catholicity seems in preparation in these present days, of which the progressive development in the missionary countries of a native priesthood and episcopate may perhaps be regarded as the forerunning sign.

For long asleep on the borders of history and now stricken with our follies, the East is as sick as the West. But here as there, we shall see

everywhere where a living faith strikes root, an adherence to what is truly above reason, to the uncreated Truth and the wisdom of the saints, bringing in its train (though certainly not without effort) the restoration of the order of reason itself, implicit in the very conditions of supernatural life. Thus the Gospel and philosophy, mysticism and metaphysics, the divine and human life are in concert. It is not to a European, but to a Bengali that we owe the great project of Brahmanandav, continued by his disciple Animananda: the foundation in Bengal of a contemplative congregation, whose members, religious mendicants resembling Hindu *sannyasis*, will carry all over India an Indian exemplification of catholic sanctity who, without ignoring the Vedantas, will base their intellectual life on the doctrines of St. Thomas.[1] I delight in this homage to the virtue of Thomism. Thomism, the gift to the entire world of mediæval christianity, belongs neither to one continent nor to one century; it is universal like the Church and like truth.

I for one can never despise the distress and expectation of those who feel that all is lost and who wait for the things to come. But the real question is: which do they in reality expect—Antichrist or the Parousia? We—we look for the resurrection of the dead and life of the world to come. We know what we await and that it surpasses all intelligence. There is a difference between not knowing what one expects and knowing that what one expects cannot be conceived.

'Adrian, yet a pagan, asked the martyrs, "What reward do you hope for?"

' "Our lips", they replied, "cannot say it nor men's ears hear."

' "You know nothing of it then? Neither from the law nor from the prophets? Nor from any other scripture?"

' "The prophets themselves could not conceive it as it needs to be understood: for they were but men who worshipped God and what they had received from the Holy Spirit they uttered again in words. But of that glory it is written: eye hath not seen and ear hath not heard,

[1]Michel Ledrus, S.J. *L'Apostolat bengali*, Louvain, 1924. In China an entirely Chinese catholic congregation, the Little Brothers of St. John Baptist, was founded by Fr. Lebbe in 1928 Generally, those who know China best think that the best of its ancient spiritual heritage in these days can find only in Catholicism any chance of escaping from the elementary materialism which the young are imbibing from the West.

neither hath it entered into the heart of man to conceive the things which the Lord hath prepared for them that love him."

'Hearing these things Adrian leapt into the midst of them, crying: "Count me also among those who confess the faith with these saints, I also am a christian." '[1]

[1]Bonmus Mombritius, *Sanctuarium seu vitae sanctorum*, new edition by the monks of Solesmes, Paris, 1910.

PART ONE

THE DEGREES OF RATIONAL KNOWLEDGE

Chapter I. Philosophy and Experimental Science

Chapter II. Critical Realism

Chapter III. Our Knowledge of the Sensible World

Chapter IV. Metaphysical Knowledge

Chapters II to IV concern Speculative Philosophy, *i.e.* the philosophy of Nature and Metaphysics according to the principles of critical realism.

CHAPTER I

PHILOSOPHY AND EXPERIMENTAL SCIENCE

1. OBJECT OF THIS CHAPTER

IN HIS important book, *De l'explication dans les sciences*, Emile Meyerson declares that 'genuine science, the only science that we may know, conforms in no way and in none of its forms to the positivist scheme of things'.[1] I have not undertaken here the enterprise of showing that the system of critical intellectualism or critical realism,[2] while preserving in philosophy itself and metaphysics their essential forms as sciences, corresponds much more exactly to that vast logical universe which the modern developments of science have revealed: such work would demand a whole treatise. I wish only to draw out in summary fashion from the philosophical point of view the rudiments of such a scheme, such at least as it appears to me to be in the light of the history of science. I will not endeavour to conceal the lacunae in such a sketch: it is indeed subject to many revisions and additions. Such as it is however and despite its insufficiency, I trust that it will enable the reader to appreciate, taken in relation to his own experience, the value of a doctrine which the inertia of many of its partizans and the negligence of modern scientific criticism have caused to be misunderstood for too long.

This chapter is devoted to the relations between experimental science and philosophy; in other words, to a consideration first of all of the experimental stage of knowledge (or that which is particularised according to the various sciences and phenomena of nature) in relation

[1] Emile Meyerson, *De l'explication dans les sciences*, Paris, 1921.

[2] These phrases seem the best description for a philosophy for which no simplifying label is adequate, because it has for object a vantage point where empiricism and idealism, realism and nominalism are alike surpassed and reconciled. On the notion of critical realism see *infra*, chap. ii.

to the higher stages, where knowledge is at once universalised and unified. It is like an introduction to the three following chapters, where an attempt is made to envisage the general conception of philosophical knowledge in critical realism, a standpoint which will imply at once a deeper treatment of these problems and a wider synthesis.

Reserving for the next chapter an examination of the bases of the thomist noetic, its principles and metaphysical substructure are here taken as hypothetically admitted; *i.e.* the assumption of the existence of things apart from the mind and the possibility of the mind's awareness of things and of its power to construct, by its own rightful activity rising from the senses, a true knowledge, in conformity with reality. Those readers for whom these propositions remain in doubt can in any case accept them as provisionary postulates, and will recollect that they are not in doubt for science itself; it is realist by nature. If the experimental sciences do not therefore constitute an ontology of nature, at least, in the observation of so well-informed a philosopher as the one quoted above, a background of ontological values is in fact invincibly prerequisite to them.

OF SCIENCE IN GENERAL

What idea can we form of science in general, taken as of the foremost limit envisaged by the mind when it is aware of striving towards what men call knowledge?[1] The idea which Aristotle and the ancients had of it is very different from that of the moderns, because, for the

[1]It is clear that these personal limits can only be culled, by reflective abstraction, from the various sciences which have been already built up among men. Nevertheless it is not merely a question of a simple residuary mean (a statistical 'totality') reached by *abstractio totalis* or the abstraction of a logical generality, but of a pure type (an ideal 'formality') reached by *abstractio formalis* or the abstraction of the formal constituents. (See *infra*, p. 46-7). The various existing sciences such as they are, from which this pure type is disengaged, are far from presenting an adequate realisation of it.

It is to a succedaneum of this *abstractio formalis* (a conception which is lacking to most modern philosophers) that E. Husserl has recourse when he applies himself (cp. *Méditations cartésiennes*, pp. 7-11) to 'live' by meditative scientific effort and so grasp the 'intention' of science, which in fact is only possible by more or less implicit reflection on the really existing sciences. On the other hand, the cartesian method followed by Husserl obliges him to provisionally characterise as invalid the sciences from which he derives his very idea of science. If on the contrary I hold to the perspective of

latter, it is the high position occupied by the experimental, the positive, the natural sciences, the sciences of phenomena as people like to call them, which attracts to itself the notion of what science is; whereas, for the ancients, it was the eminent dignity of metaphysics which *orientated* this notion. It is therefore very necessary to guard against any tendency to apply the aristotelian-thomist conception of science as such, and without precautions, to the whole vast mass of noetic material which our contemporaries habitually call by that name. To do so may lead to the worst misunderstandings. However, both for the ancients and the moderns—in this they are in accord—the clearest, the most achieved type of science, the one most perfectly adapted to our understanding,[1] is furnished by mathematics; and it is possible to hold that, on condition, I do not say of being corrected and adapted, but rather of being sufficiently penetrated and clarified, the critical intellectualist or critical realist theory of science, whose principles were laid down by the metaphysicians of antiquity and the middle ages, can alone enable us to see our way clearly through those epistemological problems which in these days have become a veritable chaos.

How then can we define science in general according to its ideal type? We can say that science is a form of knowledge perfect in its mode; more precisely, a form of knowledge where, constrained by evidence, the mind assigns to things their reasons of being, the mind being only satisfied when it has attained not only to a thing, to a given datum, but when it grounds this datum in being and intelligibility. *Cognitio certa per causas*, said the ancients, knowledge by demonstration (in other words, mediately evident) and explicative knowledge. We see

that spontaneous realism postulated in fact by the sciences themselves, it is because I am presupposing that critical reflection (which I treat in the next chapter) can take cognisance of the validity of knowledge in general and, in consequence, of the less general and less indeterminate validity of the various sciences.

[1]That mathematics constitutes in itself the type of science most perfectly adapted to the human intellect (it has its infant prodigies), is exactly true in regard to classical mathematics; it is not exact of a mathematics where the axiomatic has entirely excluded intuition. It is as true that the axiomatic method, precious as it may be, 'cannot suffice in itself' nor 'justify itself solely by its own existence. . . . It is impossible, without removing its profound significance and its inward life, to isolate an abstract science —such as mathematics—from its intuitive origins'. (F. Gonseth, *Les Fondements des mathématiques*, Paris, 1926.)

at once that it is a knowledge so based that it is necessarily true, that it cannot not be true or in conformity with that which is.[1] For it would not be a knowledge perfect in its mode, an *irrefragable* knowledge if it could be found false. This is true for the pure type of the sciences, however hypothetical it may be for their developments and the very large measure of the probable and the conjectural with which they back their certitudes and which they propound nevertheless with rigour.

But if this knowledge is necessarily true must not the object which it assumes also be necessary? How can a variable and contingent object give rise to a stable knowledge which cannot be found false? In the same way a thing could not be *explained*, would not have given up its reasons to us, if the reasons posited for its being should prove to be otherwise. This is the problem which from the very beginning has faced philosophical reflection, and which led Plato to the construction of his world of divine Ideas. We must not try to escape by some half-hearted reply which would obscure the primary exigencies of scientific knowledge. Let us agree from the start—we shall see in a moment how this assertion must be understood and delimited—that there is only a science of the necessary, or that the contingent as such cannot be the object of science. Science bears directly and in itself on a necessary object.

The difficulty is at once apparent. The object of science is necessary. But the real, the concrete course of things, allows of contingence; this table need not be here to-day, I myself who write need not be here at this moment. Does science then not bear on the real? No, it does not bear directly on the real in the raw, on the real taken in its concrete and singular existence. (In this sense, M. Goblot is right in insisting on the difference between *reality* and *truth*.) But no more does it bear on a platonic world separated from things. It is indispensable to distinguish the *thing* with which science is occupied (this table for example) and the precise *object* (the 'formal object') on which it is based and from which it derives its stability (*e.g.* the geometrical principles of this table considered in terms of its form, or the psychico-chemical properties of the

[1]Taken in itself, its systematic attachments being abstracted, the notion proposed by E. Husserl of scientific truth 'conceived as a body of predicated relations founded or to be founded in an absolute manner' (*Méditations cartésiennes*, 1931, p. 10) does seem to be very far removed from this conception.

wood of which it is made, or the laws of its manufacture)—an object which does not exist in separation from the thing (unless for our minds) and which nevertheless is not confounded with it.[1] Science bears directly and in itself on the abstract,[2] on ideal constancies and supra-momentary determinations, what can be called the intelligible objects which our mind seeks in the real and to disengage from it. They are there, they exist, but not in the state of abstraction and universality which they hold in the mind—on the contrary, under concrete and singular conditions. Human nature exists in each one of us. But it is only in the mind that it is a universal nature, common to all men. In each one of us it is the nature of Paul or the nature of John, etc

It should be observed that scientific law always only expresses (more or less directly, more or less distorted) the properties or the exigencies of a certain ontological indivisible which in itself does not fall under the ken of the senses (is not observable) and which remains for the natural sciences an x (which is nevertheless indispensable) and which is none other than what philosophy designates by the name of *nature* or *essence*.[3]

[1]It is distinguished from it by a rational distinction.

[2]I do not ignore the fact that the idea of abstraction and of abstract natures is repugnant to the avowed or unavowed nominalism of many of our contemporaries. Are they, for all that, aware of the curious spectacle which they present when, denouncing the vanity and worn-out quality of such a notion, they themselves talk of 'science', 'the mind', 'method', 'mathematical reasoning', all those objects of thought which it is oddly difficult not to recognise as abstract natures? They are in pursuit of a phantom, for the critical intellectualism of an Aristotle or a St. Thomas never, as they imagine, made scientific abstraction consist in fitting an individual object into a logical pigeonhole or a hypostasied generalisation of its characteristics, but in disengaging from it the reality which can be thought and made consistent for the mind, the complex intelligibility of which it is the carrier. This latter is what the scholastics called *abstractio formalis* (see *infra*, p. 46).

From this *abstractio formalis* the scientific mind can in no way escape. Whatever be the mode of intellectual procedure, even if it only postulates the equation of phenomena and the fixing of their empirico-mathematical connections, and renounces any search for the essence, abstraction is always present, and it is it which allows the establishment of rules of measurement and the calculus by which phenomena are adapted to a mathematic formulation, and it is by it that that empiric specification of phenomena is disengaged, which is itself a substitute for the essence and presupposes its existence.

[3]Let me quote two significant passages used by E. Meyerson: 'Whatever can be said of the modern scientific schools, where there is above all a dread of the appearance of metaphysical argument, mitigated atomism, just as much as pure atomism, implies the

By virtue of the ontology (or spontaneous philosophy) immanent in our reason, we *know in advance* that the complex of phenomena or of relations chosen as an object of observation has its support on such natures or essences, such an ontological x. The experimental sciences do not penetrate to these essences in their intelligible constitution, and even the question of knowing whether the more or less provisional and unstable categories which they construct and on which they work in the course of their reasoning corresponds exactly to them, remains often decidedly doubtful. Nevertheless, the *raison d'être* for the necessity of the stable relations among the elements chosen by the mind from phenomena formulated by the sciences and on which they construct their foundations resides exactly in these presupposed *ontological non-observables*. The necessity of these laws comes from the fact that they are concerned rightly and in the end with essences or natures, and that these essences or natures are the ground of intelligible necessities: for every nature or essence, by its intrinsic constitution, necessarily possesses such properties (as the diagonal of the square is incommensurable with the side) or tends necessarily to produce a given determined effect in given conditions (as 'heat' causes the expansion of 'solids'). What is rightly meant by the law of the expansions of solids by heat? Does it mean that, in some concrete case, the expansion of a certain piece of iron placed above a certain flame is a necessary and inevitable thing? No, that particular flame might not have been lighted, that piece of iron might not have been placed there, it might have been protected by some insulator, cooled by some current of water, etc. What the law means is that a *solid* (an abstract object which I consider in this piece of iron) holds in the secrets of its nature something unknown (at least in the present sphere of my ob-

claim to penetrate in some manner to the essence of things and to their inward nature' (Cournot, *Traité de l'enchaînement*, Paris, 1861). 'We seek for the essence or the necessity of each thing and the two expressions are equivalent, for, when we know the essence, we see that the being to which it belongs cannot be . . . different from what it is' (Sophie Germain, *Considérations générales sur l'état des sciences et des lettres aux différentes époques de leur culture*, 'Œuvres philos.', Paris, 1878). Bertrand Russell, for his part, says that 'logic and mathematics compel us to admit a form of realism in the scholastic sense of the word, that is, to admit that there is a world of *universals* and of truths which do not bear directly on this or that particular existence. This world of universals must exist, although it cannot exist in the same sense in which the given particulars exist' (*L'importance de la logistique*, Rev. de Met. et de Mor., May 1911).

servation, which perhaps some day experience will oblige me to make more precise[1]) which necessarily and immutably causes it to expand according to certain specific co-efficients under the action of *heat* (an abstract object which I consider in this flame and which I can define, thanks to a difference in certain pointer readings).

It goes without saying that I need not realise these abstractions as such, heat could rather appear to me as the kinetic energy of a multitude of molecules moving about in disorder, in such a way that on the corpuscular scale the law in question becomes a statistical one, only enunciating the stability of the resultant average. But if the essence or nature with its *determinatio ad unum* so recoils (and perhaps *ad infinitum*) from the gaze of the scientist, it does not, for all that, disappear from the field of the real. Absolute hazard is a contradiction in terms; an intersection not predetermined by predeterminations presupposes predetermination. To know at what age one dies according to such and such a percentage, an actuary only relies on statistics and the law of the greatest numbers. But behind this law and behind statistics there is the nature of the human body, and the nature of all manner of physical, moral and social things, in the midst of which that body is placed and to the accidents of whose action it is subject. Chance only gives rise to fixed numbers because there are originally predetermined elements, which are not by chance, among which it can play. If the 'primary' laws or specific determinations are succedanea of natures or essences not attained in themselves, statistical laws are succedanea at two removes and presuppose, like the others, that these natures *are* the final bases of the stability of knowledge.

To the question, why does the necessity of laws, the objects of science, not extend to every particular event which happens here on earth, it is therefore necessary to reply: because the world of existence in act and of concrete reality is not the world of pure intelligible necessities. These essences or natures are certainly contained in existing reality, whence they (or their succedanea) are drawn by our minds, but not in a pure state. Every existing thing has its nature or essence, but the

[1]Such a reservation is necessarily understood in regard to every law established by induction. And the law of the dilation of solids by heat has been established purely inductively before being attached to a physical theory of heat.

existential position of things is not implied by their nature, and events occur among them which in themselves are not derived from these natures and which no one nature essentially implies. Existent reality is thus composed of *nature* and the *adventitious*: that is why there is a meaning in time and its duration constitutes (irreversible) history—for history implies these two elements; a world of pure natures does not change with time, platonic archetypes have no history, and a world of pure chance would lack any orientation, a thermo-dynamic equilibrium has no history.

NECESSITY AND CONTINGENCE

We see, therefore, that the true notion of abstraction and of the universal gives us the explanation for which we sought. If we do not distinguish between the individual thing and the universal essence we can not comprehend how the *event* can be *contingent* while the *law* recognised by science is *necessary*, how things flow and change while the object of science is in itself immutable and enduring. It is so because contingence depends on the singular as such (and in fact, in the visible world, on matter, the principle of individualisation) while science is based, not on the singular as such, but on universal natures which are realised in the singular and which the mind draws from the singular by abstraction.

Science deals with things, but with things, thanks to abstraction, as part—whether this is clearly perceived or blindly grasped—of the universal natures which are realised in things and the necessities proper to those natures. And this—and not the flux of the singular—constitutes its object.[1] Contingence is rightly concerned with singular events and it is only 'according to the reasons of universal natures' that the necessities recognised by science apply to singular things. This is why the necessary laws of science do not essentially affect every singular event in the course of nature. A workman has cut this stone into a cube, being a cube it must necessarily have the geometric properties of a cube; but it might have been cut otherwise. This bridge has been faultily constructed

[1] '*Illa proprie ad singularia pertinent quae contingenter eveniunt; quae autem per se insunt vel repugnant, attribuuntur singularibus secundum universalium rationes.*' (St. Thomas, *In Perihermeneias*, book i, chap. ix, lect. 13, sect. 6.)

because the engineer calculated the resistances badly, or the materials were bad because the contractor cheated the state: it is fated that, because of the natures of iron and of stone, one day the bridge will collapse; but the miscalculations of the engineer or the lack of honesty in the contractor, or that a prudent inspector might not have given orders for its repair, or that such and such a pedestrian should be crossing at the moment of the accident, all these things are entirely independent of any natural necessity and belong to the contingent. These contingencies of the singular escape the grasp of science. These necessities of the universal are the proper object of its grasp.[1]

Thus the *universality* of the object of knowledge is the condition of its *necessity*, in itself the condition of perfect knowledge or science. Exactly as knowledge can only be of what is by necessity, there can only be knowledge of the universal.[2]

This is the meaning in the teaching of Aristotle, following Plato, that there can only be science, absolutely speaking, of incorruptible and sempiternal things, but he corrected Plato by adding that these incorruptible and sempiternal things (incorruptible and sempiternal in so

[1]'It can be predicted with certainty that half the children born to-day will live beyond the age of *n* years; yet this does not tell you what age young X will reach. The eclipse of 1999 is as certain as the life-scale of an insurance company; the leap that an atom is going to make is as uncertain as my life or yours.' (A. S. Eddington, *The Nature of the Physical World.*) It seems as though the ever increasing importance of the place taken by statistical laws (I am not speaking here of the 'uncertain relations' of corpuscular mechanics, which will be in question later on, but simply of the multitude of fortuitous shocks which ultimately depend on 'the leap of an individual atom or molecule') could be regarded as an illustration of aristotelian ideas on the link between the contingent and the singular. Statistical law thus presents itself, as I have indicated above, as the succedaneum at two removes of the intelligible necessities inscribed in the universal which experimental science is not able to decipher.

[2]It is important here to avoid a too easy misunderstanding. I said that there is no *science* of the individual *as such*. This in no way signifies that it is impossible to have an *intellectual and indirect* knowledge (by means of 'reflection' from the senses—or by affective connaturality) of the individual as such. I will even admit, with John of St. Thomas, the existence of a rightful (indirect) concept of the singular.

Nor does this mean that it is impossible to have a *science* of the individual—but not *as such*, (*e.g.* in his singularity, its incommunicability in itself). Character-reading, graphology, the science of temperaments, etc., are sciences of the individual, which, to attain the singular, surround it with a network of sub-specific universal notions and in addition employ an art or experience where the *ratio particularis* plays an essential part.

far as they are essences or *negatively*) are those universal natures which only exist outside the mind in singular and perishable things, and that so it is possible to have 'by accident' a science of corruptible things: in so far as we apply the universal truths of science to singulars and the intelligence, 'leaving so to speak its proper sphere, returns, by the ministry of the senses, to those corruptible things where the universal finds itself realised'[1]. 'Although sensible things', says St. Thomas, 'are corruptible, taken in their individual existences, they have nevertheless a certain eternity when taken universally.'[2]

And so, since the demonstration and knowledge of sensible things can only be under the aspect of their universal natures, not of their individuality, it follows that this knowledge and demonstration bear only indirectly and 'by accident' on the corruptible, and in themselves on what is 'sempiternal'. The condition of the immutability and necessity of the object of knowledge is its universality.

The whole of this doctrine is admirably condensed by St. Thomas: 'The intellect may know the universal and necessary reasons of contingent things. This is why, if we consider the universal reasons of objects of knowing, all science is of the necessary', even though, taking things in their material aspect, and 'considering those things with which the science is occupied, certain sciences'—such as mathematics for example —'have necessities as their subject-matter, and others'—physics, for example—'contingent things.'[3]

A DIGRESSION ON 'NATURAL DETERMINISM'

Thus we see that the error of pseudo-scientific mechanism presupposes and includes the error of nominalism. If the universal does not, either directly or indirectly, stand for an essence or nature, but only for a collection of individual cases, it is impossible any longer to comprehend how scientific law can be of necessity and the succession of singular events contingent. What the mechanists fail to understand is that the

[1]Cajetan, *In Anal. Post.*, book i, chap. viii.

[2]'Etsi enim ista sensibilia corruptibilia sint in particulari, in universalia tamen quamdam sempiternitatem habent.' (St. Thomas, *In Anal. Post.*, book i, chap. viii, lect. 16.)

[3]*Sum. theol.*, i, 86, 3.

law expresses nothing but the ordination of the cause, *taken abstractly in its universal nature*, to its effect—and that this ordination always remains the same, even if the position of the cause in actual existence is contingent, or if, in the flux of particular events, another cause presents an obstacle to the realisation of its effects.

If we suppose that no *free* (intelligent) agent exists in the universe then obviously any event happening here on earth (*e.g.* the fact that this squirrel is climbing on this tree at this moment or that the lightning strikes at any one moment on any one mountain) was infallibly predetermined by the concatenation of *all* the factors of the given universe from the beginning. But there is only necessity *de facto*, not *de jure*. Not only could this concatenation of factors have been other in the beginning, but, still more, none of the innumerable encounters between different causal successions which have been produced in the course of the evolution of the world up to the production of this event had its full and sufficient reason in the essential structure of the universe, nor in any particular essence; the secondary causes productive of this event *in themselves* might (even if they might not in relation to all the multitude of precedent and concomitant positions of fact, supposing that these in themselves were not disturbed) have been prevented from producing it, without the violation of any rational necessity. It is in itself a *contingent* event[1] (and in consequence the supposition of a free agent intervening to modify or prevent it implies not the least impossibility).

These remarks show in what sense it is possible to speak of *natural determinism*. This expression is legitimate if it is understood as meaning that every cause in nature is necessarily determined, or by its essence, to an effect (which can in fact be lacking if the cause is not posited or other causes intervene), and that such necessary determinations are the object of the sciences of nature—or, rather, their basic foundation (for the more they free themselves from ontology in their texture the more they also become remote from causality in the philosophical sense of the word).[2] But it is erroneous and a pure fit of stupidity to say that science presupposes 'the universal determinism of nature', if what

[1] On this question see my *Philosophie Bergsonienne*, second edition.

[2] See *infra*, chap. III, pp. 182–6.

is meant is that all events which take place in nature are rendered inevitable and necessary the moment nature herself is posited and that such a universal necessity is the object of science, which should therefore deal with all individual happenings in the world, whereas on the contrary, taken as such, it is exactly those things which by nature evade its grasp.

It is curious to observe how a man like Fichte, for example, was led to construct his 'theory of science' and the immense and fragile fabric of his metaphysic of liberty, in no small degree by the desire for an escape from this 'universal determinism', when a more rigorous critique of it would have sufficed to show him that it was only a troublesome idea and only presented a pseudo-problem. One could make the same melancholy comment on the philosophy of Renouvier and, more generally, on the greater part of the modern systems which have sprung from Kantianism.

The aristotelian-thomist conception, on the contrary, by showing how in the course of singular *events* contingence is reconciled with the necessity of the *laws* recognised by science, enables us to see how it is possible to integrate into nature the liberty which is proper to spirits, which as such do not make part of the sensible and corporeal world, but which nevertheless have in that world their field of action.

ANOTHER DIGRESSION. HOW DO WE ATTAIN TO ESSENCES?

Let me finish off one digression in order to begin another. I have spoken of natures and essences. Does this imply that in my eyes the primary intellectual operation, abstraction, allows us to penetrate at the first shot to the *essence of things* by its intrinsic constitution? That it is sufficient to form an idea of fire, or better, of ignition, to penetrate at once the ontological secret of combustion? That would be chemistry 'without tears', with a vengeance!

A similar reproach forms the basis of the criticism directed by several contemporary philosophers against what one of the more serious of them has christened 'pre-cartesian thought'. It is humiliating enough even to have need to reply. For the charge comes in part from the flaws of a decadent scholasticism, in part from a superficial reading of some

elementary exposition, and most of all from a remarkable ignorance of philosophical tradition.[1]

Abstraction, as has often been pointed out, by the very fact that it transfers us from the plane of sensible and material existence to the plane of the objects of thought, introduces us into the order of intelligible being or of *what things are*, but it does not immediately attain to anything except the most general and poorest aspect of intelligible being, *e.g.* the idea of fire represents to us only *something, some determined being*, which produces certain sensible effects, such as burning and shining for examples. Abstraction shows us intelligible aspects which are certainly contained in things, but the discovery, even in the imperfect way which is native to man, and only by grace of the properties manifest to it, of the very essence of things, *e.g.* the signs which denote their rightful intelligible being and which give the reason of their other properties, is only arrived at—if it is arrived at!—by hard work; I would add that in a whole immense domain, that of the inductive sciences, we do not arrive at it and must rest content with succedanea and working equivalents.[2]

[1]Those philosophers whom I have in mind, if they must talk about St. Thomas without having read him (and read him with the scrupulous accuracy and thirst for information which they ask of others and which they might also well ask of themselves), only need, to disabuse themselves on this point, to divert their haughtiness by a quick study of the very clear pages which have been written on this subject by L. Noël (*Notes d'épistémologie thomiste*, p. 142) and by J. de Tonquédec (*La Critique de la connaissance*, pp. 42, 138, also *Immanence*, Appendix i). See also A. Forrest, *La Structure métaphysique du concret selon saint Thomas d'Aquin*, chap. iii, pp. 72-97; and *infra*, chap. iv, pp. 248-255.

[2]I should like to quote here a remarkable passage by M. Gaston Rabeau (*Réalité et relativité*, Paris, 1927, p. 203), apropos of M. Leon Brunschvicg's book, *L'Expérience humaine et la causalité physique*. 'The analysis of causality, of facts and sequences which science is seeking, gives us an idea of the interpretation of the real which in no way coincides with that rarefied Kantianism which has no fixed categories and where the functions of judgment are indefinitely variable. At bottom, what M. Brunschvieg makes clear is that the essence (by which I mean laws, theories etc.,) is not attained in one stroke, that experience suggests truths rather than imposes them, that the procedure of thought does not isolate the object of knowledge, and that it is necessary from time to time to return by a reflective act to the procedure employed to render them capable of use for more complex tasks. All this is incontestably true and presents no difficulty; it is only opposed to the phantasmagoria of a world of ready-made essences already existing in the mind, to the simple-mindedness of a philosopher who could imagine that he carries in his head the divine plan of the world. Elsewhere, in his

We achieve the possession of an intimate knowledge of the real in philosophy, where things are studied, not from the particular point of view of their specific diversity, but from the point of view of the transcendental *being* which saturates them. But if it is a question of particularising specific essences? In so far as physical realities are concerned, it is only with regard to ourselves and to human things that we can arrive at quidditative definitions and reach an intelligible knowledge of nature in a specific degree. For all the rest of the corporeal world and for all things below us we cannot arrive at the perception of intelligible constituents in themselves and must have recourse to a knowledge inductively constructed from sensible effects alone, which does not give us essences, but simply their exterior signs.

One thing is too often forgotten. If there is a metaphysic which appears to be *de jure* (if not *de facto*) incapable of recognising the proper procedure of the inductive sciences and which manifests an unheard-of dogmatism and intemperate ambition in the field of the knowledge of the corporeal universe, to the point of claiming possession of an exhaustive knowledge of the essence of matter which is presumably so laid bare before our minds, it is the metaphysic of Descartes and of Malebranche, that metaphysic from which, more or less camouflaged with experimentalism, the inevitably mechanistic ideal of most contemporary thinkers is derived: it is not the critical realism elaborated by the ancients.

So, having come to the closure of our second parenthesis, it is possible to define, as it should be done, the position I have already taken up.

L'Analytique transcendentale, M. Brunschvieg points out, as a concrete element which obstructs the deduction of the categories, that irreversible continuance which is the matter of real causality: he signalises the constants which are susceptible of serving as points of reference in various systems; he speaks of that irreducible something which is the very ground of experience. In short, he shows us the fact, with the intelligible nature which constitutes it, and the mind, which, in seeking to assimilate the facts, strives to reconstruct in separated and maladjusted fragments, the presentation of essences. This history of the drama of thought at grips with nature in the effort to reveal her secrets is potently attractive; and it only appears remote from our doctrines because this analysis is bound up with postulates which it does not in fact require.'

THE SCIENCES OF EXPLANATION (IN THE FULL SENSE OF THE WORD) AND THE SCIENCES OF AFFIRMATION

I have said that science as such, and therefore all science, bears, by its direct movement,[1] on natures or universal essences seen as such in these natures. Here a distinction is necessary:

There are sciences which deal with these essences *as known*, not certainly exhaustively, for we know nothing wholly,[2] but at least as known or manifest (externally[3]): these are the deductive sciences, mathematics and philosophy; though they are deductive assuredly for very different reasons: for in mathematical science the mind lays hold on the constituent elements of entities and constructs and reconstructs in its own right what it has drawn from sensible data or built upon them, treating what in the real (when they are *entia realia*) are the accidents or properties of bodies *as if* they were subsistent beings and *as if* the notions which it holds of them were free of any experimental origin; whereas, on the other hand, in philosophical knowledge, the mind lays hold of substantial essences, not in themselves, but by their rightful accidentals, and only advances deductively by a constant revitalisation by experience (the 'analytico-synthetic' method).

These sciences are rightly sciences of EXPLICATION, διότι ἐστιν, *propter quid est*, in the terminology of the ancients; they reveal the intelligible necessities immanent in the object; they make known effects by principles or reasons of being, by causes, taking the word in the full and general sense of the older world. It is possible, it is true, that, when

[1]In distinction to that rational movement by which it *returns* to the singular.

[2]For Thomists, if we could know essences exhaustively (*adequate ut sunt in se*) there would be *as many specifically different sciences* as there were essences so known. Thus our science itself, by the simple fact that it embraces a multitude of different natures under one light and in the same degree of abstraction, attests that the real remains unfathomable to it. Cp. John of St. Thomas, *Curs. Phil.*, log. ii, P. q. 27, a. 1. Reiser, book 1, pp. 819 and 824: 'Ex hoc totum ex eo tandem provenit, quia nostrae scientiae imperfectae sunt et non omnino adaequantur ipsis rebus neque eas adaequate comprehendunt. Nam si quaelibet res perfecte comprehenderetur, quaelibet res fundaret scientiam sibi propriam et specie distinctam ab alia, neque scientia requireret coordinationem specierum, sed quaelibet res per suam speciem adaequatam perfecte repraesentata suas passiones demonstraret.'

[3]See *infra*, chap. iv, pp. 248–51 and 252–5.

confronted with a reality of such a height that its essence can only be known by analogy (as is the case of metaphysics before God), they have to confine themselves to a knowledge of the simple certainty of the fact (supra-empiric[1]), but then they have, so to speak, come out on the further side of explanation, and the fact remains that in themselves they seek to discover the essence of all things.

There are also the sciences which bear on essences *as concealed,* which can never in themselves reveal the intelligible necessities immanent in their object, inductive sciences which (at least in the degree to which they remain purely inductive, which is not the case with modern physics or 'experimental' science, as Mill and Bacon deceived themselves greatly by believing) can only be held to be sciences of empiric AFFIRMATION (a particular case of knowledge in the line of fact, ὅτι εστιν, *quia est*) and which remain on this side of explication in the rightful sense of the word. They enable us to know 'causes' or reasons of being by their effects, not in themselves, but by the signs which are our substitutes for them. We know that heat expands metals, that ruminants have cloven hoofs, and so blindly lay hold on some necessity whose reason we do not see—a well-founded experimental *constant* being the sign of some necessity, and in itself the sign of some essential connection. An inductively established law is thus much more than a simple general fact, it includes, without revealing, the essence; it is the practical equivalent of the essence or the cause which itself remains hidden.

The former sciences, the sciences of explication, set before the mind intelligible objects detached from the concrete existence which clothes them here on earth, essences delivered from existence in time. If no

[1]The *scire an sit* or *quia est* (knowledge by the record or the perspective of fact) is in no way limited to knowledge of an inductive type, for (in opposition to the *scire quid est* or *propter quid est,* which is knowledge in the record of or the perspective of reason of being) this expression includes all knowledge which does not arrive at grasping the essence itself in the totality of its intelligible constituents. For example it is in this way that in a discipline of a deductive type like metaphysics the *scire quia est* plays a very important part, since all knowledge of God which we have here on earth comes from this form of knowing.

As to the nominally inductive sciences, they belong, in the degree to which they are inductive, to the *scire quia est,* and constitute the particular type of this form of knowledge in the domain of natural knowledge.

triangle had ever existed it would still remain true that the sum of the angles of a euclidian triangle is equal to two right-angles. In this sense it may be said that these sciences proffer us eternal truths.

The other sciences, the sciences of affirmation, tend towards such truths, but do not achieve rising above existence in time, precisely because they do not attain to intelligible natures except in the signs and substitutes which constitute their field of experience, and that in a manner essentially dependent on existential conditions, in such a way that the truths enunciated by them not only affirm the necessary link between the predicate and the subject, but also presuppose the existence of this subject: the necessity which they bring to light not being seen in itself, remains absorbed in existence in time—and thereby, if I may say so, saturated with contingence.

Briefly, we can say that science in general deals with the necessities immanent in natures, with the universal essences realised in individuals in the concrete and sensible world. The distinction has been drawn between the explicatory or deductive sciences, which attain to these natures by discovery (constructively in mathematics, and from without to what is within in the case of philosophy), and the affirmative or inductive sciences, which only attain these natures as signs and substitutes, blindly so to say. These latter have assuredly a certain explicative value, without which they would not be sciences, but which consists in indicating the necessities of things by way of sensible experiments, not by assigning their intelligible reasons.

The distinction between these two categories of sciences is absolute: they are mutually irreducible.

It is clear that the sciences of the second category, the affirmative, inductive sciences, being less perfectly sciences, by failing to achieve the full expression of the type of a perfect science, are not in themselves self-sufficient; they reach out by nature towards the sciences of the first category, the sciences of explication in the full sense of the word, the deductive sciences. *They are indeed by necessity subject to their attraction.* In virtue of their very nature as sciences they inevitably tend to rationalise themselves, to become more perfectly explanatory, in other words, to approximate to a deductive type, and in that degree to become subject to the regulation of a discipline properly belonging to such a type,

either philosophical or mathematical. It is an important fact which we must never allow ourselves to forget.

Let us now endeavour to enter further into the domain of the sciences in order to discover their essential divisions and their hierarchy.

For this it is necessary to consider the various degrees of intelligibility of the objects of knowledge. If it is remembered that what philosophers call matter (the existent non-being of Plato) is in the last analysis nothing other than the ontological source of relative unintelligibility (or, in modern terms, irrationality), which affects the very substance of natural things and signifies so to speak the distance which separates them from the intelligibility in pure act proper to uncreated Being, we shall at once understand the fundamental thesis put forward so powerfully by St. Thomas: intelligibility goes with non-materiality. It is therefore by the diverse modes or degrees in which the objects of thought discovered in things by the operations of the intellect are freed from matter that it becomes possible to establish the essential divisions of science. (It is only on these essential divisions that I shall concentrate, without consequently making any claim to enter into the detail of their subdivision and classification; more, I shall only consider the speculative, leaving on one side the moral sciences, which, being concerned with the practical order and proceeding, in a 'composite' manner, to the point of the concrete determinations of an action, belong to an entirely different division of epistemology.)

II. THE THREE DEGREES OF ABSTRACTION

Here our clue is provided by the doctrine of *the three degrees of abstraction* or the three degrees in which things proffer to the mind the possibility of finding in them a more or less abstract and immaterial object, *i.e.* in regard to the way in which that intelligibility is itself derived from premises to conclusions, or, in the last analysis, by the particular mode of definition.[1]

The mind can consider objects only abstracted and purified from matter in so far as it is the foundation for the diversity of individuals in space, in as much as it is the principle of individualisation; in this case the object, in the very degree to which it is present to the mind, re-

[1]Cp. John of St. Thomas, *Curs. Phil.*, Log. ii, P. q. 27, a. 1

mains impregnated with all the signs produced by matter, abstraction consisting only in the removal of all those contingent and strictly individual particulars which are ignored by science. The mind thus considers bodies in their mobile and sensitive reality, clothed with their experimentally verifiable properties. Such an object cannot *exist* without matter and the qualities which are bound up with it, nor can it be *conceived* without it. This is the great dominion of what the ancients called *Physica*: the knowledge of sensory nature. It is the first degree of abstraction.

But the mind can also consider objects abstracted and purified from matter in so far as it is the general ground of the sensible properties, whether active or passive, of bodies. In this case it considers only one property which it detaches from bodies—what remains when all the sensible is removed—quantity, number and extension taken as such: an object of thought which cannot *exist* without sensible matter, but which can be *conceived* without it, *e.g.* nothing sensible or experimental enters into the definition of an ellipse or a square-root. This is the great kingdom of *Mathematica:* the knowledge of quantity as such, in its

[1]A more detailed discussion of the notion of quantity and the proper object of mathematics follows on a later page (cp. chap. iii, pp. 173-6 and chap. iv, p. 250). It should be noted, however, at once, that in making quantity as such, or ideal quantity, the object in general mathematics, I in no way intend the exclusion from the domain of mathematics of all qualitative determination. On the contrary; if it is a question of the qualities or formal determinations included in the notion of the entities under consideration, or of those 'irrationals' which are at the origin of their construction, *e.g.* those primary specifications which serve to define the structure of a continuum or which in the last analysis spring from a given fact (as is the case for the three-dimensional nature of space in classical geometry), it is obvious that no science of quantity is possible without qualities. *Analysis situs*, the theory of abstract spaces, those properties of order which are at the bottom of topological notions, witness to the marked importance of this qualitative element as essentially affecting the domain of mathematics But this is a question of the qualities proper to quantity as such, not of the qualities which refer to the nature or radical principle of the activity of bodies, which are reducible to the sensible order (physical qualities).

On the other hand it will be noted that for the scholastics the science of content and the science of numbers, while both belonging, generically, to the second order of abstraction, both present nevertheless in this very order a —specific—difference or level of immateriality: the latter is of higher abstraction and immateriality than the former (cp. John of St. Thomas, *Curs. Phil.*, log. ii, P. q. 27, a. 1; *Phil. Nat.*, i, P. q. 9, a. 2, Vivès, book ii, p. 16). Modern mathematics, while endeavouring to overcome this difference and accumulating thereby the most fruitful discoveries, can in the end only

rightful relations of order and measurement. This is the second degree of abstraction.

Finally, the mind can consider abstract objects from which matter has been entirely eliminated, where nothing remains of things but the being with which they are saturated, being as such and its laws: objects of thought which not only can be *conceived* without matter, but which can even *exist* without it, which may never have existed in material form at all, such as God and pure spirits, or which may equally exist in material and immaterial things, such as substance, quality, act and potency, beauty, goodness, etc. This is the great kingdom of *Metaphysica*: the knowledge of what is beyond sensible nature, or of Being as being. This is the third degree of abstraction.

It must here be pointed out, on the authority of Cajetan and John of St. Thomas, that these three degrees of abstraction apply to the form of abstraction called by the scholastics, *abstractio formalis*.[1] Actually there

enhance and underline its significance. For if geometry and arithmetic have become co-extensive, we are nevertheless justified in thinking that the numeric content in itself presupposes the primary and irreducible notion of extension, and that the irrational number, thanks to which 'the body of numbers' acquires 'the same plenitude or the same continuity as the straight line' (Dedekind), is in reality an arithmetical symbol of an arbitrarily chosen point on a straight line, an indivisible common to the two segments which continue through it (cp. F. Gonseth, *op. cit.*, p. 46). That vicious circle in the method ordinarily used for establishing the existence of irrational numbers, denounced by M. Weyl, only results from the endeavour to establish its existence solely by means of arithmetic, starting from rational and whole numbers. Either way one is obliged to fall back on the distinction between two 'schools' in mathematics and two only: 'the school of enumeration, Arithmetic, and the school of content, Geometry' (Gonseth, *op. cit.*).

It is important to observe in general that the three fundamental degrees of abstraction, which begin *ex parte termini a quo*, as the mind abandons such and such material conditions, only define the great primary determinations of speculative knowledge, within which other variations of level may be found, which spring *ex parte termini ad quem*, in the degree to which the mind itself is the object of a determined degree of immateriality (John of St. Thomas, *op. cit.*, log.). One specific form of knowledge, *e.g.* natural philosophy, can consider objects of very differing universality (cp. St. Thomas, *Comm. in de Sensu et Sensato*, lect. 1), which remain on the same plane of intelligibility as long as the *modus definiendi* remains the same for all. But if it is a question of another method of establishing specific notions, another mode of definition, it is another specific type of speculative knowledge which is in question.

[1]Cajetan, *Comm. in de Ente et Essentia*, procemium, q. 1; John of St. Thomas, *Curs. Phil.*, log. ii, P. q. 27, a. 1.

are two forms of abstraction: *abstractio totalis*, in other words, the abstraction or extraction of the universal whole, by which we derive 'man' from Peter and Paul, 'animal' from man, etc., so progressing by larger and larger universals. This form of abstraction, whereby the mind rises above all simply animal knowledge of the singular perceived by the sense *hic et nunc*, and which commences in reality with the most general and indeterminate notions, is at the bottom of all human ways of knowing; it is common to all the sciences, all science advancing from this order towards greater determination, seeking, so to say, to bind up its object in the notion proper to it, not as obscured by a more or less common or floating one. But there is a second form of abstraction, *abstractio formalis*, the abstraction or extraction of the intelligible type, by which we separate the formal reasons and essence of an object of knowledge from contingent and material data. It is by the degrees of this *abstractio formalis* that speculative sciences differ from one another, the objects of the higher science presenting the form or regulative type for the objects of the inferior. Doubtless the objects of metaphysics are more universal than those of physics, but it is not in that form, as more general notions on the same plane, that the metaphysician considers them. It is as forms or intelligible types on a higher plane, as an object of knowledge of a specifically superior nature and intelligibility, and of which he acquires a rightfully scientific knowledge by means which are absolutely transcendent to those of the physicist or the mathematician.

If it is permissible to make use of figurative language, one could say that the work of the intelligence could be compared to an immaterial magic: from the flux of singular and contingent things apprehended by the senses the first glance of the intelligence evokes the world of corporeal substances and their properties; a second glance evokes another universe, the ideal world of extension and number: a third, yet another different world, the world of being as being and of all the transcendental perfections common to both bodies and spirits, where, as in a mirror, we may attain to purely spiritual realities and the principle itself of all reality.

How then are we to classify those sciences which I just now entitled sciences of affirmation, which do not achieve the discovery of the

natures seen by them? It is obvious that they belong to the lowest degree of abstraction. They form part of *Physica*. More, we can now distinguish in *Physica* two classes of sciences, which represent its extreme limits: these sciences of affirmation, primarily inductive sciences, which we can call the empiric sciences of sensible nature—and a science of corporeal being which is rightly explanatory, the philosophy of sensible nature.

In further definition, we may observe that though all our concepts are resolved in being, which is the first object attained (*in confuso*) by intellectual apprehension, the concepts of metaphysics are resolved in being as such, *ens ut sic*, those of mathematics in that form of being (detached from the real) which is ideal quantity, and those of *Physica* in mobile or sensitive being, *ens sensibile*; but for the philosophy of nature it is necessary, in the phrase *ens sensibile*, to put the accent on *ens*: an explicatory science, it discovers the nature and the reasons of being of its object. And if it is true that the nature of substances inferior to man is not accessible to our discovery in its specific diversity, it is necessary to say that the proper object of the philosophy of nature does not extend to this specific diversity of bodies nor to the multitude of their phenomena, and is only constituted by transcendental being in so far as it is determined and particularised by the corporeal world of the mobile and the sensitive. We see by this two things: first, that the philosophy of nature, despite the essential difference of order which divides them, has a certain continuity with metaphysics, and is by this superior to mathematics: secondly, that though philosophy certainly gives rise to a deductive science of corporeal *being*, it is unable to produce a deductive science of natural phenomena.

For the empiric science of nature, on the other hand, in the phrase *ens sensibile*, sensible being, the accent must be put, not on *ens*, but on *sensibile*. It is the sensible in itself, in the visible as itself in observable determinations in themselves, that it tends to resolve all its concepts, at least in the degree to which it tends to make itself an autonomous science *of phenomena*; then all definitions, *e.g.* that of a geosynclinal or a verbal blindness, are taken in reference to variable sensible affirmations, describing something presented by such definitely determined and observable properties. In the same way, empiric science tends to build up

for itself a conceptual vocabulary totally independent of that of those sciences which, like natural philosophy and metaphysics, determine their definitions with regard to intelligible being.

DIAGRAM OF THE SCIENCES

To assist in the consideration of a matter at once so complex and so abstract I have drawn out a diagram of the points dealt with hitherto.

The following points are particularly noticeable:

1. The second degree of abstraction is not only set at a point intermediate to the first and the third, as was naturally to be expected, it also

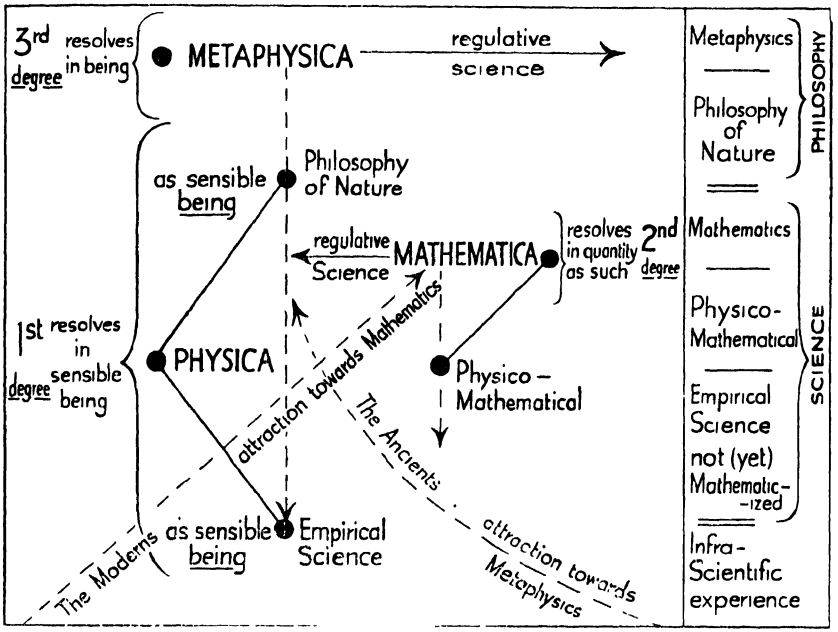


FIG. 1.

figures on a vertical line to the right. The reason for this is that mathematical abstraction is a thing all by itself. Although specifically different, *Physica* and *Metaphysica* have this in common that they only deal with intelligible objects which *can exist, i.e. real* beings, in so far as the word real designates not only actual existence but possible existence outside the mind. Mathematics on the contrary deals with an object which is not necessarily real, but which can just as well be (*permissive* is the phrase

of the ancients)[1] fictive or imaginary, a rational being as a real being. This capital difference means that the three degrees of abstraction do not form one sequence, and that the first and the third on the one hand and the second on the other determine their approach to things in opposite ways.

2. On the other hand, empiric science, the philosophy of nature, and metaphysics are found in the same hierarchical line. Although specifically different, the light of the first degree of abstraction is like a participation in that of the third[2]—an inferior and divided illumination, yet

[1]Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 6, disp. vi, a. 2, n. 20, *Mathematica an sint bona.*

[2]It is in the degree to which it participates in the illumination of the third degree of abstraction that I have placed, in this synoptic table, the philosophy of nature on a higher level than mathematics. Yet the first degree of abstraction, from which it in fact originates, is inferior in immateriality to the second degree, a point which is also illustrated in my diagram.

This enables us to understand how the natural sciences presuppose mathematics ('Scientia quae se habet ex additione ad aliam, utitur principiis ejus in demonstrando, sicut geometra utitur principiis arithmeticae; magnitudo enim addit positionem supra numerum; unde punctus dicitur esse unitas posita. Similiter autem corpus naturale addit materiam sensibilem super magnitudinem mathematicam: et idea non est inconveniens si naturalis in demonstrationibus utatur principiis mathematicis. St. Thomas, *In lib. i de Coelo et Mundo*, lect. 3—'quaecumque impossibilia accidunt circa mathematicalia corpora, necesse est quod consequantur ad corpora naturalis; et hæc idea, quia mathematica dicuntur per abstractionem a naturalibus; naturalia autem se habent per appositionem ad mathematica: superaddunt enim mathematicis naturam sensibilem et motum, a quibus mathematica abstrahunt: et sic patet quod ea quae sunt de ratione mathematicalium, salvantur in naturalibus, et non e converso' (*ibid.*, lib. iii, lect. 3). From this point of view the three-dimensional character of real space (on this question of 'real' space, see *infra*, chap. iii, pp. 201-12) is guaranteed by the necessities which are discovered in the process of construction in mathematical intuition—which will always remain as the particular claim for classical geometry. 'Naturalis praesupponit a mathematico ea quae circa dimensiones considerat. Et ideo probare demonstrative, esse solum tres dimensiones, pertinet ad mathematicam, sicut Ptolemaeus probat per hoc, quod impossibile est conjungi simul lineas perpendiculares plures quam tres super idem punctum; omnes autem dimensio mensuratur secundum aliquam lineam perpendicularem' (*ibid.*, lib. i, lect. 2). If the idea of displacement is introduced, one can say: 'If we take a free solid and fix it at three points it is immovable; fix it at only two, and every point distant from the two others may describe a circle; fix it by only one point, and each point at a finite distance from this can move in a sphere.' (R. Poincaré, *Essai sur quelques caractères des notions d'espace et de temps*, Paris, 1931.)

On the other hand we can also comprehend how the philosophy of the continuum

capable in the philosophy of nature of penetrating beyond things, arrested in empiric science on the surface and by signs.

We know that, in pursuance of the great law of the attraction of the inferior by the superior, the empiric sciences of nature among the ancients were subject to the attraction of natural philosophy and metaphysics. Only being able to constitute themselves as sciences in so far as they were informed by a deductive science, it was from notions elaborated by natural philosophy and metaphysics that they sought this informing principle.

3. Every higher discipline forms a principle of regulation for those inferior to it. Metaphysics, since it deals with the supreme reasons of being, should be the regulative science *par excellence, scientia rectrix*. But mathematics is also a deductive science, a science of the *propter quid*. It therefore also tends to regulate the lower ranges of knowledge, if not to usurp the position of metaphysics itself. This is the cause of that struggle for supremacy between these two sciences which we can so often observe in the course of their history.

4. The grand discovery of modern times, already prepared for by the

and of numbers may derive from natural philosophy, to such a degree indeed that, according to St. Thomas, the 'postulates' of mathematics could be proved by the philosophy of nature. 'Sunt enim quaedam propositiones, quae non possunt probari nisi per principia alterius scientiae; et ideo oportet in illa scientia *supponantur*, licet probentur per principia alterius scientiae. Sicut a puncto ad punctum rectam lineam ducere, supponit geometra et probat naturalis; ostendens quod inter quaelibet duo puncta sit linea media.' (St. Thomas, *In Post. Analyt.*, lib. 1, cap. 2, lect. 5, n. 7.) If this form of observation is exact it is the rational necessities perceived by the philosopher in his analysis of the continuum detached, by abstraction, from sensible and mobile reality (in other words, the axiomatic analysis of the continuum in so far as it can be built up by imaginative intuition), which form the basis of the postulates of euclidian geometry, *i.e.* which 'discover' the euclidian axiomatic in the notion of a continuum intuitively representable (as, from the idealist point of view, O. Hamelin has tried to do in certain remarkable pages of his *Essai*), and which justify in the same stroke the non-euclidian geometries, and give the mind a complete security as to the compatibility of their axioms, since these geometries, which continue that of Euclid and are contained in it, can always, by means of the addition of supplementary dimensions, be translated into euclidian terms—and since the compatibility of the euclidian axioms, the absence of any contradiction latent in their origin, is certified by the constructability of the euclidian continuum by intuition: *ab actu ad posse valet consecutio*: if the euclidian continuum can be built up in the intuitive imagination and so given fact, it is because its notion conceals no latent incompatibility.

Parisian doctors of the fourteenth century and by da Vinci, realised by Descartes and Galileo, is that of the possibility of a universal science of sensible nature informed, not by metaphysics, but by mathematics: what we might call *physico-mathematical* science. This prodigious invention—though obviously powerless to change the essential order of things of the mind such as those we are endeavouring to consider here—has changed the face of the world, and given rise, as I have tried to point out elsewhere[1] to that terrible misunderstanding which, for three hundred years, has created a quarrel between modern science and the *philosophia perennis*. It has given rise to enormous metaphysical errors, in the degree to which it has been believed that it supplied a veracious philosophy of nature. In itself, from an epistemological point of view, it was an admirable discovery to which, nevertheless, we can easily assign a place in the system of sciences.

It is a *scientia media*, of which the typical examples to the ancients were geometrical optics and astronomy: an intermediary science, halfway between mathematics and empirical natural science, of which the physically real forms the subject-matter in regard to the measurements which it allows us to draw from it, but whose formal object and conceptual procedure remain mathematical: a science which we may call *materially physical* and *formally mathematical*.[2] In such sciences the ruling principle of explication (as Duhem has clearly seen) leaves on one side principles and physical causes in their proper value of intelligibility—which does not prevent, as St. Thomas noted apropos of the Second Book[3] of the *Physics* (as Einstein and Meyerson have very well seen),

[1]Cp. J. Maritain, *Réflexions sur l'intelligence*, chap. vi.

[2]Cp. *ibid.* chap. vi and text which I have there cited from St. Thomas, notably that from *In Boet. de Trinit.*, q. 5, a. 3, ad. 6: 'Quaedam vero sunt media, quae principia mathematica ad res naturales applicant, ut musica et astrologia, quae tamen magis sunt affines mathematicis, quia in earum consideratione id quod physici, est quasi materiale, quod autem mathematici, quasi formale.' See also *infra*, pp. 76–81.

[3]He understands in this way the expression, τὰ φυσιχώτερα τῶν μαθημάτων, *Phys.*, ii, 2, 194, a. 7, used by Aristotle apropos of geometrical optics (*perspectiva*), harmony and astronomy. 'Hujusmodi autem scientiae, licet sint mediae inter scientiam naturalem et mathematicam, tamen dicitur hic a philosopho esse magis naturales quam mathematicae, quia unumquodque denominatur et speciem habet a termino: unde, quia harum scientiarum consideratio terminatur ad materiam naturalem, licet per principia

these sciences from *nevertheless* remaining physical, since they have their end in sensible nature.

Emile Meyerson has forcibly pointed out in opposition to positivism (and also to Duhem) that the thirst for 'ontology', for an explanation by physical causes, can never remain alien to science. But the encounter of

mathematica procedat, magis sunt naturales quam mathematicae.' (*In Phys.*, lib. ii, lect. 3.)

St. Thomas writes elsewhere (*Sum. theol.*, ii-ii, 9, 2, ad. 3): 'Quilibet cognoscitivus habitus formaliter quidem respicit medium per quod aliquid cognoscitur; materialiter autem id, quod per medium cognoscitur; et quid id quod est formale, potius est ideo illae scientiae quae ex principiis mathematicis concludunt circa materiam naturalem, magis cum mathematicis connumerantur, utpote eis similiores, licet quantum ad materiam magis conveniant cum naturali; et propter hoc dicitur in ii Physic. quod sunt magis naturales.' On which Cajetan remarks in his commentary: 'Non dicitur quod scientiae mediae sunt magis mathematicae quam naturales: cum falsum sit absolute loquendo; quia simpliciter sunt scientiae naturales, utpote non abstrahentes a materia sensibili. Omnis enim scientia non abstrahens a materia sensibili, est naturalis, ut patet vi Metaph. Sed dicitur quod connumerantur magis cum mathematicis, utpote eis similiores.'

Physico-mathematical science is thus at once *formally mathematic* (by the principles and *media* of demonstration which it uses) and *more physical* than mathematics by the end or the matter by which it verifies its propositions. These two characters are in no way incompatible and are affirmed simultaneously of the *scientiae mediae*, by both St. Thomas and Cajetan. It is possible that the fuller explanations here given will satisfy the scruples of Rev. Fr. Pierre Hoenen, who ('Maritain's reden te Amsterdam', in *Studien*, May 1927) appears to confound my position with that of Duhem, not observing that for me mathematical-physics is certainly a science of the *physically real*, but which only knows this by transposing it, not *of the physically real as such*. In any case I trust the distinguished professor will find appeasement in making his own Cajetan's conclusion to the commentary which I have already cited (*In II-II*, 9, 1 and 2): 'Verum, quia medium utrumque sapit extremum, et scientiae istae ex parte formae ex mathematica veniunt et pendent, ex parte vero materiae physica sunt, sermones doctorum pie interpretandi sunt, si quando alterum extremum nimis declinant.'

I must admit that it seems as if Fr. Hoenen had read rather rapidly the quotations which he criticises. In *Réflexions sur l'intelligence* I nowhere said that mathematical-physics was a logical monstrosity: what I did say was that a *false* notion of this science, which confused it with natural philosophy, turned it into a logical monstrosity.

In maintaining in his address to the Thomist Congress in Rome (*De valore theoriarum physicarum*, Romae, 1925; cp. also the interesting articles published in the review *Gregorianum*, 1925, 1927 and 1928), that physical theories give us a knowledge *by analogy* of the physically real, without defining to what form of analogy he referred, he himself, it seems to me, runs the risk of either giving rise to serious misunderstandings in regard to the notion of analogy (in fact what is above all meant in philosophy by 'knowledge by analogy'—knowledge by the analogy of rightful proportionality, of which the metaphysician makes use for the knowledge of spiritual things—

the law of causality immanent in our reason and the mathematical conception of nature has resulted in the construction of a theoretical physics of the universe which is more and more withdrawn and geometricised, where fictive causal entities founded on the real (*entia rationis cum fundamento in re*), whose whole office is to serve as a support for mathematical deduction, have risen up to obscure a highly particularised account of empirically determined real causes or conditions. In fact it is

instructs us in a veiled, but not symbolic manner, in a reality not attained to in itself, but remaining in its own entitative order, while physical theories instruct us directly, but in a manner which becomes symbolic at a certain degree of conceptualisation, in physical reality transmuted into mathematical terms, transposed into an order which is not its own); or of sinking into the quest for vain theories of concordance. The perpetual renewals of science (*e.g.* at this moment, the recent ideas on photons, and the new mechanics of Louis de Broglie and Heisenberg) show how wise it is *not* to ask a philosopher to adjudicate on the degrees of truth or falsehood in the physical theories of light or of the atom: all that he needs is to hold true the experimental facts on which these theories are based and to cull from these theories a provisionary *image* of things, destined to buttress his thought, not to shape it.

One point remains true, and it is this that I would have liked to have seen made clear by Fr. Hoenen: the fact that we can see a symmetrical correspondence on either hand of that knowledge, which I shall later call 'dia-noetic', and which attains to its objects in their essence—on one hand, for things above, the knowledge *by analogy* of rightful proportion, which metaphysics makes use of in its ascension to the First Cause—and, for the things below, knowledge by *signs*, which the sciences of phenomena cull from nature, above all that *symbolic* knowledge of the physically real in which physico-mathematical theories result in their highest elaborations from experimental data. I am well aware that this latter form of knowledge belongs, as is sufficiently pointed out by the word 'symbolic', to the logic of analogy taken in the widest sense of the term: but in that case, strictly speaking, it is a question of a metaphorical analogy which mathematics has the privilege of using for its knowledge of the physically real (cp. *infra*, chap. iii, pp. 196–201). One can say with Fr. Hoenen: 'Secundam maximam Cajetani (*De nom. anal.*, cap. 4): *quidquid assimilatur simili ut sic assimilatur etiam illi cui illud tale est simile*, concludendum est: causa quam hypothesis verificata proponit assimilatur causae verae; quod nihil aliud est ac principium analogiae theoriae physicae quod supra delineavimus.' (*De valore. . . .*p. 69.) But the *assimilatio* then in question is either a univocal substitution, in so far as physical theories translate the facts and enable us to attain to observable and measurable structures or causations (co-determinations) which have the value of *entia realia*, or a symbolic or metaphorical one, in so far as physical theory constructs on its own rational beings to assist it in the collection and interpretation of its data by explanatory deduction. This combination, in an almost infinite variety of degrees, of univocal description of experimental reality with symbolic interpretation of that same reality appears to me to be the particular characteristic of physico-mathematic knowledge.

most often the old hypotheses of mechanistic metaphysics that physico-mathematical science (while fundamentally transforming them or introducing into them vast zones of dislocation and irrationality) has been so led to rejuvenate: not as E. Meyerson, who, despite all his apparent rationalism, cannot conceive of the reasoning process except under Eleatic terms, supposes, by reason of the essential exigencies of causal explanation, but because the mechanistic theory is the only causal representation which can manage to survive, ill or well, a general reduction of physics to geometry.

Pierre Duhem himself, as Emile Picard recalled in his lecture to the Académie des Sciences, on 16th December, 1929,[1] considers that 'a physical theory is not an explanation; it is a system of mathematical propositions whose aim is to represent as simply, as completely as possible, a body of experimental laws',[2]—in fact the result is that physics in some of its departments (that of energy, for example, as Duhem conceived it, or to-day of wave-mechanics according to Heisenberg's interpretation, to which Louis de Broglie has also given his support) makes use of purely mathematical symbols, without attempting any *causal explanation* or the construction of those figurative hypotheses whereby the mind can in some fashion take to pieces the mechanism of phenomena. But truly this abstention is because it cannot do otherwise and must make a virtue of necessity. Duhem's mistake was in seeking the type-form of physical theory in these often exceptional cases, which he regarded as true examples. In reality they are borderline instances, where the mathematical transformation of phenomena momentarily occupies the mind in a state of complete isolation, with no underlying physical image: and they so little represent the type-form of physical theory that at the first opportunity the mathematical symbols so employed cease to belong to the domain of pure analytical forms and dissolve into explicative entities. (This is the case even with energy: 'almost all scientists admit to-day that it is not only an abstract conception,' *i.e.* a pure mathematical symbol. An even more glaring case is that of atomic number, which, beginning as a simple ordinal number, has ended as designating the charge of an atomic nucleus and the number of the

[1] *Un coup d'œil sur l'histoire des sciences et des théories physiques*, Paris, 1929.

[2] See in particular Duhem's book on *La Théorie physique*.

electrons gravitating about it.) On the other hand, the causal entities and structural systems constructed by the physicist owe all their consistency to the mathematical symbolism which is, so to speak, incarnate in them. Thus the interpenetration of mathematics and entitative representations appears to be essential to physico-mathematical knowledge.. From which it follows that, in the words of Emile Picard, 'these quarrels of the schools seem very far off and the two points of view are strangely mingled in the work of present-day scholars.' I would rather say that they had become one. Duhem's too rarefied conception moreover annihilated the primary heuristic stimulants without which physics cannot exist. These explanations appeared to be necessary to avoid serious misunderstandings. But let us now return to the main theme.

5. With the physico-mathematical *scientia media*, materially physical and formally mathematical, a science of *phenomena* as such becomes possible. No longer a science of sensible nature which sought to find willy-nilly in phenomena those intelligible connections which are the stuff of philosophy and which only explain phenomena when they have already transcended them; but a science of sensible nature which applies to the detailed study of phenomena as such, as they are co-ordinated in space and time, the formal connections of mathematical relations, and which so approximates, thanks to the science of ideal quantity, to that deductive character to which it aspires and without which it would not be a veracious science. To be at once experimental (by its matter) and deductive (by its form, but still more in regard to the laws of variation of scale which it brings into play) is then the rightful ideal of modern science. Producing as it does both scientific knowledge and a marvellous technical power over nature, but from the point of view of quantity, not that of being; having abandoned the direct search for real causes in order to devote itself to the translation of the measurements of things into a coherent system of equations, we see that physico-mathematical science must be placed in our diagram at an angle between purely empiric science and the philosophy of nature, thus breaking that continuity with which the optimism of the ancients was so pleased.

For the latter, it was the philosophy of nature and metaphysics which, if I may use the phrase, drained off the material of empiric science and infra-scientific experience and tried to approximate it to the level and

the nature of science. This I have represented on the diagram by the track of an arrow pointing towards metaphysics.

For the moderns, it is mathematics which acts in this way. It is necessary therefore to draw an arrow pointing in the exactly contrary direction, whose track represents a break, a sharp, irremediable cut between science and philosophy.

The intersection of these two arrows is the symbol of the epistemological drama of our times.

The endeavour of the ancients resulted, so far as the science of the phenomena of nature was concerned, in a resounding failure, at least with regard to matter and movement. We may say that they stumbled and were pulled up short by physics (in the modern sense of the word).

The endeavour of the moderns has brilliantly succeeded in physics; and to-day we are witness to a crisis of development there which is the prelude to achievements still more brilliant. But what will happen—even while remaining entirely in the domain of the science of phenomena—to those sciences whose object cannot be so easily reduced to mathematics, which cannot be content with an algebraic symbolisation of nature, and where the real continues to be dominant in the mind as a function of the idea of being? It may well be that the modern conception of science will break against biology and experimental psychology (without speaking even of the moral sciences which are more closely akin to philosophy) as that of the ancients broke against physics.

6. I have given here very summary recognition to those organic relations which sustain the mutual relations of the principal categories of science. In putting these categories in a single column, we see them ranged in their hierarchical order. Thus we recover again the classic division between the sciences, in the strict sense of the word, and philosophy.

The word science, in general, in effect embraces two great dominions, that of wisdom, which knows things by first causes and the highest reasons of being, and the domain of science in the narrower sense of the word, which knows things by secondary causes or approximate principles. Metaphysics is a form of wisdom, it is the veracious wisdom of the natural order, of the order which is accessible by reason alone. The philosophy of nature is wisdom under a particular aspect, because it

deals with first principles and prime causes *in a given order*, in the order of corporeal nature. (I would add, in parenthesis, that the study of the ontological bases of mathematics, the philosophy of number and the continuum, returns to the sphere of the philosophy of nature, for mathematical abstraction, not bearing in itself on real being, does not imply wisdom in its own rightful order.)

I have therefore bracketed together these two forms of wisdom, pure and simple wisdom and wisdom under a certain aspect, metaphysics and the philosophy of nature, under the name of PHILOSOPHY.

As to the other sciences: mathematics—the physico-mathematical sciences—the experimental sciences or those historical (paleontology, linguistics, etc.) sciences which have not (yet) received, and which will probably never receive, the dry light of mathematics into their essential constitution, I have grouped them together under the name of SCIENCE in the narrow meaning of the word.

III. SCIENCE AND PHILOSOPHY

Though it is true that the *material object* of philosophy and of science can be the same, *e.g.* the world of bodies—*the formal object*, that which determines the specific nature of intellectual disciplines, is in the two cases essentially different. In the world of bodies the scientist studies the laws of phenomena, linking one observed instance to another, and if he seeks for the structure of matter it is by representing to himself—molecules, ions, atoms, etc.—in what way and according to what laws the ultimate particles (or the mathematically conceived entities which take their place) from which the edifice is constructed, act within the framework of time and space. The philosopher, on the other hand, seeks for *what in fact that matter is* which is so figured, what, as a function of intelligible being, is the nature of corporeal substance (whether it be split up and reconstructed into a spatial or spacio-temporal construction of molecules, ions, atoms, etc., or into protons and electrons associated or unassociated into a series of waves, his problem remains exactly the same).

The one goes from the visible to the visible, from the observable to the observable (*i.e.* observable, at least indirectly—I do not say it is always

imaginatively figurable or representable: for the imagination presents things as they appear in our scale of major dimensions, as possible subjects for a complete and continued observation; and when the scientist enters into a region, *e.g.* the atomic, where even the possibility of a complete and continuous observation of phenomena is out of the question,[1] he so passes from a world of imaginatively representable objects to a world of things without imaginable features. We could say that such a world is indescribable by fault or 'by privation').

The other proceeds from the visible to the invisible, to what is *in itself* outside the bounds of all sensory observation, for the principles which are the aim of the philosopher are pure objects of intellection, not of sensible apprehension or imaginative representation.[2] This is a world naturally indescribable or 'by negation'.

Having totally different formal objects, entirely different principles of explanation and conceptual technique, and in the subject himself requiring fundamentally different intellectual virtues or qualities of discriminating illumination, the proper domains of philosophy and science are not translatable. An explanation of a scientific order can never be displaced or replaced by a philosophic one or *vice versa*. It requires an over-great dose of simplicity to imagine that the recognition of an immaterial soul in man and the study of the glycogenic functions of the liver or the relations between the idea and the image are two explanations which pursue the same lines and that either can be an obstacle to the other.

What is true is that the explanations of science, since they do not bring us into intimate contact with the being of things, and are only explanatory of proximate causes or even simply of that kind of formal cause which is represented by the mathematico-legal system of phenomena (and the entities more or less arbitrarily constructed in support of that system), cannot suffice for the mind, which by necessity, and always, asks questions of a higher order and seeks to enter into regions of intelligibility.

From this point of view we can say that the sciences have a certain dependence on philosophy. The sciences themselves, because they seek for the *raison d'être* and can only proffer it very imperfectly, inspire the mind with philosophical desire, and require the support of a higher

[1] See *infra*, chap. iii, pp. 183-4 and 226-8. [2] *Ibid.* pp. 179-80.

form of knowledge. Nothing is more curious than to measure the force with which, after the positivism of the nineteenth century, this need is exemplified in all the domains of science and that in the most disorderly fashion, philosophical competence being inevitably lacking with the lack of philosophical technique even in scientists of genius like Henri Poincaré.

The sciences have, however, no dependence whatever on philosophy with regard to their own intrinsic development. They are only dependent *in principle* (not in the sense that they are dependent on philosophy for their principles and their use, but in the sense in which the explication and justification of the latter belong to philosophy). Perhaps it is precisely because scientists have no need of an immediate recourse to philosophy for the exercise of their own rightful activities that they are so given to misunderstanding the nature of this dependence of which I have spoken. But if they were to reflect rather more attentively on the nature of the very activity which they exercise (which would indeed be already a form of philosophising) how could they fail to observe that it involves in itself a complete order of philosophical activity, wrapped up, so to speak, in practical terms?

All employment of the methods of experimental criticism, like the determination of the degree of approximation of the acquired results, constitutes a form of applied or livingly formed logic (*logica utens*), which only becomes pure logic and the object of a speculative art explicitly studied for its own sake (*logica docens*) under the reflective gaze of the logician, but which in itself is nothing other than that logic, a truly philosophical discipline, in practice.

On the other hand, whatever may be the conscious or unconscious metaphysical opinions from which he draws his conception of the world and which he follows out in his life as a human being, every scientist in fact, in the operations of his own science, when thinking as a scientist—we owe a debt of gratitude to M. Meyerson for having so forcibly stressed this point—practically affirms (*in actu exercito*) and with a dogmatism which is the more fearless in the very degree to which it is unconsidered, a number of eminently metaphysical propositions, whether it be a question of the reality of the physical world, of the existence of things as apart from the mind, of stable ontological

nuclei, or of a substantial x at the base of phenomena:[1] not only these, but the very question of the possibility of the apprehension of things in our faculties of knowledge—a difficult thing no doubt and done in a way which demands all sorts of more or less obscurely felt restrictions, but which is also surrounded with a sense of incontestable certitudes—in other words, that of the intelligibility of the world, which, though doubtless in an undefined way and with a sense of imperfect definition, nevertheless in the meanwhile no one hesitates to posit in advance. Or again the question may be that of the values of the principles of the reason, most of all, the principle of causality,[2] in regard to the world of experience, *i.e.* in other terms, the insufficiency of changes to explain themselves by themselves. . . .

[1]'The habit of calling a spade a spade keeps scientists from numerous vain causes of quarrel. It is fine to listen to their agreement about words and the things they represent. This remarkable accord creates among scientists an atmosphere of confidence, a unison whence they draw a certitude which is none other than a robust faith. There is probably not a chemist who does not confound the reality of sulphate of baryta with the idea which he has of it. I had the curiosity to ask such a question of several of them. To all it appeared exceedingly odd. I could see, by the dubious glances with which they looked at me, that they doubted whether I were not mad to ask such a thing. What happens in actual fact is that a chemist makes the absolute substratum of bodies from their properties, and knows no preoccupation with the highly hypothetical character of this conception.' (G. Urbain, 'Essai de discipline scientifique,' *La Grande Revue*, March 1920.) Formulated as it is in language which suggests entirely different philosophic opinions, this comment by a scientist of unquestioned authority, as M. Meyerson observes (*op. cit.* ii, p. 235), is evidence of all the more value since 'the scientist in question himself professes, in theory, a sufficiently orthodox positivism and evidently finds the whole way of thought, which he describes with so much accuracy, definitely blameworthy'.

[2]My claim is that the scientist affirms *in actu exercito* in the exercise of his own scientific activity, the value of the principle of causality (without waiting for any philosophical reflection on its meaning, its bearing, the various methods of its verification or still less, its critical justification). If he were not practically persuaded that everything which happens has a cause, he would not give himself up to the work of research, he would not even begin it. In the course of its progress along the lines of what I shall later call its empiriological autonomy, science itself may need to refound or transpose the concept of cause, and even perhaps admit, in the picture of the world which it constructs, lacunas which make holes in the field of what for it is 'causality'. (Cp. chap. iii, pp. 182–6 and 231–5.) Here, between the scientific vision of the world and the springs of mental work from which it emanates, there is an analogous disparity to that between the scientific universe perceived by the physicist as a physicist and the familiar universe which he knows as an ordinary man.

Finally, every scientist has a certain idea, often only very partially explicit or even highly confused, but which is practically highly effective and active, of the true nature of his science: an idea which without doubt plays a major part in the intellectual orientation of the great initiators. What, from this point of view, could be more noticeable than the aphorisms on the nature of physics which are so frequently on the lips of M. Einstein? But these considerations of the true nature of such and such a science do not in fact belong to any science, but to philosophy: to a *gnoseology* formed by living.

In short, there is no science without the first principles on which the whole train of our reasonings must be fixed, an infinite regression in this order evidently rendering all demonstration impossible: and every scientist, by the very fact that he applies himself to no matter what form of demonstration, has already given his adherence, very positively however undeclared, to an important number of philosophical propositions. It very evidently follows from this that all these things which live latently and vitally in the mind of the scientist could advantageously be brought to light and looked at face to face as objects of knowledge, in other words, be dealt with by philosophy. Then we should see explicitly the objective links between the sciences and philosophy. Their axioms are determinations of the principles of metaphysics: for example, the mathematical axiom, two masses equal to a third are themselves equal, is a particularisation of the metaphysical axiom: two things identical with a third are themselves identical. It is philosophy which justifies and defends their principles, which determines the first objects towards which they work, and as a result, their nature, their value, their limits as sciences. It is philosophy, for example, not mathematics, which tells us whether irrational numbers and indefinite numbers are real beings or only rational beings, whether the non-euclidian geometries are rational constructions built on euclidian geometry and which leave the latter its privileged position, or if, on the contrary, they constitute a much greater system of which euclidian geometry is only one specimen; whether mathematics and logic are divided or not by immovably drawn frontiers, etc. In a word, it is philosophy which assigns the order which reigns between the sciences: *sapientis est ordinare*.

In all this it does not impinge in any way on the proper procedure

and sphere of action of each of them, for we have just seen how absurd it is to treat a problem of the scientific order as if it were one of philosophy and *vice versa*: but it implies that it is a higher science.

Superior, therefore independent, at least by its own formal constitution: philosophy is, as such, independent with regard to the sciences.

It should be understood: there is no *formal* dependence of philosophy with regard to the sciences. No scientific result, no scientific theory, in short, no science in the exercise of its own proper means, can ever adequately cut the knot of a philosophical problem, for those problems depend both in their origin and their solution on a light which is not in the reach of science.

There is, most certainly, a strong *material* dependence of philosophy on the sciences. To begin with, philosophy is like the culminating point of the hierarchy of knowledge, and as a result comes pedagogically last; and the philosopher, since he judges of the value, the limits and subordinations of the sciences, must evidently know them as they are and the stuff of their proper life; more, scientific data are like illustrations which normally serve the philosopher in the exemplification and embodiment of his ideas; finally and above all, the progress of science, at least in regard to the facts discovered if not the theories, should normally, above all in what is concerned with natural philosophy, renew and enrich the matter offered for philosophical explication. Thus, for example, modern discoveries concerning the organic structure of the cell, in particular the embryo and the sexual elements, artificial parthenogenesis, etc., should give a new precision and a greater quality to the way in which the problem of the eduction of the vegetative soul is posed. The new developments in geometry begun by Lobatchevski and Bolyai equally oblige the philosopher to clear up and re-order his notions concerning quantity.

But such dependence remains material, and the changes which it induces primarily affect the nature of that imagery whose importance is so great in his vocabulary, and the halo of associations which have gathered about the actual didactic terms: to imagine that philosophical doctrines need to be radically transformed to fit in with scientific revolutions is as absurd as to suggest that our souls are vitally affected and altered by a variation in the elements of our dietary.

SOME ELUCIDATIONS ON THE NOTION OF FACT

A question arises here which must be briefly treated: that of the part played by experience and experimental fact with regard to philosophy.

The latter, according to St. Thomas, rests on facts; it must accept the facts, begin by an act of humility before the real already made known by the senses, attained by our physical contact with the universe. And the philosophy of nature, differing in this from metaphysics, has not only its origin but the end where it must verify its conclusions in the experience of the senses: although in a way other than that of the experimental sciences.

What then is a fact? It is a well-founded existential truth: in existence a certain group of conceptual objects is posited beside the thing; and this in itself implies that this existence is face to face with a mind, a spirit which can lay hold on its objects. A fact which interests human observation is not created by the human mind, it is given. But it is given *to someone*; if it is given, it is because it is received, a stone is not given to a stone: a fact is given to a mind. That is to say, the mind discerns and judges it. To wish to make of this a sure and simple transcription of external reality without any discrimination is a deceptive simplification due to the unconscious materialism of the imagination.

Even in the order of the external senses, there is, as St. Thomas said, *a judgment by the senses*; sensible perception is itself induced by and presupposes the bringing into action, instinctively or otherwise, of the internal senses or *ratio particularis*. The discernment of any fact presupposes a judgment either of the senses or of the intellect. On that point the idealists are certainly right. But they are wrong in thinking that the activity of the mind cannot ask or draw from things information which is at once enunciated by and *given to* it; their error is to believe—a gratuitous postulate and in fact quite absurd—that every interpretation, or more exactly every judgment, by our faculties for knowledge is either a deformation or a creation, not a more or less pure and profound assimilating of oneself to the object, a conformation to what it rightly is.

Their other error is a rejection of the primordial values of sensible intuition. It is from this intuition, in one way or another—and even when the fact in question transcends the whole order of the empiric and the sensible—that all existential apprehension originates (it is the same for our experience of our own existence, which is spiritual and non-empiric, but which supposes reflection upon our acts, as for the knowledge of the existence of God, which is established apart from sensible things). In the physical order or in that of the knowledge of bodily nature, it is by the senses, through a discriminating and critical judgment of the intellect, that the facts are given. To distinguish, in that order and in the use made of them in the natural sciences, the category of *fact* from that of *theory*, we should not say that the one belongs to the intellect and the other to the senses, which would be far too summary a view; but that the intervention of the intellect, with its natural or artificial resources, we might even say with its knowing devices and most delicate refinements of theory, remains in the former case ordinated to the discernment and formulation of what is furnished to it by the intuition of the senses,[1] while in the latter, with the same resources, to discovering essences and laws, and their underlying reasons.

Into the complex of things attained by the perception of the senses the activity of the mind so intervenes, not in order to create, but to discern what interests the observation. And in so much as the moment a science is born, the rightful point of view which characterises it emerges at the same time as the first facts on which it is based—whether before advancing into a scientific region and there unearthing new facts the mind has already begun to enter and acquired the habit of such science, or whether before crossing the threshold of some particular scientific region it has already begun to philosophise, already in some measure disengaged the notion of being as such from the principles to which it is attached—in that degree the discernment of which we are speaking will take place at a certain level of abstraction and in the light of certain principles in regard to which the fact holds its value, a value, that is to say,

[1]In the orders superior to those of physics, which will be in question at a later stage, this work of the intellect, characteristic of the 'registration of facts', is ordinated to make clear an existential position which we conceive *by analogy* with that furnished by the intuition of the senses.

of knowledge and truth. We may conclude from this that all facts are not of the same *rank*, that they do not constitute an indistinct crowd without hierarchical arrangement, piled pell-mell in the field of sensible experience for each of the various sciences to come and pick out the particular wares of their desire. Facts in themselves belong to hierarchies of knowledge: there are facts of common sense, scientific facts (*i.e.* facts which occupy the natural sciences), mathematical facts[1] (*e.g.* the (ideal) existence of continuous functions without derivatives), logical facts, philosophical facts.

Materially speaking, one can say from this that philosophy is 'experimental' and founded on facts. This is true in the sense that experience is not for philosophy, as it is for mathematics, entirely pre-scientific, infra-scientific, mathematical science being entirely deductive and axiomatic and apart from imaginative intuition and those notions which experience alone allows abstraction to form and reconstruct. The method of philosophy, on the contrary, is analytico-synthetic; and, just because it deals with real being, rightly capable of existing outside the mind, experimental affirmations form an integral part of philosophic observation as such.

But for philosophy, in contradiction to the natural sciences, this is only the material foundation from which it rises to the consideration of essences and the necessities which they imply, by a formal resolution into the first truths in themselves intelligibly known: it only returns to experience—in natural philosophy to verify deduced conclusions and seek for ever fresh material—in metaphysics to take up new points of departure, new analogical material, not to verify conclusions which belong to an entirely immaterial order. For, formally speaking, metaphysics is in no degree an experimental science, but a form of knowledge far more purely rational than mathematics.

THE STRUCTURES AND METHOD OF THE PRINCIPAL KINDS OF KNOWLEDGE

The foregoing conclusions imply several important consequences in epistemology.

[1] Cp. Pierre Boutroux, *L'Idéal scientifique des mathématiciens*, chap. IV.

Here I can only briefly indicate some of these, most of all in the endeavour to exhibit how rare an instrument of epistemological analysis is offered by the principles of St. Thomas, and to draw attention to one of the characteristic features of his noetic: the order and organic differentiations which it establishes among the sciences, and the care which it takes (unlike many modern systems which exhibit them as all on the same plane) to recognise and respect the structure and particular procedure of each.[1]

Let it be remembered that every science is a response to two questions: first the question *an est*, if a thing exists: second, the question *quid est*, of what nature is it.

For mathematics, experience has only a pre-scientific function, in the sense that if we had never seen a ball or a stick we could not have formed the notion of a circle or of a straight line; if we had never counted on our fingers the parts of a concrete whole we should never have formed the idea of number. But once in possession of these notions, thanks to the abstracting power of the intellect, they present in themselves objects of thought independent of experience, so independent of experience that we can generalise analogically from them, de-ballasting them of that very intuitive scheme in which they were first made manifest. If mathematical entities could only—when they are capable of existing outside the mind—so exist in matter, they could not exist mathematically: the straight line, the circle, the whole number are realised in sensible things, but lose thereby the conditions of ideal purity which are imposed by the mathematical mode of existence.

In the mathematical order the question AN EST bears on the *ideal* (*possible*

[1]Here I follow the ideas which St. Thomas develops in his commentary on the *Posterior Analytics* (book ii) and on the *De Trinitate* of Boethius (q. 5 and 6). Let me recall here the fundamental text from the latter: 'In qualibet cognitione duo est considerare, scilicet principium, et finem sive terminum. Principium quidem ad apprehensionem pertinet, terminus autem ad judicium, ibi enim cognitio perficitur. Principium igitur cujuslibet nostrae cognitionis est in sensu. . . . Sed terminus cognitionis non semper est uniformiter: quandoque enim est in sensu, quandoque in imaginatione, quandoque in solo intellectu. . . .

'Deduci autem ad aliquid est ad illud terminari: et ideo in divinis neque ad sensum, neque ad imaginationem debemus deduci: in mathematicis autem ad imaginationem, et non ad sensum; in naturalibus autem etiam ad sensum. Et propter hoc peccant qui uniformiter in tribus his speculativae partibus procedere nituntur.'

or *rational*)[1] existence of the entity under consideration; and starting from the notion of this entity once so posited as capable of mathematical existence, the truths which concern it (*quid est*) are deductively established, by means of constructive operations which may apparently play the principal part, but which in fact remain only material: formally

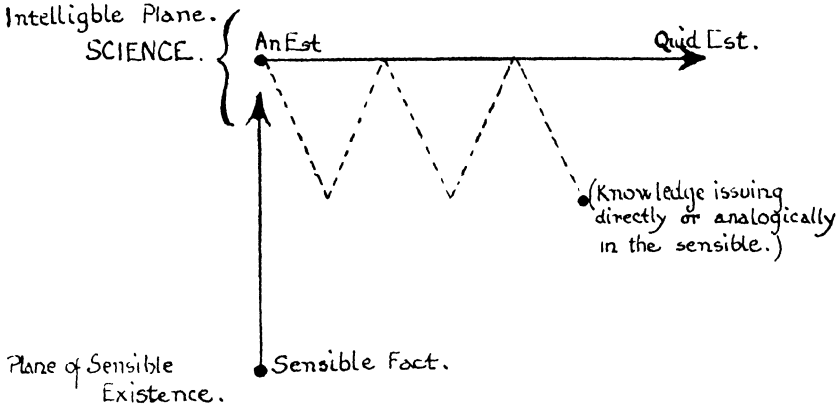


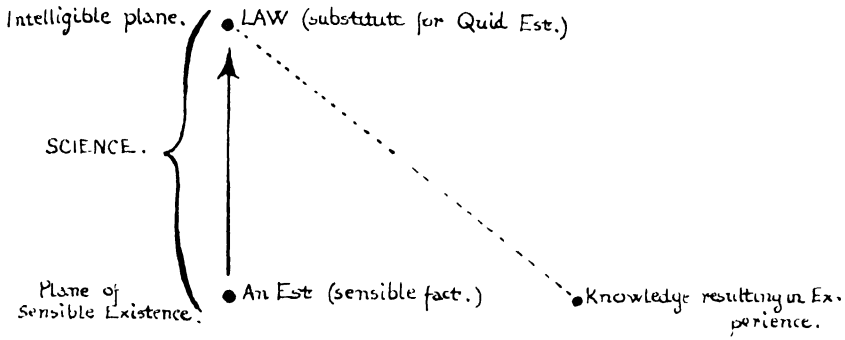
FIG 2

it is by virtue of the intelligible connections which proceed from mathematical deduction, whether these connections are themselves guided and determined all the time by constructive operations, or are established and justified once for all by the rules of an architecture of signs where the art so determined has only need to be applied. The ancients held that in mathematics the judgment—by which knowledge is achieved—resulted not in the sensible, but in the imaginable. This should not be understood as meaning that each of the established con-

[1]The sense of the words 'ideal existence' is fixed according to the following division:

real being { actual; possible } rational being { ideal being.

clusions needs to be directly verified by imaginative intuition: but that they need to be verified by it either *directly or analogically, i.e.* according to whether they are constructed by intuition, or whether they belong to a system of notions (as for example non-euclidian or archimedian geometrical entities), itself issuing from a system of constructable notions in the intuition (like the euclidian entities) and which can find in this system an analogical interpretation.[1]



EXPERIMENTAL SCIENCES.

FIG 3

In the experimental sciences experience is in itself essential and *entirely rules*. The question AN EST bears directly on the facts experimentally criticised. Science does not arrive at seeing the essence in itself or *dianoetically*[2] as it lies embedded in facts, it only grasps it blindly: not in its constituting signs but in those of *peri-noetic*[3] intellection which it contents itself with in their place (above all the *constancy* of a well-verified relation), and that substitute which is scientific *law*—the judgment, by which knowledge is achieved, issuing in experience itself, or in other words, every newly acquired conclusion needing to be verified by sensible fact.

When it is a question of the physico-mathematical sciences, the deductive theory and the system of notions elaborated by it come face to face with experimental results to find there their verification, although

[1] *Vide infra*, chap III, p. 201-2. [2] *Vide infra*, chap. IV, p. 248-9

[3] *Ibid.* p. 251-2.

apt to translate them in a somewhat rigorous fashion by means of an adopted vocabulary; and it is a mathematical *quid est*, not an inductively established law, but an algorithm of the physically real, which is then substituted for the ontological *quid est*.

In the philosophy of nature, sensible fact forms the material part of observation, which thus essentially depends on experience, but it does not constitute the formal medium of demonstration. The question AN EST bears on the *real existence* of a nature which abstraction has been able

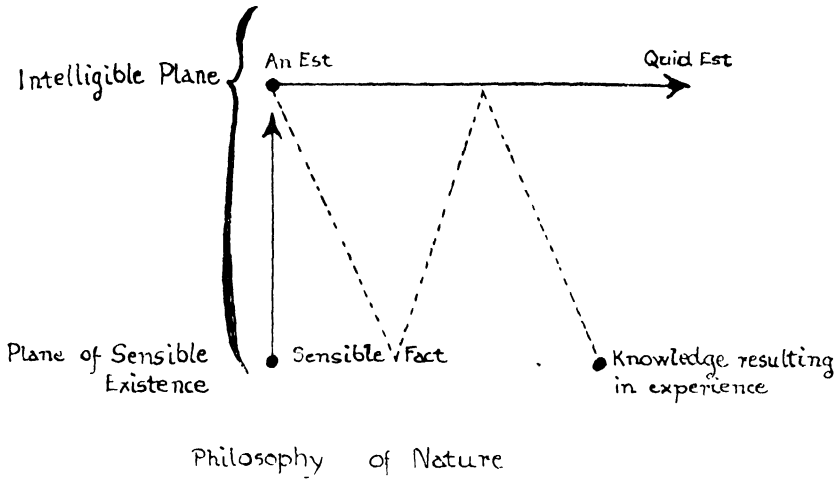


FIG 4

to raise to a point where it can be considered in itself, *e.g.* the vegetative soul; and starting from this so posited nature, reason establishes its properties by an inductive-deductive alternation, all the while issuing in experience and verifying by sensible facts the conclusions so obtained.

Finally, in metaphysics sensible fact also forms the material part of knowledge, because we only rise to the invisible from the visible, but it does not formally constitute its medium, *neither are its conclusions verified by it*. The judgment, by which knowledge is achieved, issues in pure intelligibility. For it is not because, like the philosophy of nature, it essentially depends on sensible experience, but because of its transcendence that metaphysics (as mathematics does not do) descends to the world of sensible existence. It also ascends to the world of supra-sensible existence. Thus in natural theology the question AN EST bears on the real

existence of an immaterial object to which knowledge is able to rise by analogy (ananoetic intellection).[1] And from the recognition of such an object, reason, by the triple path of causality, eminence and negation, without verification either from the sensible or the imaginable, since it is a case of the purely immaterial, establishes conclusions concerned with nature (analogically known) and the perfections of the Pure Act.

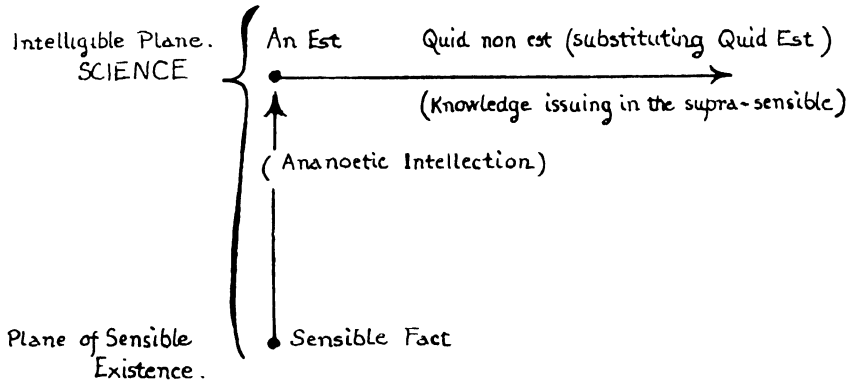


FIG 5.

THE CONDITIONS PROPER TO PHILOSOPHY. ITS RELATIONS WITH FACTS

Moreover, whether it be a question of natural philosophy or of metaphysics, philosophy, which emerges, as do the positive sciences, from sensible experience and empirical knowledge, but which transcends them in a much more perfect and pure manner,

1. makes use of an experimental material which is proper to it, much more simple, universal, immediate and incontestable than that of the experimental sciences. The facts on which it is based are not facts which are more or less difficult to define—and which, in the degree to which science progresses, become more and more only points of incidence between the real and the constructions (ever more complex and elaborated) previously established by the reason—but facts which are absolutely general and primary.

[1] *Vide infra*, chap. iv, pp 268-71.

2. These facts are not drawn from 'common experience' (although that is in a sense more certain than scientific experience)[1]; this common experience only enters into philosophy in so far as it takes the place of an as yet undeveloped scientific experience and thus in the same (secondary) manner as the latter. The rightful material of philosophy springs from an experience which is philosophically elucidated, and is therefore much superior to that of common experience, for philosophy judges and criticises this material *in the light of its own perception*, in such a way as to establish it with complete certitude, since being able by right of wisdom to defend its rightful principles, it also defends and (indirectly) justifies the value of sensible perception in itself. From this point of view one could say that the fact that *something exists*, the fact *that multiplicity exists, that change and becoming exist, that knowledge and thought exist, that desire exists*, are all rightly PHILOSOPHICAL FACTS.

With regard to scientific experience, to *scientific facts*, we see that it is possible for them, as I said just now, to bring new material to philosophy and to be annexed by it, since philosophy knows well how to make alien material its own; nevertheless they do not as such constitute its proper material, and must in any case, like the latter, be judged and criticised in the light of philosophical perception before they are fitted for philosophic use.

A scientific fact in itself belongs to the stuff of the natural sciences; and if it is true that what characterises these sciences is the resolution of their instruments of knowledge in the sensory, a scientific fact in itself can only be interesting to that form of explication. In so far as it is only illuminated in the degree to which it was first of all seen and utilised by the scientist, it interests the latter, not the philosopher. It is thus an illusion to believe that any appeal to scientific facts with no higher perception turned upon them can ever nullify a philosophical assertion, such as, for example, hylomorphism. In themselves of course they have nothing to say about it one way or the other. For heaven's sake then let

[1] 'The layman believes that a scientific experiment is distinguished from common observation by a greater degree of certitude; he is mistaken, for any account of a physical experiment lacks that immediate certitude and relatively easily controlled witness of common, non-scientific observation. It is less certain, but surpasses the latter by the number and precision of the details which it makes known to us: there lies its essential and veritable superiority.' (Pierre Duhem, *La Théorie physique*.)

us avoid torturing them to wring from them pretended avowals: neither let us fawn on them! But let us continually ask them straightforward questions, which presuppose that we already possess some information. It is necessary to compare them, and as many of them as possible, to enquire of the scientist for everything concerning their ordinary conditions, their experimental significance and the fashion in which they have been established. All should be treated with respect and we should be on the look-out for the appearance of any new ones. But it is only in relating them to philosophical knowledge which has already been acquired by other means, with philosophical principles, that an intelligible content appropriate to philosophy can be drawn from them, in order to discern and judge the ontological values implied by them, and use can be made of them, either to confirm and establish facts which are rightly philosophic or as a point of departure for philosophic demonstration.

A whole nest of critical problems is revealed by this, which I must content myself with signalising in passing. I have just shown how in a general way we can distinguish in the natural sciences the category of facts from that of theory. But because in the concrete these two categories constantly overlap one another, since science proceeds by a continual encirclement of facts by new theories which again serve for the creation of new theories from the new facts so discerned, it becomes necessary to establish a hierarchy of scientific facts in themselves, from the point of view of their varying values as facts and also to make a division between 'facts' which rightly merit the name and those which in one way or another have usurped it. The facts immediately exposed by scientific observation themselves presuppose a certain number of theoretical and already established propositions (the foremost of which originate from sensible perception) concerning the objects to be measured and the means of measuring, the apparatus which it is necessary to construct to this end. As to the other scientific facts mediately established, they result either from the coincidence of a verifiable datum and a preliminarily constructed system of theory, or from the explication itself when it asserts that it is the only one possible. The need for numerous discriminations is therefore imposed on the philosopher. When modern astronomy established that the earth turned round the sun, or when

modern physics established the existence of atoms, such 'facts', mediate as they are, have nevertheless an incomparably greater value as *data* (higher also in the first case than in the second) than the hypothetical 'fact' of Lorentz's contraction or that of the curvature of space postulated by Einstein's system. How then do we find the principles of discernment? Nowhere else than in the critical analysis of the reasoning process employed in each instance in particular. The more mathematics is reduced in physics to allow of our grasping, thanks to measurement and the calculus, in a physics not so transposed, those causes and conditions whose character as *entia realia* the philosopher has no reason to doubt, the more the result merits the claim of being held as a fact. The more physics is reduced to intervening simply as a discriminatory element in theoretic constructions whose proper value belongs to their mathematical amplitude and coherence, or as a simple foundation for entities which the philosopher has reasons for holding rational, not real, beings, the more the result should be considered as belonging to the order not of facts, but of explanatory images.

If philosophy is in itself independent of the sciences, cannot the latter nevertheless indirectly exhibit the falsity of some philosophical doctrine as a consequence deduced from a given principle which, being recognised as false, exhibits the falsity of the former?

That is true in so far as a philosophical doctrine impinges upon science as such or holds as a necessary consequence a scientific conception or at least a general framework for science whose worthlessness is thus exhibited.

But whatever may be said by certain popular writers (such as those who attribute to the ancients their own casualness in distinguishing intelligibility from topography, either in metaphysics or astronomy) this is not the case when the philosophy of Aristotle is brought back to its authentic principles. On the side of the human subject we must needs recognise that a too great confidence in the intelligibility of things and in the procedure of the reason, in a region which is not rightly that of philosophy, but of experience, and where essences are not discoverable, had its part (and perhaps a preponderating one) in the errors of antique science. From this point of view, and here I am prepared to go all lengths, we are persuaded that, on the one hand, modern science has

done immense service to philosophy in delivering it from the essentially alien burden which had oppressed it for so long, of the necessity for explaining phenomena; and, on the other, if the loss or weakness of the metaphysical spirit is an incalculable misfortune for the general order of intelligence and mortal things, it is also true that the predominance of the metaphysical spirit, unaccompanied by critical rectifications of exceptional vigour, can nullify as though *per accidens* the particular interests of experimental research. And this accident is a costly one, for experimental research and the smallest advance towards the minutest truth of fact are also a work of the spirit and the spirit brooks no impediment.

But on the side of the object there is no necessary link between the mechanics, physics and astronomy of the ancients and the natural philosophy of the scholastic tradition. The whole edifice of the experimental science of the ancients could fall in ruins, and this immense wreck has seemed to hurried minds as if it were the ruin of all the ancients had thought, in reality their metaphysic and their philosophy of nature, in their essential principles, as we are able to disengage these in the thomist synthesis, have been no more affected than the spiritual soul is altered by the dissolution of the body.

If the purity of philosophic and metaphysical knowledge has been so delivered from many alien elements, it is evidently as necessary and desirable, once this purification has been performed, to recover, after the interruption of three centuries of bankruptcy and misunderstanding, its organic relations with the grand totality, the life, actuality and activity, of the sciences. For the position of a soul without a body here on earth is exceedingly uncomfortable, and the prison of the body is a definite good. (As for the modern metaphysical systems, most often in reality they only represent the oppression of metaphysics by the hypostatised ambitions of the science of the sensory world.)

Under what conditions this work of integration, which has already been begun at several points, needs to be pursued to be brought to a good end, the notions brought together in this essay may serve as a certain indication. Those who take part in this quest must be on their guard against both an indolent separatism and a too facile concordance, in order to re-establish the vital connections without offending against the

essential distinctions and hierarchical order of the universe of knowledge.

For this end it seems to me that it is essentially necessary to distinguish clearly between two different cases: the case of physico-mathematical science and the sciences of which it is a type-form, and the case of sciences of the biological and psychological type.

KNOWLEDGE OF THE PHYSICO-MATHEMATICAL TYPE AND PHILOSOPHY

In my opinion it is necessary to abandon, as contrary to the nature of things, the hope of finding any continuity or close connection in regard to the explication of the real, I do not say in regard to the *facts* (in so far as they can be isolated from theory), but the *theories*, the conceptual elaborations of mathematical physics, and the proper texture of philosophical and metaphysical knowledge. The discontinuity is very clear-cut and is due to the very essence of these sciences. Mathematical physics is not a formally physical science: if it is directly physical in regard to the matter whereby it verifies its judgments, if it is orientated towards an end in the physically real and physical causes, it is not in order to grasp their intimate ontological nature. I shall return, in chapter iii, to a further consideration of this conviction, which is as frequently put forward by scientists[1] as by philosophers, but which it is over-easy to misunderstand and of which the full epistemological meaning is a delicate matter to fix. Such as it is, it suffices for out present object.

Physics is based upon ontological reality, it is preoccupied with causes, it is because of a passion for the nature of things that it bestirs itself. But it only envisages this ontological reality, these physical causes, from the angle of mathematics; it only considers them in pursuit of certain analytic translations, in divisions effected by mathematical means. It retains of the real only its measurable bearing, the measurements taken of it by our instruments—and it is thanks to these measurements, which are certainly

[1]'The object of mathematical theories (of physical phenomena) is not to exhibit to us the veritable nature of things: that would be an unreasonable claim. Their unique aim is the co-ordination of the physical laws discovered by experiment, but which without the assistance of mathematics we should not even be able to enunciate. The question whether ether in fact exists is a matter for the metaphysicians; the essential for us is that everything happens as if it did. . . .' (H. Poincaré, *La Science et l'hypothèse*.)

real, that the entities and symbols of mathematical physics have a foundation in reality. But it is in the measurable that it resolves all its concepts, which alone has a meaning for it.[1] And once in possession of its measurements, it essentially lives by weaving between them a web of mathematical relations deductive in form, which constitute its formal object and which doubtless need to be completed by a certain hypothetical reconstruction of the physically real, but from which it is only asked that their ultimate numerical result should coincide with the measurements of things effected by our instruments.

This is no manner of pragmatism. I do not in any sense suggest that in such a science *utilitarian success* substitutes the *truth*, in my eyes a barbarous conception. Like every other science it only exists to be true and the definition of truth—conformity between our judgment and the thing—endures for it as for all the others, but in the following sense: a physico-mathematical theory is called 'true' when the coherent system and the fullest possible range of mathematical symbols and explicatory entities which it is able to organise coincides in all its numerical conclusions with the real measurements effected by us, without it being in the least necessary that any physical reality, a certain nature or ontological law in the world of bodies, should *precisely* correspond with each of the symbols and mathematical entities which are in question.[2] The need for

[1]'. . . The whole of our physical knowledge is based on measures. . . . The physical world consists, so to speak, of measure-groups resting on a shadowy background that lies outside the scope of physics.' (A. E. Eddington, *The Nature of the Physical World*, 1928, p. 152.)

'The whole subject-matter of exact science consists of pointer readings and similar indications. We cannot enter here into the definition of what are to be classed as similar indications. The observation of approximate coincidence of the pointer with a scale-division can be generally extended to include the observation of any kind of coincidence—or, as it is usually expressed in the language of the general relativity theory, an intersection of world-lines. The essential point is that, although we seem to have very definite conceptions of objects in the external world, these conceptions do not enter into exact science and are not in any way confirmed by it. Before exact science can begin to handle the problems they must be replaced by quantities representing the results of physical measurement.' (*Ibid.* pp. 251–3.)

[2]This is a generalised application of the method which the ancients described as consisting in 'saving sensible appearances', and they made clear and explicit first in regard to astronomical theories, later in certain sections of physics. As Pierre Duhem has pointed out in a remarkable passage, aristotelian astronomy with its homocentric

causal physical explanations which remains immanent in the reason of the physicist issues, in the highest syntheses, in the construction of a certain number of rational entities founded on the real and the production of an image (or the shadow of an image) of the world capable of sustaining mathematical deduction. It would therefore be a proof of a very uncritical and truly naïve optimism to hope to make any real continuity between the way in which the theories of mathematical physics

spheres, however irreconcilable, as quickly appeared with the observed facts, is the first application of this method, 'the first of all physical theories. For the first time, in fact, in the construction of this theory, we see geometry starting from a certain number of simple principles which it has received from elsewhere and, conformably to these principles, constructing a system of hypothetical mathematics, retouching, complicating this system to the point where it has saved with sufficient exactitude the appearances described by observers.

'When observation had learned from phenomena that the whole system of homocentric spheres was forever impossible to save, geometric astronomers accepted other principles and, with their novel aid, combined them in new hypotheses, but the method which was followed in the construction of these new astronomical systems did not differ from that which had served for the building up of the system of homocentric spheres.

'There was no delay in extending this method from Astronomy to the other sections of Physics; the author of the *Mechanical Questions*, which was attributed to Aristotle, attempted its application to the equilibrium of solid weights, and Archimedes gave a rational form of rare perfection to the science of equilibrium; this admirable formulation he extended, following as always the same method, to the equilibrium of liquids and of floating bodies.

'Euclid on his side showed how the single hypothesis of the equality between the angle of incidence and the angle of refraction sufficed to save the phenomena presented by concave and convex planes and mirrors.

'Thus, two centuries before our era, Astronomy, the Science of the equilibrium of weights, and a part of Optics had taken on the form of mathematically precise theories, in the desire of satisfying the demands of experimental control; though many parts of Physics have in their turn only taken on this form after long years of groping; but, in doing so, they have only followed the method by which the earlier sciences had already arrived at the conditional of rational theories.

'The attribution of the title of "creator of the method of physical science" has given rise to many quarrels; some would claim it for Galileo, some for Descartes, others for Francis Bacon, who died without having ever even understood this method. In fact, the method of physical science has been defined by Plato and the Pythagoreans of his time with a clearness, a precision which has never been surpassed, it was applied for the first time by Eudoxus when he attempted, by combining the rotations of the homocentric spheres, to save the apparent movement of the stars.' (P. Duhem, *Le Système du monde.*)

The same discussions, moreover, must have taken place among the Greeks and the

and of philosophy—which seeks to grasp ontological principles in the very stuff of their reality—affirm their apprehension of things. It is in this sense, as I have tried to show elsewhere,[1] that we must both pay a tribute of admiration to the conceptions introduced by Einstein in the degree to which they create a powerful physico-mathematic synthesis, and reprove any pretensions which may be made to give them a rightly philosophical significance.

Does this imply the breaking of any organic connections between

mediæval Arabs and Christians, on the significance of the results obtained as in our own day on the theme of 'the value of science'. St. Thomas has clearly indicated the bearing of the method in question in the following passage: 'Ad aliquam rem dupliciter inducitur ratio Uno modo ad probandum sufficienter aliquam radicem. Alio modo inducitur ratio non quae sufficienter probet radicem, sed quae radici jam positae ostendat congruere consequentes effectus; sicut in astrologia ponitur ratio excentricorum et epicyclorum, ex hoc quod, hac positione facta, possunt salvari apparentia sensibilia circa motus caelestis· non tamen ratio haec est sufficienter probans, quia etiam, forte, alia positione facta salvari possent.' (*Sum. theol.*, 1, 32, 1, ad 2)

I would add, to avoid all misunderstanding, that σώζειν τὰ φαινόμενα in no sense implies that refusal of the search for causes and an explicatory hypothesis which Duhem attributes for his part to physical theory (see *supra*, p. 55). These are in themselves causal explications and figurable entities which are elaborated by the physical sciences and which are arranged to *save phenomena* and which are *true* (not in the absolute sense in which a metaphysical doctrine is called true), but true in the measure in which they succeed, without assuming a penetration into the essential nature of things. It is therefore a secondary question whether a scientist attributes to a theory the value of a simple mathematical representation or that of a causal explanation, or both at once, or oscillates between the two (as Ptolemy did in astronomy; or as, in our own day, in physics, 'some ask if the electron has not only a purely analytic existence, is only a centre of vibration in a system of waves which are the true reality. For others, it is these waves which have only an analytic existence: for a surrounding field of discontinuity a field of imaginary continuity has been mathematically substituted' (E. Picard, *op. cit*)): for, in reality, this 'causal' explication in itself remains 'empiriological', and has no rightful or direct 'ontological' significance. (Cp. chap III.)

As M. René Poirier has written, from a point of view which otherwise is very different from mine, 'There is no essential difference between the way in which a logical or numerical allegory rationalises the real and that of a structural scheme or figurative hypothesis. . . . The most abstract schemes of statistical energy and of Relativity in general do not proceed from any other attitude of mind, correspond to no other form of comprehension than that which produces the mechanical models of the atom or the solar system; the difference between abstract and intuitive theories is like that between painting and sculpture' (*Essai*).

[1] Cp. *Réflexions sur l'intelligence*, chap. VII

philosophy and mathematical physics? Certainly not. In the very nature of the order of the explication of things there is a continuity between the philosophy of nature and mathematical physics, if not in the explicatory theories elaborated by the latter, at least in the degree to which, as I said above, science furnishes philosophy with an immense supply of facts, a gain which endures despite the fluctuations of theory. This is the case with the existence of atoms (which have nothing in common with those of Democritus), a probability which to-day has grown next door to certitude: I say the existence of atoms, not, be it noted, the nature and structure attributed to them by science, for these latter are subject to constant alteration and consist in large measure of scientific symbolisation. But if nowadays, for example, the Rutherford-Bohr atom is eclipsed by that of Schrödinger, and has become, in anticipation of further avatars, 'a wave-centre of probability', the existence of the constituent elements of the molecule called 'atoms' (and of their constituent elements, 'protons', 'electrons', 'neutrons', or whatever other names science has endowed them with) seems in no way overthrown, although conceived of in such varying fashion, as though thought out solely in the form of mathematical symbols.

On the other hand, in the epistemological order, in that of theories of knowledge, the organic link between physico-mathematics and metaphysics is closer than ever. In the determination of the nature and true value of physico-mathematical science, the place, the part and the bearing of its explications, metaphysics not only maintains order in the system of our forms of knowledge, but renders to physico-mathematics the essential service of protecting it against otherwise almost inevitable deformations, above all, against the pernicious illusion that it is itself called on to be a philosophy of nature and the belief that things only begin to exist when submitted to the measurement of our instruments. Physico-mathematical explanations are free to make use and good use of dislocations of time and non-euclidian space, for they have the right to progress along the lines of their own development: they do well in doing their own work: the eyes of the spirit are set on their significance and know its limitations.

There is perhaps an element of melancholy in this assertion that the image of the universe, or more exactly the more or less discordant

images and shadow-images in which it appears in the last analysis the explicatory effort of physical theories can only result, cannot be, as was for so long believed, the natural prolongation of the ontological explications supplied by philosophy. Nevertheless for the latter this is an excellent purification. Philosophy must renounce a state of satisfaction with images—whether they be the explanatory but imaginary images of science or the natural image, which is still more baseless for any explanatory use, proffered by common sense. I shall endeavour to show in a later chapter[1] how it is possible, but in another order than that of knowledge in this sense of the term, for philosophy to re-connect with these scientific images and incorporate them in its own field.

KNOWLEDGE OF THE BIOLOGICAL AND PSYCHOLOGICAL TYPE

In the sphere of life and organic wholes the distinction between the point of view of philosophy and that of the experimental sciences remains exceedingly clear; the conceptual vocabulary, the procedure of verification, the laws of the resolution of concepts and the organisation of knowledge being necessarily different one from the other. But in this sphere a certain 'continuity' or solidarity between the specifically rational and specifically experimental sections of knowledge can be established—despite an essential epistemological diversity—in what is concerned with the explanatory theories which are furnished by the sciences and the final explanation given by the philosophy of nature. For, although resolving their concepts in sensible and observable being in the very degree to which it is sensible and observable, experimental biology and psychology do not undertake the construction of a closed universe of mathematically inspired phenomena, and it is natural that the form of deductive explication to which they are attracted should be of a philosophical, and not mathematical, type.

It is not in the least that I wish to deny or lessen *a priori* the part played by physico-chemical explications (which are in themselves orientated towards the integral mathematisation of the real) in biology. If it is true that physico-chemical forces are the *instruments* of superior ontological principles in living matter, it is possible to hold that the field of

[1] See *infra*, chap. iii, pp. 222-4.

these explications can be unceasingly extended, although a halt has to be called before certain specific 'irrationals' which inevitably arise of themselves.[1] But it is also possible to hold that in the measure to which the biologist keeps the sense of reality proper to living things, and demands, in the study of phenomena, a type of explication which does not, in the last analysis, resolve this reality into its constituent elements, in a word, to the degree in which he refers himself to the notion of living *being*, that he will subordinate the so discovered physico-chemical explanations to an 'autonomous' conception of biology, or to the penetration of the detail of phenomena and the grouping of them under more and more general experimental laws—without the pretension thereby of resolving them in that universal mathematical explanatory deduction envisaged by physics (and moreover without quitting the ground of the observable and the measurable)—and will remain based on that ontological structure which is *understood* in the concepts furnished by philosophy.

On the other hand, if they do not put their intelligence in blinkers, the biologist and the psychologist are inevitably led by their very objective to ask meta-phenomenal questions; to which they can certainly endeavour to reply with the aid of their own conceptual equipment, their own means of analysis, so winning, in the most favourable instances, indirect and circuitous solutions, surrounded with inconceivable limitations, which mimic those of philosophy and are at a tangent to them. Thus Driesch[2] has recognised, in the course of remarkable work, that embryonic development depends on a non-spatial *factor E* which maintains the specific type, or again that the actions of animals also depend on a non-spatial factor, thanks to which stimuli coming from without are individualised, and the functioning of the animal mechanism is enriched by its own exercise—a non-spatial factor which he prudently christens *psychoid*.

But it is only in making use of the apparatus of philosophy, in becoming themselves philosophers, that they will be able to give a rightful and adequate solution to those supra-experimental problems which experience itself constrains them to envisage; that they will be able, for one example, to learn the veritable names of a *psychoid* and *factor E*.

[1] See *infra*, chap. iii, pp. 235-40.

[2] Cp. my preface to the French translation of Hans Driesch's *Philosophy of the Organism* (Paris, 1921).

CONCLUSION

We have the right to hold that thomist philosophy rather than any other is in the position to supply the sciences with the metaphysical framework where they can follow out at ease the necessities of their own proper development and which will do them no violence: not only because it is essentially realist and critically justifies the extra-mental reality of things and the value of our faculties of knowledge, which all science implicitly presupposes, but because it guarantees the autonomy, the specific quality of each, and its metaphysical elucidations of the real imply in consequence no necessary systematic deformation despotically imposed upon experience.

In fact the reproach addressed by the misinformed to scholastic philosophy recoils on the modern systems. For it is these systems which derive from systematic prejudices like mechanism or monism, psycho-physical parallelism, the cartesian theory of knowledge, universal evolutionism, etc., which necessarily and as such impose on science such exasperating metaphysical fetters.

It is not a question of finding between the aristotelian-thomist philosophy and the sciences that concordance of detail which we have just rejected: but of affirming rather a concord in general, a good understanding, a natural friendship, of which the very liberty of science, the ease with which it spreads its wings, is the best indication. This is explicitly affirmed by several representatives of the natural sciences, while elsewhere a remarkable renaissance of themes proper to the moral philosophy of St. Thomas is visible among the juridical and moral sciences, which I have not had the space to speak of in this essay.

If there is no lack of labourers, if unreasonable prejudices—due most of all, it seems, to a morbid fear of ontological research, and of all philosophy directed towards the knowledge of things (as if a philosophy of being could not also be a philosophy of the spirit)—do not turn them back from the study of the sole philosophy which claims to confront the universality of extra-mental reality without claiming in the same stroke to absorb all knowledge into itself, we may hope to see the dawn of a great new scientific period, which will put an end to the misunderstandings engendered in the field of experimental research by the quarrel

between Aristotle and Descartes, and where the phenomenological sciences will at last achieve their normative organisation, some, especially physics, subject to the attraction of mathematics and following out on those lines the path of their splendid progress, others, especially biology and psychology, subject to the attraction of philosophy, and finding there that organic order of which they have such need, and the conditions of a development which will be not only material, but rightly worthy of the human mind. A general redistribution which comes from the natural growth of phenomenological science, but which also presupposes, that is clear, the supreme regulative power of metaphysical wisdom.

This would be the restitution to the human soul of that divine blessing of intellectual unity, which for three centuries has been broken.

Kant denied to metaphysics the character of a science, because for him experience was both the product and the end of science, which creates it by applying to sensible data those necessities which are purely mental forms; but St. Thomas recognised in metaphysics the supreme science of the natural order, because for him experience is the point of departure for the science, which, reading in sensible data those intelligible necessities which surpass them, can transcend it in following out those necessities and so come to a supra-experimental knowledge which is absolutely certain.

Being is in fact the proper object of the intellect; it is enracinated in all its concepts, it is towards it, in so far as it is absorbed in what is given through the senses, that it is first of all directed.

When the intellect disengages this conceptual object to consider it in itself, in the degree to which it is being, it perceives that it is not exhausted by the sensible realities in which it is at first discovered; it has a supra-experimental value and so also have the principles founded upon it. Thus the mind, if I may say so, 'loops the loop', returning in order to grasp it metaphysically and transcendently to that same *being* which it was given first of all in its primary intellection of the sensible.

And so, because it has in its metaphysical concepts the intellectual perception of objects, such as being and the transcendentals, which can be realised otherwise than in the matter where it perceived them, it can also attain to these objects—without, this time, directly perceiving

them, and as if in the mirror of sensible things—there, where they are realised immaterially, as the facts asserted by the world of experience compel us to infer. The supra-sensible cannot be, at least in the natural order, the object of an experimental science; it is nevertheless the object of a science rightfully so called, the science *par excellence*; for if the universe of being as such, disengaged by the mind when it delivers its objects from all materiality, does not fall under the ken of the senses, on the other hand, intelligible necessities are there seen in such a degree of perfection that the knowledge ordinated in regard to such a world of intelligibility is in itself of the highest certainty, though we indeed may have difficulty in acknowledging it. For we are an ungrateful and mediocre species, who only ask the right to fail to achieve the heights of which we are capable, and who in ourselves, even when the highest gifts have fortified our eyes, have always a preference for the dark.

CHAPTER II

CRITICAL REALISM

I. CRITICAL REALISM

BY THE name *critical realism* I do not here mean those contemporary philosophical ideas which, notably in America and in Germany, have adopted that title to characterise their position,[1] but rather the aristotelian-thomist conception of knowledge. It strikes me as having a better title to the appellation.

M. Etienne Gilson has raised an interesting and useful controversy on this theme, by maintaining[2] that though thomist realism constitutes a 'methodic' realism rather than anything 'naïve', it can nevertheless only become a 'critical' realism in conceding, at the very moment when it claims to strike them down, to the pretensions of idealism.[3]

Gilson's study is marked by many just and penetrating observations, and it excellently exhibits how vain is the idea of asking from the cartesian *cogito*, however many amendments one proposes in it, any elements of a realist noetic. 'He who begins as an idealist', he writes, 'necessarily ends as one: it is impossible to be an idealist by halves. There is no need to doubt what history teaches by so many examples. "*Cogito, ergo res sunt*" is Cartesianism, that is to say, the exact antithesis of what is considered scholastic realism and the cause of its ruin. No one made a greater

[1] Still less in particular to that theory of the perception of the exterior world sustained not only by Kulpe but also by several neo-scholastics, and opposed with so much reason by J. Gredt (*Unsere Auswelt*, 1921); according to which, sensation is only attained as a subjective end which is objectified in a secondary manner thanks to an inference.

[2] 'Le Réalisme méthodique,' in *Philosophia perennis* (Mélanges Geyer), Regensburg, 1930, vol. ii. L. Noël's reply ('La Méthode du réalisme') will be found in *La Revue néo-scolastique*, Nov. 1931.

[3] E. Gilson, 'Réalisme et méthode' (*Revue des sciences philosophiques et théologiques*, vol. xxi, 1932).

effort than Descartes did to throw a bridge between thought and things, basing himself on the principle of causality; he was indeed the first to make the effort since he had obliged himself so to do by placing the point of departure of knowledge in intuitive thought: it is therefore strictly accurate to say that every scholastic who thinks he is a realist because he accepts this setting of the problem is in reality a Cartesian. . . . The cartesian experiment was a wonderful metaphysical enterprise, marked with the purest genius; we owe much to it, if only for its brilliant proof that every tentative of this kind is doomed in advance to failure; but it is the height of simplicity to begin it again in the hope of obtaining contrary results from those which have always followed, because they are of its essence. . . . One may begin with Descartes, but one will end along that road with Berkeley or Kant. There is an internal necessity in the very essence of metaphysics, and the progress of philosophy precisely consists in an increasingly clear consciousness of its content. . . . No man will ever win from the *cogito* the justification of the realism of St. Thomas.'[1] *Aurea dicta!* Let us give thanks to a philosopher with such a rich historical background for this vigorous witness, in the name of history itself, to the intelligible necessities which, despite all the accidents of material causality, rule the historical development of thought.

The criticism which he suggested from this point of view of idealism is exceedingly pertinent.[2] History attests at once the essential impotence of idealism 'to pass on from criticism to positive construction' and for the preservation of the rightful content of philosophy as distinct from that of a chosen regulative science—and the necessity in which it finds itself of substituting for the real (because it does not start from things, but from thought) rational not real beings 'which are only false coin'.[3]

It is certainly true, on the other hand, that, though fundamentally and consciously 'realists' *in actu exercito*, neither Aristotle nor St. Thomas ever felt the need to qualify themselves as realists in the modern interpretation of the term; for the reason that the error to which it is opposed had not yet arisen in the West. But the realism professed by Thomists to-day is only a passage from the implicit to the explicit. And this transition is itself a form of progress. It is even possible to think that in this, idealism has played a necessary historical part. Precisely because

[1] *Ibid.* pp. 747-8, 751. [2] *Ibid.* pp. 753-4. [3] *Ibid.* p. 754.

the aptitude with which our faculties for knowledge lay hold on the real is a gift of nature, and human thought, by the very reason of its native vigour, deals the more spontaneously with what is in the degree to which it is healthy, it needed, so to speak, the pathogenic ferment of the cartesian *cogito*, and the aberration of the way in which idealism posed the critical problem, to compel the philosophical intelligence to turn seriously to its consideration and to enter consciously into a phase of self-reflection, which in itself, whatever the cost needing to be paid for it, must add to the fuller manifestation of the spirituality of the reason.

If idealism is in itself a tragic experience for thought—which, like all veritable tragedies, ends with the suicide of the protagonist—it also opens —on condition that it itself is entirely turned out—together with a new problematic, new possibilities of depth and penetration which the mind cannot renounce. It is important therefore to avoid here a double-sided danger: one, which consists in accepting, in whatever way and however little, the idealist setting of the critical problem; and here I am in the fullest agreement with M. Gilson; and the other which consists in the refusal of any possibility whatsoever of posing as philosophically soluble the whole critical problem. It is here that I part company with M. Gilson. I believe that it is possible—in fact that it is the particular office of wisdom—to face this problem in a wholly other fashion than that of idealism.

To my mind it is inexact to say that realism only exists by idealism[1] (on that ground no true thesis would exist except by right of the error which it refutes, and a dogmatic definition would depend on the error which it opposes), and that realism, in order to be critical, must 'borrow' from idealism 'the posing of the problem'. Nor is it sufficient to point out that realism has succeeded at the point where idealism fails, or to demonstrate the insufficiency of the latter in constructing a viable philosophical system.[2] Without doubt that is an indirect sign whose value is far from negligible. But the point which it is necessary to bring the mind to take full cognisance of is the absolute impossibility in itself and *as such* of idealism. More, there is not the slightest reason for

[1] E. Gilson, 'Réalisme et méthode' (*Revue des sciences philosophiques et théologiques*, vol. xxi, 1932), p. 751.

[2] *Ibid.* p. 752.

abandoning into the hands of the idealists the whole use and possession of the word 'critical' and all it signifies. 'To criticise in the exact sense of the word is *to judge*, in conformity with the exigencies of the object under examination.'[1] And how can judgment and the control of the self by the self be held alien to the one philosophy in which the mind is characterised by its capacity for a complete return upon itself? Truly, as I have already claimed in an earlier book[2] and as J. de Tonquédec has forcibly pointed out,[3] the primary reproach with which we can face critical idealism is that it is and has been insufficiently critical.

The critical problem is not: 'How is it possible to pass from *percipi* to *esse*? Thought being itself the sole object attained with indubitable certainty, is it possible to demonstrate that it attains also to things, to a real which is its measure?' It is this: 'What value, in the various degrees of the elaboration of knowing, must we recognise in *percipere* and *judicare*? Thought giving itself at the first shot and as if with complete assurance to things and being given its measure by an *esse* independent of it, how is it possible so to judge, how, under what conditions and what measure is it really thus in the beginning and in the various degrees of human knowledge?' It is absurd to demand from philosophical thought that it should begin, before rightly knowing anything, by giving proof that it is able to know (which it can only know by knowing); it is absurd to suppose first of all that what cannot be judged as true by thought may, by the action of some malign genius, not be true, in order to demand as a result that this same thought should demonstrate that in fact it is not so; or to admit that thought can only attain to phenomenal-objects and then ask that it should prove that these objects are extra-mental realities.[4] Such things are those *stultae questiones* which St. Thomas, following St. Paul, counsels us to shun.[5]

[1]R. Garrigou-Lagrange, 'Le Réalisme thomiste et le mystère de la connaissance,' *Revue de philosophie*, Jan.-Feb. and Mar.-Apr., 1931. (This article has been reprinted in *Le réalisme du principe de finalité*, Paris, 1932.)

[2]Cp. *Réflexions sur l'intelligence*, chaps. i and ii.

[3]J. de Tonquédec, *La Critique de la connaissance*, pp. 21-2.

[4]Cp. *Réflexions sur l'intelligence*, p. 41.

[5]'Stultae questiones de vita', Tit. iii, 9: St. Thomas, lesson ii, '. . . . Item quando manifestum proponitur ut dubium, sc. quaecumque debet aliquis per se tenere in scientia.'

But when thought has begun to operate, to know and to philosophise, to acquire the certitudes of science and of wisdom concerning things and the soul, and their first cause, it has need to turn back upon itself and on these acquisitions, and apply itself to the knowing of knowledge, to judge concerning it and to verify it (in order to advance again, and again to circle back upon itself . . .).This is the task of metaphysical wisdom[1] which, as the highest natural point of spirituality among the sciences, has the power to go back over the principles of these latter and over its own, in order to justify (if not by direct demonstration—for it is an *apaedeusia, id est ineruditio*[2] to wish to demonstrate everything—at least by a *reductio ad absurdum*) and so fulfil that self-return which is proper to the spirit.

In a sense it is ungrateful and dangerous work (the danger is sufficiently obvious), as is all rescension and verification, all the registration of reflex valuation, a work which goes against nature, but which is indispensable, for the intellect even more than the hand needs to know how to control its tools and that instrument which is itself. It makes a particular call on the sobriety and humility of veracious science and on that respect for the object, which is in this case the mystery proper to knowledge. Thus humbly, by the impossibility of their contraries, the fundamental truths and particularly the general validity of knowledge and its first principles are confirmed: then follows the principal business, where research can advance and exhaust itself endlessly: which consists on the one side in the analysis and description—with full respect for its integrity—of the objective content of knowledge in its diverse phases[3] and of the witness which it gives to itself; on the other side, of the endeavour to penetrate metaphysically into its nature and its causes, and to make it in the rightful sense of the word, know itself:

[1]'Considerandum est in scientiis philosophicis, quod inferiores scientiae non probant sua principia, nec contra negantem principia disputant, sed hoc relinquunt superiori scientiae; suprema vero inter eas, scilicet metaphysica, disputat contra negantem sua principia, si adversarius aliquid concedit; si autem nihil potest cum eo disputare, potest tamen solvere rationis ipsius.' (St. Thomas, *Sum. theol.*, I, 1, 8.) Cp. R. Garrigou-Lagrange, *art. cit.*

[2]St. Thomas, *In Metaph.*, book iv, lect. 6.

[3]It is here without doubt that something will remain, when it has been distilled by time and reduced to more modest proportions, of the phenomenological method.

after which it is possible to proceed to the detail of instances and discrimination of gnoseological values and what in the act of knowing depends on the real and what on the constructive activity of the mind (thus the treatise on the Divine Names in the *Summa* is a critique of theological knowledge; and thus again all search for the true significance of physical theory is an attempt at a critique of physico-mathematical knowledge), like, for instance, the discovery of the laws of that transcendental theme which is at various times under discussion in the present book.

The mind throughout has a veritable understanding of the object which it proposes to itself and *judges* of it in accord with the intrinsic necessities proper to knowledge; indeed, in the strictest sense of the word, it is a critique of knowledge which will have been instituted. But its work will always and essentially remain a taking cognisance of, a return on another activity which is the knowledge of things, a purely reflective activity. When this condition is fully understood the principal danger drops away. Such a critique of knowledge will have been subject to no idealist contagion. For it is in effect essential to all idealism to mix a constructive desire with all reflective activity (however unacknowledged it may be, however dissimulated under the aspect of a pure methodical austerity)—at least the desire to make the whole nature of philosophy depend on this preparatory self-reflection, if not to make it wholly consist of it. As soon as one acknowledges that the work of a critique is purely and exclusively reflex, secondary (not only in order of time, but of nature) and therefore cannot separate itself for an instant from the knowledge of the real without having recourse to an illusory self-devouring, one is securely innoculated against cartesian fever.

SCIO ALIQUID ESSE

If the foregoing remarks are correct, it follows that a thomist criticism of knowledge will differ from the beginning and by reason of the very method of its procedure, from that of any type of idealism, and particularly by these three points:

1. It is in no sense the pure *cogito* shut in on itself which makes its

point of departure. Criticism, as a work of philosophy, implies the act of consciousness whereby the mind goes philosophically back over its preliminary work of knowing; and this is not the act of consciousness which is in point of fact and chronologically first (to what point in that case of infant experience would it be necessary to return?) but that *act of consciousness* which is verified by the philosopher as being *by right and logically first*, when he lays bare those most primary roots of knowledge which constitute his point of departure. How is this exactly determined? In my opinion three primordial axioms, which each imply the others, are included in this fundamental act of consciousness and impose themselves on any philosophic analysis: the incontrovertible evidence of the principle of identity, that primary fact to which we are led by the resolution of the knowledge which has already been acquired[1] and in which we find the very first (*i.e.* in the order of reason) living connection between the mind and things; the general truthfulness of our powers of knowledge, which is like the first if highly indeterminate witness which the intellect gives to itself; the notion of truth, whose elucidation presents the primary problem which criticism must solve. Thus if we wish to formulate directly that experience which forms the point of departure for all criticism, it must run not, *I think*, but—I *am*

[1]'Hujusmodi autem principia naturaliter cognoscuntur, et error qui circa hujusmodi principia accideret, ex corruptione naturae proveniret. Unde non posset homo mutari de vera acceptione principiorum in falsam, vel e converso, nisi per mutationem naturae.' *Sum. Contra Gent.*, IV, 95.

Cp. R. Garrigou-Lagrange, *op. cit.* 'This primordial evidence belongs to the *first intellectual apprehension* of being or of the real and to the *necessary and universal judgment* which immediately follows it; these direct acts are necessarily anterior to any reflection upon them. Then this primary and indestructible evidence is confirmed by the intellect's reflection on its own act, on the nature of that act and its own nature, of which it sees the *essential finality*, as it sees the finality of the eye or of the ear. And by this the intellect sees that the idea of being, impressed on it and subsequently expressed by it, is as essentially relative to *extra-mental being*, whether actual or possible, wholly different from *being only existing in the reason*....' (*Ibid.*)

'It is untrue that we are first conscious of our certitudes as "purely subjective" states, from which we subsequently conclude (no one has ever explained by what right) the existence of reality distinct from our knowledge, in "objective" truth. No, *immediate evidence gives us the object*; if it did not, no reflection on it—it is only too evident—could discover it among its acquisitions.' (J. de Tonquédec, *op. cit.*)

'The real is given us straight away in the activity of knowing.' (L. Noël, *art. cit.*)

conscious of knowing—I am conscious of knowing at least one thing, that that which is, is.

The *cogito ergo sum* is ambiguous: it is proffered at the same time as the point of departure for the whole of philosophy and for the critique. If we were in search of an equally ambiguous formula, to serve both these aims, we could say: '*scio aliquid esse* (*seu esse posse*)', but it would be necessary at once to resolve it into the two significations which it embraces and which would need to be differentiated, for the one is concerned with direct knowledge and the first movement of the mind, the other with reflex knowledge and the mind's secondary motion. When I say, 'I know that some thing is (or may be)', I can have the intention of affirming simply that *some thing is* (or may be), *aliquid est*, an enunciation in this case concerned with the first movement of the mind, and thereby related to *the starting-point of all philosophy*. The concrete experience which it translates includes besides all the complexity of my cognitive activities, for my intelligence there lays hold of intelligible being, on which it bears directly, and which has been perceived by it in exactly so far as the surrounding possibility of eternal exigencies forms the object of its whole first purely intellectual certitude (principle of identity), but which it grasps in fact in turning back on some singular object given to it by the senses and from which it has caused it to arise; and in going back also, although entirely implicitly and by the single fact of judgment, on its own act of knowledge and its relation to the thing; on the self which knows and whose existence in act—for my me the most indubitable of all such existence—is so made known to me—but as though in its germ (*in actu primo*) and not yet effectively—each time that I know.[1]

If I say after this: 'I know that some thing is (or may be)', having taken explicit cognisance only of what was included in direct knowledge and meaning to say that *I know* that some thing is or may be, *ego cognosco aliquid esse*, my statement is then concerned with the second motion of the mind, refers to the point of departure of a critique.

The position so taken up is this: Since the intellect deals first of all neither with itself nor with myself, but with *being*, the very first evidence (I say first, not in the order of time, where what in itself is

[1]Cp. *infra*, pp. 108 (note 1) and 124 (note 1).

primary is only implicit, but in nature), the *evidence which in itself is first* for the intellect is that of the principle of identity, 'discovered' in the intellectual apprehension of being or of the real.

I have said that the real in question is not necessarily in the actual (existential) order, although it may be as incarnate in the example of some sensible existence that the intellect first lays hold on the principle of identity. In itself this principle bears on the whole extension of being and primarily on the order of essences, on the *possible reality*.[1] But at the same time in the intelligible order itself a certain *actual reality* is given to the intellect in this first act of perception and judgment, this time from the side of the subject, *i.e.* the existence of the thinking subject itself, for all that it is implicitly and pre-consciously and by an initial act[2] and not yet as an express object of knowledge.

Thus the intellect here embraces in its own sphere at one and the same time—the possible real: the object ('all being . . .') set before the mind and attained by it, and signified in the enunciation of the principle of identity[3]—and the actual real: the reality of the thinking subject, not yet attained in ultimate act (*in actu secundo*). *Intelligible being* and the *self* are given it at once and together, but *being* is in the foreground and, as it were, on the centre of the stage, and the *self* in the background or in the wings. It is only with the second movement of the mind, in that reflex act which serves as a starting-point for the critique of knowledge, that it comes into the foreground.

2. An authentic criticism of knowledge does not in the least imply a

[1] See *infra*, pp. 111-12 and 123-4.

[2] On the distinction between the initial act (*actus primus*) and the final act (*actus secundus seu ultimus*) in the order of knowledge see *infra*, p. 141. When the object of intellection is a thing other than myself it is (directly) known in initial act by the fact of the actuation of the intellect by the *species impressa*, and in final act (*i.e.* purely and simply) by the act of intellection itself and in the *species expressa* or mental work. When it is the act of intelligence or the intelligence itself or the existence of the self, it is known (reflexively) in initial act by the very fact that the intellect is itself a direct act of knowledge of a thing, and by that very fact intelligible in act to itself, and it is known in final act (effectively known) by the act of reflex intellection and in a reflex concept. Cp. *infra*, p. 108 (note 1) and p. 145 (note 2).

[3] 'All being is what it is.'

single moment of real universal doubt.[1] Such a moment in effect includes *in actu exercito* the negation of what it is assumed one as yet knows nothing of (I mean, the essential ordination of the intellect to being), and creates a vicious circle.[2] As I have indicated elsewhere,[3] the *universalis dubitatio de veritate* of which St. Thomas, following Aristotle,[4]

[1]'In fact the evidence takes us by the throat and leaves us no time to defend ourselves; it leaps to our eyes, not like a blind force, but like an irresistible light. The moment the mind decides to reflect, it is subject to this shock; not a moment is given it for deliberation, its reflection instantly comes across evidence which it cannot dispute, which it has not to 'justify', but only to observe and record. There is not, nor can there be, at the beginning of the critique of knowledge, any instant's pause, a second of uncertainty, abstention or ignorance, of any real doubt.' (J. de Tonquédec, *op. cit.*)

'This is what Descartes, the founder of modern idealism, did not see when he said that God, if he had so wished, could have created square circles or hills without valleys. Descartes did not comprehend that he was committing an unforgivable sin as grave as that which is called in the spiritual order the sin against the Holy Ghost or against the light of liberation. From the dawn of our intellectual life we have an absolute certainty that neither God, if he exists, however powerful he may be, nor any malign genius, however perverse and deceiving, could make a square circle, for this is not only *inconceivable by us*, but *really in itself impossible*.' (R. Garrigou-Lagrange, *art. cit.*)

[2]And this is not the only one. 'It is impossible to deliberately put in doubt the value of all certitude without expressly referring to an absolute and incontestable ideal of certitude, to a notion already acquired and held as assured of certitude, to a rigorous principle which will dominate all further discussion: let it be quite clear, viable, scientific certitude—which carries as its correlative, objective truth—carries such characteristics, implies such conditions. Here for reflection, at least, is something which is not in the least dubious! There is a *considered, even philosophic*, certitude, moreover one that is easily recognisable, which must be rescued from universal doubt! But it implies all the elements of critical philosophy: the notions of truth, of reality, of objectivity, etc.; critical philosophy has therefore been in action before the point assigned for it to come into action.' (Cp. Du Roussaux, 'Le Néo-dogmatisme,' *Revue néo-scolastique*, Nov. 1911.)

'It is perfectly legitimate to make an inventory and a critical revision of human knowledge. It is indeed what has been attempted in the present book. But in this enterprise there is no place for universal doubt. "The reduction of thought to a bare potentiality which knows nothing about nothing is an impossibility, even for the duration of a flash of lightning. . . . Every attempt at universal doubt is still-born, dead in its essence, void of reality or possibility. The interlocutory question is a vain interrogation; it is answered by the asking." (Du Roussaux, *op. cit.*).' (J. de Tonquédec, *op. cit.*)

[3]*Réflexions sur l'intelligence*, p. 42.

[4]Aristotle, *Metaph.*, B. c. 1. (St. Thomas, book III, lect. 1.) J. de Tonquédec has shown the true meaning of this expression at the concluding chapter of his book, *op. cit.*, pp. 436-441.

speaks, that putting in question, or universal *aporia* which is the privilege of metaphysics, that *videtur quod non* which is the beginning of all scientific research and which stops at nothing, is not in any slightest degree a living or *exercised* doubt—no more than it is the phenomenological ἐποχή[1]—it is not a living ἐποχή but one put forward as a hypothesis to be examined, a conceived or *represented* doubt (and by this much more rigorous and much more sincere than the cartesian doubt, for it involves no ruse, no arbitrary forcing from the side of the will, no pseudo-drama); and the end which the mind arrives at as a result of this universal problematisation is precisely the clear and deliberate consciousness of both the absolute impossibility of realising a universal doubt (or a 'putting in parentheses' of all certitude concerning the being of things), and of the knowledge which it already possessed, rooted in the exercise of its basic activity, although unformulated, from the very start, of its essential ordering for the apprehension of things: for in every judgment the intellect tacitly and virtually knows itself, *in cujus natura est ut rebus conformetur.*[2] The intellect lives realistically before it recognises the name of realism.

3. Finally, an authentic critique of knowledge, comprehending that it is absurd to go back on its traces at the first step, does not give itself out as the preliminary condition of all philosophy.[3] The conception of 'philosophical radicalism'[4] formed by Cartesians and neo-Cartesians appears from this point of view as an almost perfect type of presumption in the field of human knowledge. The critique of knowledge presupposes a long-continued effort to know—knowledge which is not only spontaneous, but also scientific—not only scientific (in the modern sense of the word), but philosophic and psychological, logical and metaphysical.[5] It is itself a part of metaphysical knowledge, the

[1]On this ἐποχή, see *infra*, pp. 123-4.

[2]St. Thomas, *De Veritate*, 1, 9; cp. *infra*, p. 108 (note 1).

[3]'What is necessary is to free ourselves from the beginning from the obsession of the idea that epistemology is the essential preliminary of philosophy' (E. Gilson, *art. cit.*). On this point I share the fullest agreement with M. Gilson.

[4]Cp. E. Husserl, *Méditations cartésiennes*.

[5]'According to the thought of Aristotle and St. Thomas, when rightly understood, the critique of knowledge should not come at the beginning of metaphysics (or, if one

supreme wisdom of the natural order. And although in the interests of exterior order in a written treatise (where one must behave, alas, as if knowledge were achieved and fulfilled), it is convenient to place the critique at the beginning of metaphysics, like a sort of introductory apologetic—in reality, criticism, ontology and natural theology all grow together, even more closely interconnected than the moral virtues, since they are integrated into one and the same specific whole. 'Instead of being a pre-condition of ontology, epistemology ought to grow in and with it, sustaining it amd being sustained by it, being at once explanatory and explained, mutually supporting elements of one true philosophy.'[1] The critique of knowledge or epistemology has no existence as a discipline distinct from metaphysics. To give it a separate existence is to interpose a third term between realism and idealism, between yes and no, which is indeed the pretension of the moderns, with their unthinkable notion of a 'pure phenomenon',[2] which voids the very concept of being of any being, that most general of all our concepts.

It is in this way by the very setting-up of the problem and from the outset, that a thomist critique of knowledge is distinguished from all the pseudo-critiques of idealism.[3]

wishes it so, at the end, by way of reflection), but after natural philosophy and after psychology. For in order to criticise the value of knowledge it is necessary first to know psychologically what it is, to know how to distinguish the formal object of the intellect (being and the reasons of being of things) and the formal object of the senses (sensible phenomena).' R. Garrigou-Lagrange, *art cit.*, cp. *Revue thomiste*, Jan. 1924: *Dans quel ordre proposer les sciences philosophiques.*

L. Noël (*Notes d'epistémologie thomiste*) supports this thesis, while pointing out, as is very true, that the critique also serves in its turn the progress of the philosophical sciences. Here, as in all organic growth, *causae ad invicem sunt causae.*

[1]E. Gilson, *art. cit.*

[2]There is, of course, a perfectly legitimate notion of phenomena, but which is not *separated* from that of the 'thing in itself'. It is the sensible appearance of the thing existing in itself.

[3]More, in order to rightly call oneself a Thomist, it is necessary to maintain that what is 'first of all known by the human intellect' is the being of sensible things, the proper object of our mind, and that there is a primary intellectual apprehension which can be called a 'view' (cp. M. D. Roland-Gosselin, 'Peut-on parler d'intuition intellectuelle dans la philosophie thomiste?' *Philosophia Perennis*, vol. I, p. 730) or a 'perception', or an 'abstractive intuition'. (Cp. J. Maritain, *Réflexions sur l'intelligence*, Annexe II, and *Philosophie Bergsonienne*, also L. Noël, *op. cit.*) The particular word is unimportant,

Will M. Gilson grant after this explanation that his objections to the possibility of a thomist critique of knowledge are not insuperable, and that the idea of *critical realism* is not self-contradictory like that of a square circle?[1]

In any case it must be obvious why I hold that thomist realism is not only not naïve (if by that is meant the absence of scrupulous scientific accuracy and the thirst for verification; for the word can also imply the naturalness of the procedure, a recognition of the primacy of nature over reflection), but that it is also 'conscious, considered and deliberate' or 'methodical'[2]; still more, that it is truly and rightly critical, indeed the only gnoseological doctrine which rightly merits the name.

These comments on the notion of critical realism are only a preliminary. It is necessary now to touch on some of the questions which are central to the critique itself. In the endeavour to posit any just idea of speculative philosophy and of the two typically distinct degrees of knowledge

what is essential is to recognise that the object is immediately attained (*v. infra*, p. 149), and that our mind does not only 'conceive' of being, as some neo-scholastics (Zamboni for example) have suggested, but also in conceiving it, 'perceives'. It is also necessary to maintain that the *species intelligibilis* is *quo* and not *quod* (cp. p. 144-6); and that the knower divines the other as other as much in the 'first' or initial act (by the *species impressa*) as in the final or 'second' (by the cognitive act itself). If these points are not maintained, there is a break between the critique of knowledge which has been set up and the principles of Aristotle and St. Thomas.

[1]E. Gilson, *art. cit.* Actually it is the conception which certain neo-scholastics have set up of realism which M. Gilson has had in his mind, but I should myself hold that if his objections run directly counter to such positions as that of Jeannière (whom he does not mention) or of S. Picard, or still more those of the phenomenologists, his discord with L. Noël is less concerned with doctrine than method; and it is possible that Mgr. Noël would himself agree that the rôle assigned to the *cogito* in his *Notes d'épistémologie thomiste* (particularly on p. 88) is in fact secondary in regard to what is essential to his mind. This latter must rather be sought in the forcible criticism which he directs against Picard and Zamboni. I rejoice to observe that fundamentally, *e.g.* in a point as important as that of the *immediacy* of intellectual perception and those put forward on p. 97, n 3, there is an essential agreement between such writers as the lamented Fr. Gemy, R. Garrigou-Lagrange, J. de Tonquédec, E. Peillaube, L. Noël, A. Masnovo, M. Cordovani, R. Kremer, and E. Gilson; the differences which subsist between them being those divergences which circle a fundamental unity, and which attest the possibility of collective work really causing a positive advance in the treatment of philosophical questions.

[2]E. Gilson, *ibid.*

which it implies—the philosophy of nature and metaphysics—it is in effect necessary to treat first of all of noetics, and to establish a certain number of propositions concerned with the much more general problem of the relation between thought and reality. I shall begin then with a sketch of the solution which, I believe, can be brought to bear on these problems by the principles of the critical realism of Aristotle and St. Thomas. This exposition will perchance make it easier to confront thomist thought and those diverse tendencies which have been grouped in England and America under the title of Neo-realism and which in Germany have been christened Phenomenological Philosophy. They are tendencies which seem to me to possess great interest and which I hold possessed of a high degree of intellectual stimulation, but which seem perhaps a little too much under the compulsion of the need to re-act against dominant prejudices and are thus too much and too gratuitously *a priori* and thereby too indifferent to the real depths of metaphysics. I shall only offer on these themes indications and suggestions in passing, for my plan is not to propound a thorough examination of such tendencies, but rather to treat of the degrees of knowledge, the philosophy of nature and metaphysics, and so to fix first of all the gnoseological propositions which are requisite for that end.

II. REALISM AND COMMONSENSE

Nowadays, when the world suffers so much from the mind's self-division, when commonsense has had to put up with so many insults, a realist philosophy usually begins by some attempt to rehabilitate commonsense in one fashion or another and to reopen connection with it. It is an excellent preoccupation, for it teaches philosophy a certain measure of humility, it brings it back into line with nature, and it tends to re-establish intellectual unity at the most fundamental and modestly human point, that point where the thought of the man in the street unites with that of the philosopher. But it is also dangerous, for commonsense is nothing homogeneous and because a large part of scientific progress, above all in its modern expression, runs exactly contrary to it.

If one takes commonsense in the purest sense of the word, meaning thereby that common awareness of truths known as such and the

principles of reason (*habitus principiorum*), that metaphysic which is unformulated, but rich in the possession of certain absolutely fundamental certitudes for human life, which reason by the aid of experience draws from those principles, then, for Thomists, it must be said there is indeed a solidarity between commonsense and philosophy, though at the same time a clearly drawn distinction; for philosophy is a form of knowledge where the fundamental certitudes of commonsense are rediscovered, but as they are formulated by critical reasoning and in a scientific state, and which endlessly extends these certitudes by means of new discoveries and new demonstrations, and which is based not only on commonsense, but on the evident necessity of those principles which the intellect knows by intuition.[1] St. Thomas's position is thus, while maintaining both forcibly and respectfully the coherence between commonsense and philosophy, very different from that of Reid and much more critical.

Simple-mindedness and the superstitious fear of being so are, we may observe in parenthesis, the two enemies of any sane critique. Philosophy in so far as it is wisdom needs to verify its organs and its instruments in the degree to which it advances, and can take nothing from either nature or culture without examination and judgment. But to pretend to 'justify oneself from the beginning'[2] and to take nothing from nature, to make the course of the world consist in the fact of this

[1]Cp. R. Garrigou-Lagrange, 'La Philosophie de l'être et les formules dogmatiques', *Le Sens commun*, Paris, third edition.

[2]E. Husserl, *op. cit.* There is a form of singularly naive credulity with regard to the possibilities of philosophy in thinking that the latter should constitute itself first of all by a 'radical' act of self-cognition and build itself up progressively on the 'fundamental basis' of a 'full, entire and universal act of self-cognition'. The human mind will never achieve this act of self-cognition. And, moreover, consciousness of self presupposes a self and that in all the stages of knowledge: in the highest degree (metaphysics) as in the lower (the particular sciences), there is a self-return, a critique (here partial and limited, there universal and radical) which presupposes direct knowledge. If philosophy should effectively fill the human mind with a more and more profound self-cognition, it is first of all on condition of being itself constituted and progressively built up exactly as knowledge of being, thus permitting the better penetration of itself by thought (by a reflex process which, thanks to the deviation of idealism, has for two centuries resulted in a corrosive and destructive action with regard to that very knowledge of being on which it is a return).

self-verification, is to shut it up in a state of pure artificiality which belongs to that worst form of simple-headedness, that of the professor. We might well ask of those philosophers who are at pains to 'put an end to all this simplicity' how they managed to get born: they will find it equally hard to get born into wisdom (and so into criticism). Let it be added that, in any case, simple-headed simplicity is better than elaborated simplicity; it at least is in line with nature and curable. In fact, in the course of the history of thought, it is simple-mindedness which by reflecting on itself little by little becomes critical. And such critical progress is destined to endure forever. A Socrates or a Plato, an Aristotle or a St. Augustine by no means ignored the critical problem; the Fourth Book (*gamma*) of the *Metaphysics* is pregnant with a critique without the name[1]; there is a deeper criticism in Albertus Magnus, in St. Thomas or Cajetan, than in Kant. Nevertheless they never dreamed of making a special body of doctrine of the reflective and critical section of metaphysics, so leaving vast regions of knowledge lying as it were fallow; and one must add that in their time, as I pointed out above, there was a much less explicit and defined separation of the critical problems and their corresponding technique. It remains for the Thomists of today, of this 'reflective age', to carry this technique to a point worthy of the thought of their masters. The apparatus of observation which should be applied to primary notions and first principles will always require perfecting: we cannot have done with pre-critical 'naïveté' once and for all. Knowledge precedes reflection, as nature precedes knowledge. Critical reflection must increase with each increase of natural knowledge.

I said that general commonsense was not at all homogeneous. In fact it is made up not only of those intellectual elements of which I spoke, but also of a mass of imagery, according to which, for instance, the sun moves round the earth, height and depth are absolute determinations of space, the antipodes live upside down, etc. It is absolutely necessary to discriminate between commonsense and this imagery: and it is only on condition of their deliverance from the latter that science and philosophy can advance.

[1]Cp. R. Garrigou-Lagrange, ' Le réalisme thomiste et le mystère de la connaissance', *Rev. de Phil.*, Jan.-Feb., Mar.-April, 1931; and *op. cit*

Finally, it is necessary to keep in mind one of those fundamental apothegms which St. Thomas is never tired of repeating, that the human mind belongs to the lowest stage of the scale of minds. By reason of this, the word *natural* has, when in relation to man, two entirely opposite meanings. Commonsense, in so far as it is 'natural', *i.e.* in conformity with the essential inclinations of the mind, is naturally in the right, agile and intuitive, and goes from being towards God by a sort of spiritual phototropism: and it is in this sense that philosophy is its continuation. On the other hand, when the word 'natural' is taken in the second and wholly different sense, and means 'exposed to all the ordinary perils menacing our intelligence', commonsense has a certain natural propensity for stupidity, for materialism, for the incomprehension of what is living and spiritual; and in this sense philosophy is constantly obliged to correct it.

Thus it is easy to see why the history of thought, at least in so far as it is a progress, is made up of a series of scandals for commonsense, each of which is followed by a higher reintegration and reconquest, a victory for commonsense. Each of our paces on this earth is in itself the beginnings of a fall and its recovery.

THE TRUTH

One of these primary scandals for commonsense is that concerned with the relation between things and thought, and the very notion of the truth. 'What I think is what is,' thinks commonsense (and it is not in the wrong), but at once this affirmation is materialised, sinks into a facile representation, and we begin to imagine that thought is some sort of copy or tracing of the thing, in all ways coincident with it, so that all the conditions of the one are also those of the other.

Reflection is not slow in evoking certain bitter disillusionments. If thought or knowledge is a copy, a tracing of things, if all the conditions of the one are also those of the other, how is it possible to err? It would be absurd to imagine error as the tracing of something which is not. And how, by means of a multiple thought such as the idea of 'living being' joined to the idea of 'capable of sensation' and that of 'capable of intelligence', can we know a thing one and undivided in itself as is what

we call 'man'? How by universal ideas can we know what in its own existence is singular, by theorems of the rectangle the geometric properties of this table? And how can we look at this bindweed or this apple without ourselves participating in the sensations of their vegetable existence?

We are thus constrained to make a certain divorce between things and thought, to recognise that the conditions of the one cannot be those of the other. The way in which things live in our thought in order to be known is not the same as the way in which they live in themselves.

(The mind thus, as soon as it begins to reflect on itself, perceives that there is an *inwardness* of thought, a universe apart from, however open to, things. It is above all necessary to be on guard against the reduction of mental things to spatial imagination,[1] but it is vain to try to overleap the limits of human language; the expressions 'in thought' and 'outside thought' have no more spatial significance than the word spirit, which originally meant breath, or the word God, which originally meant light. In the same way, when we speak of creatures which exist 'apart from God' the use of space is entirely metaphorical. Here it simply signifies that sometimes the thing exists—actually or possibly—for itself in the universe which we see, and, more generally, in the order of simple position or existential effectuation, and sometimes not for itself, nor in this universe, nor in space, nor in the order of the simple *positio extra nihil*, but under quite other conditions which are those of thought, and as a beginning or end of the act of thought; in this case we say: it exists in thought.[2] To draw any argument from the metaphorically material or spatial sense evoked by this 'in' and the 'outside' which cor-

[1]L. Noel has rightly pointed out, apropos of this, that the idealist formula 'what is beyond thought is unthinkable' belongs in fact to exactly this spatial form of imagination, or simply signifies that thought cannot achieve an end without its being, by that simple fact, thought of, 'a sufficiently useless truism'. (*Op cit.*)

[2]Cp. St. Thomas, *Sum. theol*, i, 59, 2: 1-11, 86, 1, ad. 2; *Sum. Contra Gent.*, IV, 11, sect. 3: *In IV Sent.*, dist. 49, q. 1, a. 1, sol. 2.

If, on the other hand, we take the word *in* in, I do not say a spatial sense, but even only that of entitative inherence in the subject, then St. Thomas warns us that knowledge considered not as *accidental* to the knower (conditioned by the entitative order implied by all created knowledge), but as a relation to the known and in the pure line of knowledge, is not in the soul as in a subject, in the entitative sense of the word 'in' (because it is outside any entitative order). 'Secundum quod comparatur ad cognoscentem, notitia . . . inest cognoscenti sicut accidens in subjecto, et sic non excedit subjectum,

responds to it is the banal sophism of idealism. But to interdict, under the pretext that the mind is neither a courtyard nor a cupboard, the use of such expressions as 'in the consciousness' and 'outside consciousness'[1] would be to take exception at the outset to that inwardness which is proper to the mind and condemn oneself to describing knowledge with the mind left out, in other words, the interdiction of any penetration into what is knowledge. This comment having been here made once and for all, we can pursue our proper object without tripping over words and without fear of using language which, like all metaphysical terms, only refers to space metaphorically).

Things have two different forms of *esse*, two differing planes of existence: their rightful existence by which they act and hold themselves apart from nothingness, and the existence which they take on in the apprehension of the soul, so as to be known. In order to enter into the sense of sight the bindweed and the apple have to leave off that matter by which they subsist; in order to enter into the intelligence and the reason, they lay by their individuality. In the inward world of our intelligence there are a multitude of distinct aspects or concepts of things which in the world of nature exist in an undivided state, and which lead in one world a life wholly different from that of the other.

quia nunquam invenitur inesse, alicui nisi menti. . . . Secundum quod comparatur ad cognoscibile . . . sic non habet quod insit, sed quod aliud sit. Illud autem quod ad aliquid dicitur, non habet rationem accidentis ex hoc quod est ad aliquid, sed solum ex hoc quod inest. . . . Et propter hoc notitia secundum considerationem istam non est in anima sicut in subjecto; et secundum hanc comparationem excedit mentem in quantum alia a mente per notitiam cognoscuntur. . . . Et secundum hoc etiam est quaedam aequalitas notitiae ad mentem, inquantum se extendit ad omnia ad quae potest se extendere mens.' (*Quodlib.*, VII, a. 4). Which does not prevent things known being in the soul in the not entitative but *intentional* sense indicated in the text.

[1]Cp. G. Gurvitch, *Les Tendances actuelles de la philosophie allemande*, Paris, 1930 (àpropos of E. Husserl). What in Husserl's observations is exceedingly true is that the object is not *as such* either in or outside the mind. But it is precisely for this reason that it can exist *both* in and outside the mind. Exactly as Husserl himself cannot expound his ideas without saying at every turn that the object or *cognitum* is 'immanent in the consciousness' (E. Husserl, *op. cit.*), is constituted 'in the depth of the *ego*', that it exists 'in us, in me', 'the meditating ego in me', etc. etc. Besides, it might be pointed out, if the spatial metaphor denoted by all the roots of our human tongues is not a crying fault when one says '*in* thought', it cannot be any worse a crime to say correspondingly '*outside* thought'.

In one the lion devours the antelope, in the other he achieves by means of the copula the predicate, carnivorous. And the possibility of error simply arises from the disparity between these two worlds. All of which shows that thought is not a copy of the thing corresponding materially with its model: there is an abyss between the conditions and mode of thought and the condition and mode of things.

But it also signifies that there is between the thing and the thought, thought that is in act, an incomparably deeper unity than that between a model and its copy. For if things were modified or in some way changed, I do not say in their conditions, their *manner of existence*, but in their rightful constituents, in *what* they are, by sensation or intellection, there could be neither truth nor knowledge, and the theoretician of knowledge could not even begin to lift a finger in explanation, for in that case he would have only two, equally impossible resources: either to say knowledge implies a relation with things but one which deforms them and so they can never be known; or that knowledge implies no relation with things, and that it is an expansion of absolute thought which has only itself for object, a position incompatible with the fact of error and that of negative ideas, and which moreover appears *self-refuting*,[1] since one can only affirm that knowledge itself is this or that in holding it distinct from the act by which one thinks. It has been very well demonstrated in England and in America[2] that the principle according to which every relation must modify or alter its term is a pure postulate, for which no proof has ever been forthcoming, and is incumbent only on idealism; and all efforts to demonstrate it only lead to the declaration that a thing cannot be known without being known, a proposition of which the world was in no particular doubt.

The relation of knowledge is precisely a relation which does *not deform*, which neither alters nor modifies its objective. The scholastics used to say that the relation of the knowing mind to the thing known is a real one (it brings something new into the soul), but that of the thing known to the knowing mind is a relation of reason, which in no way affects or modifies the thing known. The mind's power to transfer

[1]In English in the original. (*Translator's Note.*)

[2]Cp. René Kremer, *Le Néo-réalisme américain*, Alcan, 1920; *La Théorie de la connaissance chez les néo-réalistes anglais*, Vrin, 1928.

things into an immaterial and universal condition, its division of them into diverse aspects, the way it shifts and manipulates them, separating, uniting, comparing them with what is outside itself, all these operations are the conditions of their existence in it and preparatory to knowledge; they do not constitute *the act* of knowing itself and leave intact what the thing in itself is. In the working of this great logical factory there is one secret, mysterious and sacred substance which no treatment can alter—the *essence* or nature, the ontological inwardness of the thing made present to the mind by the idea.

This distinction between the mode of existence of the thing and the thing in itself or its nature is capital in the theory of knowledge. And this exigence, which is immanent in knowledge, to leave intact and unaltered the thing known, in so far as it is known, is so potent that it does not admit that in the act of knowing the thing and the thought should make two: for then there would be some difference between the thought and the thing; the thing, by the fact that it was thought, would not be purely what it is. In the act of knowledge the thing (in the exact measure to which it is known) and the thought are not only united, they are strictly *one*: in Aristotle's words, the intelligence in act is the intelligible in act. This is why I just said that the notion of knowledge as a copy or tracing is altogether deficient, not only by the disparity between the conditions of thought and those of things, but also because of the unity between the thing and the thought.

Thus we see in what sense it is necessary to comprehend the definition of truth which St. Thomas made classic: *adaequatio rei et intellectus*, adequation or conformity between the intelligence and the thing.[1] This conformity has nothing to do with any copy or material tracing. Our knowledge comes originally from the senses, all our words, as we were reminded but a moment ago, are drawn from the sphere of the visible and the tangible: the words adequation and conformity are no exception; but their significance here must be taken with no trace of the

[1]Cp *Réflexions sur l'intelligence*, p. 24; J. de Tonquédec, *op. cit.* According to the researches of P. Muckle, this celebrated definition does not come from Isaac Israeli, the Jewish doctor and philosopher, who lived in Egypt between 845 and 940, to whose *Definitionibus* St. Thomas attributes it. Transmitted by some compiler or other, it must be regarded as being much older and was in any case prepared for by Aristotle.

visible or the tangible. It is a question of a certain corespondence[1] altogether unique in its own kind between the way in which thought declares itself on a thing and posits it in existence in its own inward act of judgment, and the way in which the thing exists: a correspondence which is an identity, not with regard to the mode of existence in the thing and in the mind, but to that of the thing taken in its pure value as an intelligible object, and which is in one case brought about (or can be brought about) outside the mind, in the other is lived in the mind by the mind as brought about (or might be) outside the mind. For judgment is like an imitation of the creative act by one incapable of creating; it brings the content of the mind into existence outside the mind, not by creation *ad extra*, but by affirmation *ad intra*.[2]

'Truth', says St. Thomas,[3] 'is that conformity of the mind with being, whereby it calls being that which is and not being that which is not.' This conformity is established by the being imprisoned in the thing and affirmed by the mind. When the act of the mind, by reason of which things outside it are referred to existence in a certain determined manner, accords with the way in which things present themselves in (actual

[1]'Secundum proportionalitatem', says St. Thomas (*IV Sent.*, d. 49, q. 2, a 1, ad 7).

[2]On the nature of the judgment, see *infra*, pp. 117–20.

[3]*Contra Gent.* 1, 59, cp. *In Met.*, IV, 1, 8, n. 651; *In Perih.*, 1, 1, 3, n. 7; 1, 13, n. 12. It is notable that this notion of the truth, which is only the explication of what, from the first instant of critical reflection and self-awareness, the mind intuitively perceives that it sees, in fact imposes itself even on those who in theory reject it. Not only does idealism break at the outset against the fact of error, which is nothing but a scandal or an impossibility from the moment that knowledge is thought of as self-engendered, self-posited and self-attained, but also those who, even while they claim to have surpassed ordinary idealism, continue to recoil from the 'thing' posited as such outside thought, in fact only make use of the idea of truth by reconstituting after the event and artificially some equivalent for the *adaequatio rei et intellectus*, which in reality necessarily presupposes that original notion. It is thus that in the new 'transcendental idealism' of E. Husserl—and it is the same for the wholly different idealism of L. Brunschvieg—the *verified* takes the place of the *true* (what is true is that which is presented by a 'synthesis of verifying confirmations', *op. cit.* p. 51; cp. pp. 76, 88, 106, 109): as if 'to verify' were something other than 'to recognise as true', for to define the truth by verification is a non-sense. Similarly Husserl, at the instance of Descartes, takes obviousness as a characteristic of the object of thought (*cogitatum*) taken as separated from the thing, instead of coming from the thing itself (*ens intelligible*) as it is objectified in the mind as the object of judgment.

or possible) existence—or in more exact terms, when the identification operated by the mind between the two terms of a proposition corresponds to an identity in the thing, then the mind is true.[1] And whether

[1]It is a well-known thomist thesis that the intelligence is only possessed of truth, only *says* true or false, in the judgment. A commentary on the passages where St. Thomas treats this question, in particular on the classic passage of the *De Veritate*, 1, 9—*Veritas est in intellectu et in sensu, licet non eodem modo. In intellectu enim est sicut consequens actum intellectus et sicut cognita per intellectum; consequitur namque intellectus operationem, secundum quod judicium intellectus est de re secundum quod est: cognoscitur autem ab intellectu secundum quod intellectus reflectitur supra actum suum, non solum secundum cognoscit actum suum, sed secundum quod cognoscit proportionem ejus ad rem: quod quidem cognosci non potest nisi cognita natura ipsius actus; quae cognosci non potest, nisi cognoscatur natura principii activi, quod est ipse intellectus, in cujus natura est ut rebus conformetur; unde secundum hoc cognoscit veritatem intellectus quod supra seipsum reflectitur*'—will be found in L. Noël (*op. cit.* chap. v), and J. de Tonquédec (*op. cit.* chap. vi). Cp. also M.-D. Roland-Gosselin, 'Sur la théorie thomiste de la vérité, *Rev. des sciences phil. et théol.*, April 1921, and R. Garrigou-Lagrange, *art. cit.*

Here I should like to recall and particularise certain points which seem to me specially important. Conformity to the real ('logically true') is the 'ontological truth' itself for the senses and the intelligence in act. All true knowledge is a knowing of the truth. Simple apprehension is only true in this sense. But truth is only possessed as such when it is itself *known*, and it is only known by the judgment where the mind, in giving its assent to the mental presentation which has been constructed for this end, pronounces on a thing and declares that it is so, *ita est*. 'Quando judicat rem ita se habere, sicut est forma quam de re apprehendit, tunc primo cognoscit et dicit verum. Et hoc facit componendo et dividendo. Nam in omni propositione aliquam formam significatam per praedicatum, vel applicat alicui rei significatae per subjectum, vel removet ab ea.' (*Sum. theol.*, i, 16, 2. Cp. *De Veritate*, 1, 3.)

By the simple fact that the mind so pronounces on what is, there is here a reflection *in actu exercito* by the mind on itself and on its proper conformity with the thing ('super ipsam similitudinem reflectitur, cognoscendo et dijudicando ipsam', *In Met*, book IV, lect. 4). This reflection is not yet a logical or critical reflection (cp. Ferrariensis, *In Contra Gent.*, 1, 59), where the mind knows *in actu signato* its act and its concept by a new act and a new (reflex) concept, it is only a 'taking in hand' of itself by the mind, *which is none other than the act of judging itself*, in such a way that Cajetan can define the judgment *illa cognitio quae sui ipsius conformitatem cum re cognoscit* (*In I*, 16, 2). This is very clearly pointed out by St. Thomas himself in the precious elucidations of the commentary *In Periherm.*, book i, lect. 3, n. 9: 'Cognoscere autem praedictam habitudinem (conformitatis suae ad rem) nihil est aliud quam judicare ita esse in re vel non esse; quod est componere et dividere; et ideo intellectus non cognoscit veritatem, nisi componendo vel dividendo per suum judicium.'

And by this there are already known in the primary act (cp. *infra*, p. 117, note 3) the nature (*i.e.* the finality, *i.e.* its conformity with the being of things) of the act and that of the potency or faculty from which it emanates (*De Veritate*, i, 9), which are

it be so or not, we have no other means in each case of knowing than the resolution of our thought into the immediate assertion of sensible experience and the first principles of the intelligence, where our knowledge, being intuitively and immediately ruled by what is, cannot be false.

But what is important for the moment in these remarks is to keep hold of the fact that truth is grasped in relation to the (actual or possible)

known in the second act by express reflection, as the nature of the *habitus* (*ibid.* 10, 9) from which the act proceeds, and the very existence of the soul (*ibid.* 10, 8).

The two following points should be carefully observed. 1. If the *nature* of the act, of the *habitus* and the potency is so known, at the same time as their existence, by express reflection and immediate experience, it is precisely and uniquely in so far as the act is specified by the object and the degree to which the *habitus* and the potency (*ibid.* 1, 9: 10, 9) are principles more or less proximate to the act and essentially ordinated to it. (This is a question of an experience of my act, my *habitus*, my intellect, of my mind, in their concrete singularity.) Vide *De Veritate*, 10, 9.

2. My soul, on the contrary is not made known to me by this concrete experience and express reflection, either in regard to its *existence* or its nature, because it is not a proximate and operating principle, but only the radical and substantial one of these operations, and because its essence is not specified by them. (*Ibid.*)

One could add that this implicit and living, not yet express, reflection, by which, before any logical or critical reflection, the mind in the judgment knows *in actu exercito* that it is true, or in conformity with reality—that it is by it also (more than by the simple apprehension of the objects of concepts, where nevertheless already it becomes intelligible in act to itself) that it knows in embryo, pre-consciously, before all introspective reflection, the existence of the thinking self, which only becomes the object of effective knowledge (in a second act) with express reflection. Thus it is in *judging* of things that we have at once an implicit experience of the truth of the mind, and the still hidden or pre-conscious germ, the *initium* of the experience of ourselves. This is why in any reading of the passage (*De Veritate*, 10, 8) where St. Thomas explains how each has actual knowledge of the existence of the soul by (express) reflection on its operations, in particular on its acts of intellection, he implies, I am convinced, by the latter not only simple apprehension, but also and most of all the *judgment*, the act of intellection in achievement. Here is this capital text: 'Quantum ad actualem cognitionem, qua aliquis considerat se in actu animam habere, sic dico, quod anima cognoscitur per actos suos. In hoc enim aliquis percipit se animam habere, et vivere, et esse, quod percipit se sentire et intelligere, et alia hujusmodi vitae opera exercere; unde dicit Philosophus in *IX Ethic.* (cap. 9): *Sentimus autem quoniam sentimus; et intelligimus quoniam intelligimus; et quia hoc sentimus, intelligimus quoniam sumus.* Nullus autem percipit se intelligere nisi ex hoc quod aliquid intelligit: quia prius est intelligere aliquid quam intelligere se intelligere; et ideo pervenit anima ad actualiter percipiendum se esse per illud, quod intelligit, vel sentit.'

existence contained by the thing: *verum sequitur* ESSE *rerum*.[1] And a new problem at once confronts us.

THING AND OBJECT

If the preceding analysis is correct, we see that the same thing can be found at one and the same time in the world of nature, where it exists, and, when it is known, in the world of the soul or of thought; and it is necessary for us to distinguish the thing as thing, existing or able to exist by itself, and the thing as object,[2] set before the faculty of knowledge and made present to it. The *objects* as such of our intelligence are abstracted from actual existence and only hold in themselves a *possible* existence; on the contrary, the objects as such of our senses denote an existence *in act* and grasped *ut exercita*, held in the present if it is question of the objects of external sense, without the determinations of time[3] (or in uncertain time) for those of the imagination, belonging to the past in the case of the objects of memory. The tragedy of modern noetics began when the scholastics of the decadence, and Descartes following them, separated the *object* and the *thing*; the thing thus becoming doubly problematic in its concealment behind the object. What

[1]St. Thomas, *De Veritate*, 1, 1, 3, *sed contra*. Cp. *In I Sent.*, d. 19, q. 5, a. 1, also *In Boet. de Trin.*, q. 5, a. 3.

[2]The word 'object' is taken here in the strictest scholastic sense (formal object). It is superfluous to add that in current modern language it has a very different meaning, the opposition between *objective* and *subjective* having finally achieved the transference to the object of all the values proper to the 'thing' or 'the real'. To-day, English neo-realist philosophy and German phenomenology have given back to the word *object* some of its authentic meaning.

As to the word, *thing*, it is taken here in the widest possible sense. If first of all it is taken as meaning 'the sensible and visible thing' which is naturally found by our intelligence (for its ideas all originate in the senses) as the simplest paradigm of reality, it also applies to all reality, of whatsoever kind, spiritual or corporeal, to all actually or possibly posited or able to be posited data existing in independence of the mind.

[3]It is because the existence in act denoted by them is not determined as to time that the objects presented by the imagination are either so integrated into sensation that they merely complete it and thus become one with the object perceived, or are entirely displaced by sensation and the flux of the present and relegated to the unreal. When this reduction does not take place, they may themselves be taken for real objects, or at least mingle in an illusory interpretation (cp. P. Quercy, *Etudes sur l'hallucination*, Paris, 1930). Inversely, when the sense of the present is weakened as the result of a defect in the synthetic activity of the consciousness, it is sensation which takes on an unreal aspect.

then is the value in this notion of a *thing* of which we have made use up to now in this analysis? This question is all the more important in that it is there that the most notable contemporary attempts, in England and Germany, to overcome the dangers of idealism have alike broken down.

The moderns, generally speaking, take the *object* as pure object, detached in itself from any *thing* where it could exist, *i.e.*, from existence independent of my *cogito*, posited in itself before my act of thought and independent of it: existence which one may call in this sense extra-mental, without this 'externality' having the least spatial implication, or which could also be called pre-mental, *i.e.* previous to the knowledge which we have of it, or again, metalogical, not in the sense that to know it it is necessary to repudiate logic or to make use of another logic than logic, but in the sense by which it does not belong to the sphere of logic or of the rightful constituents of the life of the reason, to the sphere of *the known as known*, but is 'beyond' that sphere. It is essential to add that in speaking of extra-mental existence I am not only thinking of actual existence but also and first of all of possible existence, for our intellect, in the simple act of apprehension, abstracts from existence in act, and in its judgments does not only judge of what exists, but also of what might or might not exist, and of the rightful necessities inherent in essences, so that it is first of all with regard to the *possibly real*[1] that it 'justifies itself', or better, confirms itself or makes explicit to itself

[1]Cp. R. Garrigou-Lagrange, *art. cit.*; *Dieu, son existence et sa nature*, 5th edit. 'Essentiae rerum antequam existant sunt *entia realia, ut ens reale distinguitur contra fictitium*, non tamen ut distinguitur contra non existens in actu, secundum distinctionem Cajetani in I. de Entia et Essentia, c. IV, q. 6.' Bannez, *In Sum. theol.*, I, 10, 3.

I have already noted that the irrefragable certainty of the principle of identity (p. 93) which is the first law of metalogical being before that of logic, is included in the first motion of the intellect's self-consciousness. In fact it is in an *actual* (and contingent) existence grasped by it *thanks to the senses* (cp. Cajetan, *In II Anal*., II, 13) that the intellect perceives, *by virtue of its proper activity*, this *necessary* law of all *possible* being. From this point of view, and granting that we sharply discriminate between the problem of the existence of the external world, which belongs to the critique of sensation, and that of purely possible extra-mental being, which belongs to the critique of intellectual knowledge, one can say with L. Noël (*Rev. néo-scol.*, Nov. 1931): 'La donnée réelle c'est la donnée sensible,' which is in fact and in the concrete at the same time intelligible. In the concrete complex of our cognitive operations, the senses and the intellect work together; our *direct knowledge* starts from sensory perception interpenetrated with an intellection not yet explicitly conscious of itself. But for *critical reflection* it is necessary

reflectively the value of intellectual knowledge, whence the critique of knowledge must primarily proceed. It is because of their misunderstanding of this fundamental point, because they confound the possibly real with rational being and only recognise the actual as real, that the noetics of so many modern writers go astray from the outset.

Then, the object being taken as pure object separated from all that is extra-mental or metalogical—even if it is recognised that the objects of the senses and of the intellect, having as such their rightful and irreducible value, their constitution, consistency or intrinsic resistance, are not subjective modifications or products of thought, but typical structures given by intuition, the question presents itself of knowing how to explain the stable connections and internal regularities exhibited by these pure objects: and the idea that they are distributed in discontinuous groups because they are aspects (rightly it would be better to say 'inspects') or elements of cognisability of certain ontological nuclei called *things*, capable of extra-mental existence. The idea that the law of connection between the different images which our eyes perceive in looking at this table from various points of view is explained by the existence of a *thing* which is precisely this table, appears simply as one explanatory hypothesis among a crowd of others, equally possible. Some, indeed, hold with Bertrand Russell and A. H. Whitehead that by the principle of economy (Occam's razor) it is better to pass by this hypothesis, which results, rightly speaking, in a form of Leibnitzianism heroically pushed to the absolute, in the passing over of all subjective or material causality and the reduction of reality to a cloud of predicates without subjects flying about in unbounded air and which we endeavour to connect up with each other by purely formal laws. Others, like E. Husserl, endeavour to re-absorb the thing in itself and its existentiality into transcendental subjectivity, one of whose functions will be to set it up within itself: which is only another way of suppressing the thing in any authentic sense of the word, the thing which is extramental and metalogical.

to consider the primary datum in itself (as detached by psychological and logical analysis) apart from intellectual perception *as such*, and this is why I said (cp. p. 95) with R. Garrigou-Lagrange, that the consciousness of the unbreakable certitude of the principle of identity as the law of all *possible* being makes a part of that first (philosophical) act of consciousness which is the point of departure for the critique.

It must be said that this is fundamentally erroneous: philosophical reflection has neither to reconstitute the *thing* apart from the *object* as a necessary hypothesis, nor to suppress the *thing* as a superfluous hypothesis, which is a contradiction in itself, but to affirm the fact that the *thing* is given with and by the object, and indeed that it is absurd to wish to separate them. On this point a truly critical critique of knowledge, one which is entirely faithful to the immediate stuff of reflective intuition, is in accord with commonsense in its apologia for the *thing*. In thomist language, the *thing* is the 'material object' of the senses and the intellect, while what I have here called the *object* (*i.e.* on one hand, colouring, sonority, cold, heat, etc., and on the other, the intelligible *quid*) is its 'formal object': both the material and the formal object being attained at once and indivisibly by the same perception.

If the word *thing* appears suspect as belonging already to common speech, nothing prevents our adoption of a vocabulary more in conformity with the habits of modern science, in other words, more artificial and more didactic, but which also shows a greater desire to guard against the uncritical preconceptions of common acceptance. I shall therefore say, bowing down in my turn before the jargon of pedantry, that as the object is correlative to a knowing subject, to an ontological 'for itself' to which it corresponds, which by reflection on its acts of thought perceives immediately, not, as Descartes thought, its rightful essence, but the fact of its rightful existence, and which we may call the *cis-objective subject*, it is also, not correlative to, but inseparable from (because it is itself) an ontological 'for itself' which precisely takes on the name of the object in so far as it is present to thought, and which we may call the *objectiviable* or *transobjective subject*, not certainly in as much as it is hidden behind the object, but, on the contrary, in the degree to which it is itself grasped as object, and that it nevertheless constitutes an irreducible in which the possibility of new objects to be grasped remains always open (for it can give rise to an indefinite sequence of necessary and contingent truths).[1] The transobjective is not

[1] I should like to quote here the very just comments of J. de Tonquédec on a frequent sophism, which Fonsegrive has expressed in a characteristic formula. Fonsegrive has written: 'The concept of an object which should be at the same time in itself and an object of knowledge is clearly contradictory. . . . For to say object of knowledge is the

an unfigurable field of the unknown, which withdraws in the degree to which new objects are grasped, but that of known subjects indefinitely knowable as objects. Cis-objective or transobjective, the subject is never attained purely as such; but it is precisely this which is attained as object;[1] the process of knowledge consists in making it into an object.

That it is so, every act of (intellectually conscious) knowing tells us, so that if we admit that the mind really attains an *object* valid in itself with which it can deal, we must also admit, and in the same degree, that it attains a (possible or actual) *thing*, a transobjective subject which is one with this object (or which is the ground or occasion of it, if the latter is a rational not real being). Being in effect (the being contained in sensible things) is the first object attained by our intelligence.[2] And what is meant by this name of being, if not *what exists or can exist*; and what is first and immediately presented by this to the intellect, except that it exists or can exist in itself or outside the mind? It is sufficient for each one of us to think for himself to experience for ourself the absolute impossibility of the intellect's thinking of the principle of identity without positing (at least possible) extramental being, of which this first of all axioms expresses the bearing. A primary object which is extramental intelligible being without which nothing is intelligible,[3] there is the inescapable datum of fact which imposes itself on the intel-

same as to say known. . . . But it is entirely evident that the known, in as much as it is known, is not in itself in the degree to which it is known.' (*Essais sur la connaissance*, p. 186). J. de Tonquédec rightly replies: 'This entirely formal argument proves only one thing: that the fact of being is itself different from that of being known. But that the one *is not* the other does not result in the *exclusion of* the one by the other The concepts are different, but it is not 'entirely evident' that they cannot be realised together in the same being. By this same pitting against one another of abstractions one could quite as well prove that 'the concept' of a moon at once round and shining 'is clearly contradictory' because the moon is not round in *so much* as it is shining.' (J. de Tonquédec, *op. cit.*) The known as known defines the sphere of logic; the known, or rather the knowable, as extramental being defines the sphere of the real.

[1]According as it attains itself by reflection on its own acts as in the case of men, or on, primarily and above all, another object, as is the case with angels, the cis-objective subject is also the transobjective.

[2]Cp. Cajetan, *In de ente et essentia*, q.1.

[3]Cp. R. Garrigou-Lagrange, *art. cit.*

lect in the very core of that reflection in which it takes cognisance of its movement towards its object. This apprehension of being is absolutely primary and is implied in all our other intellectual apprehensions. Hence an object incapable of existing (a rational, not real being) can well be conceived, but on condition of its being referred to being, or to objects capable of existing, *i.e.* transobjective (possible) subjects which the mind makes into objects, and at the instance of which this object is conceived, and without which it could not be built up by the intellect. If the notion of being can be extended to what neither exists nor can exist except in the mind it is by an afterthought and on further consideration, by a secondary improper use of this primary notion, which makes it signify—conceived as it is in the way of being—exactly that which is not.

Advancing further in this corrective analysis of the immediate content of knowledge it can be said that, in the very order of sensitive knowledge, the content of a sensory perception is not only some sensible quality or some stimulation, but rather—in so far as what belongs to a non-intellectual plane of knowledge can be described in intellectual terms—*some thing* impinges on us as an extensive field of determined sensory-affective awareness, and so excites our motor-functions. The behaviour of animals can only be explained if, even at the lowest stages, the stimuli received are not only individualised in the subject in an act of sensation,[1] but are still more individualised on the side of the object, in *something* at once sensory and stimulating perceived by the animal. Ascending the zoological scale, we see this something—which as known by sensation itself is something purely indeterminate underlying sensory perception—become determined, solidified, and distinguishing itself more and more through the synergy of all the external and internal senses and by the effect, it may be of hereditary instinctive estimations, it may be of individual experience. A dog does not only know visual, audible, etc., variables associated in a certain way, he knows his master —without the power of saying so to himself or of knowing why; he has on the sensitive plane, thanks to innumerable associations of similarity, something analogous to the knowledge—this time given by the intellect—which we have of this *thing*, that transobjective subject which we

[1]Cp. Hans Driesch, *Die 'Seele' als elementarer Naturfactor*, Leipzig, 1903.

call his master.[1] And if the sheep flies from the wolf, it is not, as St. Thomas said, that the coloured *object* thus perceived has wounded its retina, but that it sees in it 'its natural enemy'.

All of which presupposes that from the first the external senses have communicated to the animal not only their 'proper sensibility' and at the same time the 'general sensibilities' such as extension, but also, in a wholly implicit and potential state—indiscernible by the senses themselves—a *thing* of which the proper *object* of the senses is an aspect. The ancients, assigning a reason for this fact, explained that the perceptive act of the external senses issues in the thing itself or ends with the thing itself, *terminatur ad rem*, and that in the very degree to which the thing exists outside the knower, *i.e.* in the degree to which it exercises *hic et nunc* an effective action on the sensory organs of the knower. And it is with regard to the thing so attained that they spoke of a *judicium sensus*, by which the senses at once adhere to the object perceived as an existing reality,[2] and which is capable of deceiving us, when affected by the thing otherwise than as it is.[3]

Existence is not a sensible object *per se* but, though the senses are incapable of showing or 'discovering' existence as such, what the intellect discovers (thanks precisely to the perception of the senses) and what it calls to itself existence—existence not only possible, but in act—is nevertheless attained by it from the fact, being rooted in its object. The analysis of consciousness attests this irrefutably: it is on what is given by the external senses (long before the reflex data of any possible *cogito*) that

[1]On animal knowledge and on the difference between grasping a conceptual object in itself (which is proper to the intellect) and that sensory complex in which this object is realised, see the important comments by Roland Dalbiez in the 4th *Cahier de philosophie de la nature*, Paris, 1930.

[2]Cp. St. Thomas, *In III Sent*, dist. 23, q. 2, a. 2, sol. 1. 'Intellectus noster determinatur ad assentiendum ex praesentia intelligibilis . . . et hoc quidem contingit in his quae statim . . . intelligibilia fiunt, sicut sunt prima principia; et similiter determinatur *judicium sensitivae partis ex hoc quod sensibile subjacet sensibus*.' See also the text from *De Potentia*, quoted on p. 143 (note).

[3]Thus the tongue of a fever patient, covered with a bitter coating, finds sweet drinks sour. 'Per hoc quod sensus ita nuntiant sicut afficiuntur, sequitur quod non decipiamur in judicio quo judicamus nos sentire aliquid. Sed ex eo quod sensus aliter afficitur interdum quam res sit, sequitur quod nuntiet nobis aliquando rem aliter quam sit. Et ex hoc fallimur per sensum circa rem, non circa ipsum sentire.' (*Sum. theol.*, 1, 17, 2, ad. 1. See the very excellent commentary on this text by J. de Tonquédec, *op. cit.*)

consciousness ineluctably relies when in search of the original type corresponding to the notion of actual existence, which is undiscoverable apart from the prime origin and significance of this notion. It is under the compulsion of the evidence of the intuitions of the senses that the mind is led to make its primary judgments on existence. As to the animal, if it lacks this notion, the relaxation of its motor-functions by sensation, the thrill of desire or of aversion which makes it run to or fly the object so sensibly perceived, at least gives to it its practical equivalent, and alike attests the value of the existential certitude (not known as such) with which the action of the senses is impregnated.

If the existence in act of a thing actually acting is thus implied by sensation, the at least possible existence of a possible thing, of a possible transobjective subject, is equally implied by intellectual knowledge. On the one hand, in effect, every predicate signifies not only such intelligible determination, but *that which had* such determination; the simplest intellectual apprehension, in perceiving what I call 'triangular' or 'comic' or 'musician' or 'philosopher', perceives some (possible) *thing* which is given to it as an *object* under the formal aspects in question. On the other hand, intellectual knowledge is above all achieved in judgment, and what is a judgment if not the act by which the mind declares the identity between a predicate and a subject *in the thing* or outside the mind which differ *in the notion*, or in their intramental existence? For all veritable judgment identifies two terms notionally different, *sunt idem re seu subjecto, diversa ratione*:[1] the notion of 'the whole' is formally other than the notion 'greater than the part', the notion 'Mr. Bernard Shaw' is formally other than that of 'dramatic author'; and nevertheless when I judge that 'Mr. Bernard Shaw is a dramatic author', or that 'the whole is greater than the part', I posit in actual existence a thing or object of thought, 'Bernard Shaw' and an object of thought 'dramatic author' as identical, and that the possible existence of a thing or object of thought 'whole' and the object of thought 'greater than a part' are identical. I accomplish, in the depth of my thought, with my *noemata* an operation which only makes sense because it relates to the way in which (at least in possibility) they exist outside my thought. The proper func-

[1]St. Thomas, *In I Sent.*, dist. 4, q. 2, a. 1; *Sum theol.*, 1, 13, 12. Cp. *Sum. theol.*, III, 16, 1, et ad. 1; *Contra Gent.*, I, 36: John of St. Thomas, *Curs. Phil.* log. II, P. q. 5, a. 2.

tion of the judgment is thus to make the mind progress from the plane of simple essence, or of the simple *object* significant for thought, to that of the *thing* or subject containing (actually or possibly) existence, and of which the thought-objects predicate and subject are the intelligible aspects.[1] If we do not admit that the objects of thought are aspects ('inspects') of actual or possible *things*; that each of them contains, if I may put it so, an ontological or metalogical charge, the rightful function of the judgment becomes unintelligible. The analysis of intellectual knowledge thus gives us the same fundamental evidence in favour of the *thing* or transobjective subject as that of sensitive knowledge.

In another sense than Lask's one can say with him that every judgment supposes an 'unbroken harmony' (on the side of the thing) and—worked by the judgment itself—'a reconciliation after conflict'.[2] The 'embrace' preceding that 'condition of tearing apart' which it is the function of the judgment to 'conquer', is in the thing, in the given transobjective subject.[3] The judgment restores to the transobjective

[1]The notion of the judgment has been in obscurity since Descartes. The Cartesian theory definitely results in making the judgment consist in an act of the will consenting to a *quod* immediately attained by the mind (in idea) as an object conforming to its double (the real *quod* so ideated). One would have to turn a Cartesian despite oneself to see in the judgment (as the tendency of certain contemporary scholastics seems to allow) a comparison between the mental word and the object of thought, and an affirmation of this conformity. On the contrary, what is declared to be is that *object* (predicate) attained in the mental word. The text already cited on p. 108 from the *Commentary on the Metaphysics* does not mean that in the judgment the mind only decides that the concept is conformed to the thing; but rather that it knows *in actu exercito* that it itself is true or conformed to the thing, *i.e.* possessed in itself the similitude of the thing known. ('Ex hoc quod cognoscens habet similitudinem rei cognitae, dicitur habere veram cognitionem.')

[2]E. Lask, *Die Lehre von Urtheil* (cited by Gurvitch, *op. cit.*).

[3]And it is there that it is seen. In fact the mind does not approach from outside the 'distant and isolated' concepts (J. de Tonquédec, *op. cit.*) which he would apply to the real. In throwing itself on the thing in the endeavour to penetrate it, it sees and grasps in it both a diversity of conceptual objects into which it divides it (this is the preparation of the judgment, as it issues from simple apprehension) and the unity of these objects (which it elucidates to itself in the construction of a statement to which it assents, which is the judgment). I would point out here what in my eyes is an error of perspective in the otherwise penetrating pages which J. de Tonquédec has consecrated to the judgment. When he insists on the analytical character of judgment, on its 'first function' which should be 'to discompose' the 'simple thought' (*op. cit.* p. 186), in reality he is speaking not of the judgment itself, but of the preparatory phase which

subject the unity which the simple apprehension (as grasping in it its differing objects of thought) disunited. This unity cannot begin in the mind, since on the contrary the mind breaks it in order to fulfil it anew. It commences outside the mind, in (actual or possible) existence, which in so far as it is held in (*exercita*) is outside the order of simple representation or apprehension.[1] Finally, in order that the judgment should so take place it is necessary that every object posited before the mind should be posited as able to exist outside the mind (or, if it is a question of an *ens rationis*, as if it could exist outside the mind); in other words, it is necessary that our intuition or intellectual perception, far from confronting us with a multiplicity of unresolvable 'simple natures', should confront us with an object found everywhere and everywhere varying, which is being itself, and in which all our notions are resolved without prejudice to the irreducibility of essences. Under these conditions judgment is possible, that is, as a logical movement which in

comes from simple apprehension (itself *in concreto*, vitally ordinated to the judgment); otherwise he does not sufficiently distinguish the simple apprehension or judicative apprehension (which is resolved it may be in the experimental intuition of the senses, or maybe the intellectual intuition of first principles).

[1]Existence is attained and brought to the mind by simple apprehension not in that degree to which it is held or may be held (*existentia ut exercita*) by a subject, but in the degree to which it is itself conceivable *per modum quidditatis*, as constituting a certain intelligible object, a certain quiddity (*existentia ut significata*). It is only in the second *ut exercita, as held.* (Cp. Cajetan, *In Sum theol.*, 1, 2, 1; 82, 3). We should note that the operation of the mind (composition and division), and in the judgment that it is known judgment, is not content with the representation or apprehension of existence; it affirms it, it projects into it as it is effected or able to be effected outside the mind the conceptual objects apprehended by the mind; in other words, the intelligence, when it judges, lives out intentionally itself, by an act proper to it, that same act of existence which the thing exercises or may exercise outside the mind. (It may be said that even in the very act of judgment the transobjective subject is known as subject, that is, intentionally lived by the mind in its function of subject.)

It is here that a new, a capital element of the intellectual order is introduced, which concerns the *esse rerum*, and by reason of which the judgment is called by St. Thomas, the achievement of knowledge (*'judicium est completivum cognitionis.' Sum. theol.*, II-II, 183, 2). And this in itself presupposes the not expressed, but implicit reflection whereby the mind, when it judges, knows *in actu exercito* its rightful conformity with the thing. (Cp. *supra*, p. 108, note 1.)

On the very important distinction between *existentia ut significata* and *existentia ut exercita*, see J. Maritain, *Songe de Descartes*, pp. 193, *et seq.*

the order of the purely rational (or, in modern terms, *a priori*), progresses from the one to the other. It is not on 'the unity of transcendental apperception' but that (of a simple analogy or proportionality) of transcendental being on which the possibility of the judgment is based.[1] Whether it bears on rational or factual truths, on the 'ideal' or the (actual) 'real', it is thus irresistibly *realist*.

And what is it then that thought wishes to observe if not the thing, the transobjective subject in all its ontological richness, in the infinity of its objectifiable reserves? A pure object (if such a notion were conceivable) would bring with it nothing but itself and having once served and no more, thought could but turn the leaves of the objective world like a book of idle pictures. If the Scheler ian idea of a 'perspectivism' of the world of essences has a foundation, it is in the degree to which that world rises from a world of things or of subjects, in which—so that they may each be considered in their rightful essence, or in the relations which mutually support them—new objects of thought are inexhaustibly discoverable as the directions of its attention succeed one another in the human mind.

Indeed the phenomenalist notion of a *pure object*—a notion from which neither the neo-realism of Russell and Whitehead nor German phenomenology has succeeded in breaking free—appears as rightly inconceivable. The unforgivable ambiguity from which it suffers arises from the fact that, in order to conceive it, it is necessary at one and the same time to posit the idea of being (from the instant that one *thinks* of an object) and to reject it (the moment one thinks of a *pure* object). The to and fro between the two terms of this contradiction deludes the mind with the sense of conceiving this entirely imaginary notion; a victim here of its natural propensity for being, that apprehension of being which aids the deceiving idea of its capacity to think that which rejects both this apprehension and all thought. More, by a redoubled equivocation, being, as though it could itself make an abstraction of existence, comes to the point of giving its name to this pure object which makes an abstraction of it, and the philosopher at all cost directs his meditation towards the mirage of an 'ontology' devoid of being. As soon as it is understood that this notion of the pure object demands that one should

[1] 'Quot modis praedicatio fit, tot modis ens dicitur,' St. Thomas, *In Metaph.*, book v, lect 9.

make an abstraction of being, or substitute *objici* for *esse*, these illusions have no more power to hold us.

Because the primary datum of thought is being it is impossible to think of a pure object separated from ontological stuff holding or capable of holding existence in itself, of a pure object separated from being *in and for itself*, of which the object of sensation or intellection is a determination or an aspect.[1] If this object is not an aspect of a *thing known*, of a transobjective subject,[2] then it must become an aspect of the *thing which knows*: each of the great systems of idealism have endeavoured at any price to escape from this alternative, and they have failed. Husserlian phenomenology likewise fails: it could be shown that when, by means of an ill-conducted abstraction which acts like a separation, it claims to escape any (metalogical) extramental subject, what it does shows up what it says, and it only makes use of his 'I-pole' and the various progressively reconstituted stages of his 'objective world' in thinking despite itself (while all the time rejecting any such thought), of the former as a transobjective subject and the latter as a cis-objective subject existing outside the apprehension of the mind. And when it claims to reconstitute the one or the other in the depth of the transcendental *ego* and the 'universal self-consciousness'[3] it is only persuaded of its success by recourse to a conjuring-trick, which consists in making use of transcendental *being* taken in all its native fullness to reduce it to one of its modalites (to *being in thought*)—in other words, by drawing out of extramental being, which has been once and for all 'put in parentheses', the reality and existence in which the *self* and these *others* are muffled up, to which at the same time all 'real' or 'existent' being is refused, if not in and by the intentional life of the consciousness, yet in their dependence on the transcendental subjectivity[4] and as inseparable from it.

Let it be stated here once and for all: there is no way of 'transcending'

[1]Or which serves as the basis or occasion for the object of intellection, when the latter is a rational not real being.

[2]Or, in the case of a rational not real being, a mental work made by means of such aspects of things.

[3]Cp. E. Husserl, *Méditations cartésiennes*, 4th and 5th meditations.

[4]'Every imaginable meaning or being, whether called immanent or transcendent, makes part of the domain of transcendental subjectivity, in so far as it constitutes all meaning and being,' (E. Husserl, *op. cit*).

realism and idealism; no higher position which surpassess and reconciles them: there is only a choice between them, as between good and evil. Any realism which makes accommodation with Descartes and Kant will one day find that it is false to its name.

A DIGRESSION OF PHENOMENOLOGY[1] AND THE *Cartesian Meditations*

It is curious to observe that the origin of the phenomenological movement lies in a form of activation of post-kantian philosophy by contact with the aristotelian and scholastic elements transmitted by Brentano: the notions of the *Wesenschau* and intentionality clearly show this influence. But from the beginning there is a complete deviation in the fact that reflex activity (though clearly recognised as such) has been utilised as if it were primary: it is taken as a basis for immediate *a priori* perception, as though reflection could, in returning on its direct operations and on their already apprehended object, fashion for itself from the latter an object attained before it, more immediately attained (and finally substitute itself for it), and betake itself to the discovery of those evidences which as 'primary in themselves' surpass 'all other conceivable evidences';[2] as though reflex observation, whose proper business is purely critical, could become constituting and constructive.[3] There lies the πρῶτον ψεῦδος of phenomenology.

[1]It is phenomenology as seen by E. Husserl which is in question here. The phenomenological movement in Germany has been highly complex, and it would be a mistake to think of Husserl as its sole initiator. Without speaking of the divergent tendencies attached to the name of Max Scheler, and to-day to those of Nicolai Hartmann and Martin Heidegger, etc., there is the Munich school, which does not follow Husserl's neo-idealism, and of which it is difficult to appreciate the full importance as long as the teaching of Prof Alexander Pfander has not been published in any complete form (cp. A. Pfander, *Logik*, Halle, 1929). The object of my study being what it is, it is sufficient here to concentrate on that highly significant aspect—which is the best known in France—exhibited by E. Husserl. But it must be clearly remembered that the consideration here is thus limited.

[2]E. Husserl, *op. cit.*

[3]This need to constitute and construct in the heart of the reflective process is marked on nearly every page of the *Méditations cartésiennes*.

This is why phenomenology regards itself as all philosophy, and as replacing the 'naive ontology' of the older metaphysics. On the other hand, in my opinion what can be retained—after a process of careful straining—of phenomenology and 'the discoveries' in which it glories belongs only to the reflective and critical parts of philosophy. The 'transcendental experience' which it disengages is, in what is authentic in it, nothing

This fundamental misunderstanding is bound up with the phenomenological ἐποχή[1] in so far as it 'puts in parentheses' the whole register of extramental existence and thus separates the object (the essence-phenomenon) from the thing—an ἐποχή of which it must be said that, like the cartesian doubt, it would be legitimate *ut significata*, as envisaged eventuality—recognised as impossible—but which implies a contradiction *ut exercita*, as really lived and experienced. In demanding from the outset, by an imposed postulate whose conditions have not been critically examined, that one should livingly put extramental being 'out of bounds', the possibility is practically and by presupposition admitted of stopping thought short at a pure object-phenomenon, *i.e. of thinking of being while refusing to think of it as being*. It is not seen that the cartesian assertion, according to which, in order to build up a philosophy radically free of 'preconceptions'[2] not based on reason, the mind must first of all cast out *in actu exercito* every certitude concerned with extramental being, is itself a pre-judgment born from a naïvely material conception of the life of the mind: for to allow nothing to enter into a material recipient which has not previously been verified it is essential first of all to empty the receiver of all content; but, since the power of auto-intellection and auto-criticism, of a complete return upon itself, is the privilege of the mind, the latter has no need to empty itself in reality of its certainties in order to critically verify them: exactly that of which it is and remains really certain *in actu exercito* it can ideally represent to itself in doubting of it, in order to realise whether such a doubt is possible, and it is only by such a suspension of judgment, signified, not lived, that it is possible to make critical proof of the primary truths. It is

other than the critical reflection of the mind on itself, and the only 'novelty' is the assigning to it of an impossible task of construction. The first period of phenomenology (the description of the *cogitata* as such) presents from this point of view much greater interest than the second (the wholly artificial reconstitution of 'aprioric structures' of universal reality).

[1]'Suspension of judgment' is the phrase of Pyrrho and the ancient sceptics, used here in a methodological sense.

[2]It is in *starting from this* that it reflectively confirms ('justifies') to itself the veracity of the senses and its own certitude of the existence of the sensible world. So that to pose, as is so often done, the problem of the bearing of intellectual knowledge by bringing into question, as real being other than the *ego*, not first of all possible extramental being but only the existence or non-existence (in act) of the sensible world, is a non-sense.

because the mind is capable of a perfect return upon itself that it can undertake a critical (reflex) description of its *cogitata* as *cogitata*, without any need to practise the ἐποχή of Husserl.

Still more he has not seen that the first, absolutely unbreakable, apodictic certainty of the intellect is concerned with *possible* (metalogical) extramental being, of which it knows in an entirely and eternally certain and necessary way that in so far as it is it is not nothing. But his misunderstanding of the proper life of the intellect as such and confusion of it with that of the senses gives rise to the supposition that this first certitude should bear on the actually given, in the search for it in the pure *cogito*.[1] And he sets *ego cogito cogitatum* as the point of departure for all philosophy; keeping faith with the primary evidence of intuition, it should rather be *ego cogito ens*, the starting-point, not for the whole of philosophy, but of that reflective part of first philosophy which is the critique.

The effect of this prime deviation is that the very notion of intentionality, in passing from the hands of the great scholastic realists[2] to those of the contemporary 'Neo-Cartesians' (it is E. Husserl's own description of himself in his last book), has lost both its efficacy and its value. How indeed could it be otherwise since its whole meaning comes first of all from its opposition to the *esse entitativum* of the extramental thing? Intentionality is not only that property of my consciousness of

[1] 'My *ego* given to me in apodictic fashion—the sole being which I can posit as existing in an absolutely apodictic manner. . . .' (E. Husserl, *op. cit.*) My own existence (reflectively grasped is certainly the most basic and irreducible of all existences *in act* given to me. That is why it is practically more important to me than any other. But all actual existence which is not that of the Pure Act is contingent. And it is an *absolute necessity* (but in the order of *possible* existence or of essences) which should include the most basic and irreducible data of *apodictic* knowledge or *science*. This is why the prime datum of speculative knowledge is the principle of identity, not that of the self. The ancients rightly held that the certitude of my own existence, absolute as it may be, is not for all that a *scientific* certainty, because it bears on a contingent object, and so, on the side of the object, it lacks that necessity which is required to constitute a knowledge infrangible *at all points*.

[2] *Cuique suum*. It is singular to see E. Husserl, and many of the critics who write of the phenomenological movement, paying honour to Brentano for his discovery of intentionality. This discovery is at least seven centuries old (for neither was St. Thomas its inventor). It is possible also to observe the dependence of certain characteristic aspects of phenomenology with regard to Duns Scotus, in particular to his theory of ideas and the *esse objectivum*.

being transparent in a given direction, of seeing objects in its own depth, it is above all that property of thought, the privilege of its immaterial nature, by which being in itself and outside the mind, *i.e.* entirely independent of its action, becomes existent in it, posited and integrated by thought for thought's own action, and by which henceforward both exist in it in one and the same supra-subjective existence.

If we do not go as far as this, if we refuse to the mind the power, which is only real if being itself is real, of 'surmounting' and interiorising being in itself, the pure transparence of intentionality is inevitably turned material, being regarded as a 'constituent' of the object through its 'structural laws',[1] by the asking of it to constitute *the other* and confer on it its own proper meaning 'starting from my being as myself'[2] (whereas on the contrary it brings the *other* to me 'starting' from its otherness, and makes me be the other). And even, as so often happens with Husserl, one seems so to speak to brush against the true nature of knowledge, always in the end he passes on one side of the great secret. It is left dark that knowledge does not need to come out of itself to attain the thing which exists or can exist outside itself—the extramental thing which has caused the prejudice it is desired to exorcise. It is in thought itself that the extramental is attained, in the concept that the real or metalogical is touched and handled, there that it is grasped; for the very glory of thought's immaterial nature is that it is not a thing in exterior space extended over another thing, but rather a life superior to all spatial order, which, without quitting itself, perfects itself with what is not itself—the intelligible real whose fecund substance it draws

[1]Cp. E. Husserl, *op cit.* We know that Husserl, the declared enemy of all subjectivism (in the usual sense of the word), opposes his doctrine of transcendental subjectivity to that, into which Kant fell by inconsequence, which shuts up the mind in a subjectivity which might be called entitative, and according to which the activity of a subject considered *secundum esse naturae* produces or engenders the object of knowledge. For him (see Gurvitch, *op. cit.*, p. 22) the object is neither produced nor engendered, it is by an act of attention or fixation, not of formation, that the intentional synthesis is constituted. But in order that this constituting synthesis may take place in one way or another the essential thing is that it should be constituting with regard to an object (which is why Husserl admits in his own way the 'Copernican reversal' of Kant). To make this the proper function of intentionality is to misunderstand precisely what is most typical in it.

[2]E. Husserl, *op. cit.*

from the senses, gathered by them from the (materially) existent in act. The way to evaporate the rightful mystery of knowledge is precisely to exorcise extramental being, to suppress these ontological (metalogical) 'for themselves', entirely independent of my thought, which my thought makes its own by making itself into them.[1]

Despite the important services which it has rendered to contemporary thought (above all, perhaps, like Bergsonism heretofore by its extra-philosophical influence, notably in the stimulation which various scientific disciplines have received from it), despite its original realist impulsion and its liberating virtue in regard to monism and mechanism, phenomenology runs the risk from the outset of ambiguity. Nothing is more instructive than the way in which, finally vanquished by the false 'radicalism' of Cartesianism, it has ended up to-day, proud of its recovered chains, by indubitably returning to the kantian tradition and by affirming a new transcendental idealism, which is certainly different from kantian idealism, but mainly in the fact that it refuses to 'leave open the possibility of a world of things as such, under no matter what name of limited-concept.'[2] While 'naïve metaphysics' operates with 'the absurd thing in itself'[3] on the other hand, 'for phenomenology . . . being' is a practical idea—the idea of an infinite labour of theoretical determination',[4] and the world also 'is an infinite idea, relating to an infinity of concordant experiences'.[5]

Despite the reserves necessitated by the difference of the two cases, one could say that Husserl's position in regard to Kant is comparable to that of Berkeley to Descartes. Berkeley also, in his battle against the 'thing', believed that he was avenging intuition; in suppressing extramental 'matter' he believed he had retrieved, he also, 'the meaning

[1]These comments do not only apply to the idealism of Edouard Le Roy, of Leon Brunschvieg, and so many others, or to the phenomenology of E. Husserl, but also to the solipsism of Schuppe and the general immanentism of Rickert (*see* on the work of the two latter, A. Krzesinski, *Une Nouvelle Philosophie de l'immanence*, Paris, 1931).

[2]E. Husserl, *op. cit.*

[3]*Ibid.* I will willingly concede the absurdity of the *kantian* 'thing in itself', in itself unknowable and *separated* from the phenomenal (in place of manifesting itself through it). But it is of everything capable of an extramental or metalogical existence of which E. Husserl is speaking here.

[4]*Ibid.* [5]*Ibid.*

which the world (of objective realities) has for all of us, anterior to all philosophy.'[1] Husserl, in order to free transcendental idealism from the 'absurd thing in itself', reconstitutes by a more and more artificial procedure the whole universe of realism in the heart of the transcendental *ego* 'starting from its rightful being'.[2] Though one may call this 'formidable' task the discovery of the apriori constitution of the world of the real and of all possible being by the complete explication of the transcendental *ego*, it remains in reality a reconstitution, and, like all reconstitutions, presupposes an original: the world of naïve realism, from which phenomenological idealism is suspended like a parasite trying to suck into itself its subject: it is by it that it lives, not only with regard to the various levels or stages of objectivity which it reconstitutes after first of all having put them in parentheses, but also in regard to its notional instruments, the *Denkmitteln* which it employs, and which are gathered by way of analogy from the conceptual register of the knowledge of things.

Nevertheless an unexplained residuum remains outside this universal science: the 'naïve' belief in extramental reality. Even if this belief is illusory it is necessary all the same to assign the reason for such a universal and irrepressible illusion; but in that case the method of phenomenology has been betrayed: and if this belief has no need of explication because it finally finds itself reconstituted in the interior of the phenomenological ἐποχή, then it is not illusory and the thing in itself is not absurd, but it is phenomenology to which an end has been put. The truth is that the belief in extramental reality is not reconstituted, but replaced by a substitute; a dispensation from the need to explain it is supposed to be supplied by the production of a counterfeit in the idealist style.

Thus contradiction is in the heart of the business. Extramental being which one began by putting in parentheses in forbidding either its denial or its affirmation finds itself (by the simple fact that in erecting a philosophy one accepts *in actu exercito* the separation of the *object* and the *thing*) practically denied and finally cast out (without ever having been criticised and without even a question whether this separation was possible—a fundamental omission which should cause transcendental neo-Cartesianism to be regarded as a system which is *radically* naïve). Much more logical than Descartes, understanding—but in order to

[1] *Ibid.* [2] *Ibid.*

make himself more cartesian than Descartes and to sacrifice the notion of extramental being—that the cartesian problem of passing from the consciousness of my thought to certitudes concerning the being of things (thanks to the divine veracity) is a 'contra-sense',[1] E. Husserl has undertaken to construct his entire philosophy without coming out of the phenomenological ἐποχή. Nevertheless it comes about that he leaves it despite himself, since he reconstitutes so admirably in the interior of the ἐποχή all that he had left outside and put in parentheses, that in the end everything that was in parentheses finds itself transferred to the interior of the transcendental ecology—everything except extramental subsistence and existence, which have been turned out of the parentheses at the other end and cast out into nothingness. But then there can be no more parentheses and no more ἐποχή. In maintaining the ἐποχή to the last limit it has been suppressed—an admirable achievement certainly in transcendental sleight-of-hand, but equally undeniably a glaring contradiction in fact.

The ambiguity of this last stage of phenomenology is such that it only needs a momentary misunderstanding, a lapse of mind, to think out in realist terms this renovated transcendental idealism. What in effect has been reconstituted in the heart of the 'intentional consciousness', before the *cogito*, is the whole universe of Nature and Culture, and it is certainly true that in so far as it is known this is in the mind. When one involuntarily thinks that this same universe is also (and first)—at least possibly—in existence outside the mind, one has passed surreptitiously into the world of realism. I am indeed not at all sure that it is not thanks to such unobserved slips of mind—the revenge of nature—that idealist philosophers are able to believe that they have thought out their systems.

Finally, it seems that from the beginning phenomenology has advanced by a form of unnatural hybridisation between ontology and logic. It is a grave thing for a philosopher not to be able to distinguish between the *ens reale* and *ens rationis*, and he runs the risk, despite all his protestations against castle-building, of setting to work on the 'elucidation' of a universe of fictions, and of leaving on one side the proper duty of an honest philosophy, which is to assign the reasons for the given data and to win knowledge of them. Other inconveniences will also

[1] E. Husserl, *op. cit.*

spring up. In excluding the transobjective subject, the rightful effects of materiality are introduced into the very world of intelligible essences and the 'a priori', and it is vain to try not to treat this world in empiricist fashion,[1] as those who think with their eyes and their hands treat the concrete world of the sensible; for if the intellect in its proper life is pure, I do not say of those experimental deposits from which it draws all its substance, but from all material co-action and empiric servility, it is because all the contingent, the potential and the material, all that inert mass which can be defined by its resistance to intelligibility, makes part of the world which it is absorbed in and it knows, but is situated outside it as is that world itself. On the other hand, by the fact that the essences perceived by the mind are no longer seized in transobjective subjects existing outside the mind and themselves included in the flux of time, the extra-temporal objects of the intellect find themselves, in an unexpected re-appearance of Platonism, separated from real and temporal existence; and in order to reunite them there is nothing to be done but to invert the intellect, giving time dominance over being, whether like M. Bergson one seeks to substitute time for being, or whether with M. Heidegger to establish being over time. This is to assure the existence of realism by knocking away its foundation.

CONCERNING IDEALISM

It must be obvious from these considerations that the problem of the thing and the object[2] is the central-knot of the problem of realism.

[1] As phenomenology essentially declares that it is an 'eidetic' description or analysis, it would be well, it seems, to remedy this inconvenient point. But the remedy remains insufficient. In making the object of the various intentional functions freely variable, by imagination, in order to retain only their *eidos*, a rightful necessity grasped in an essence is not set before the mind, but only the statement of a factual necessity of the intentional life, a succedaneum of the veritable intelligible necessity. Victor Delbos's comment that phenomenology runs the risk of subjecting thought to the indetermination of the sub-logical, finds in this point in particular another verification.

[2] Various useful comments on this problem will be found in J. de Tonquédec's book which I have already cited, and in that of L. Noël. Cp. René Kremer, 'Sur la notion de réalisme épistemologique,' in *Philosophia Perennis*, vol. i, p. 739.

In those passages of *Réflexions sur l'intelligence* to which L. Noël is certainly referring (*op. cit.* pp. 153-4), my discussion did not exclude reflective descriptions and affirmations, rather it pre-supposed them. Affirmations which moreover are not simple

Philosophers imbued with Cartesianism call all authentic realism 'naïve'. However much one demonstrates that to apply such an appellation to aristotelico-thomist realism is puerile, they will not be undeceived, for to them this naïveté consists in beginning with an act of knowledge of things and not of knowledge of knowledge. Let it be so! The mind must in fact choose its own way from the beginning, must make a primary decision, which will command all its destiny. But the first act of reflection shows that those who have chosen according to nature and without rejecting the first ray of light which shines across our hearts, the first objective evidence, have chosen wisely: and those who choose against nature, who demand another light without pursuing the first, have chosen foolishly; wishing to commence with what comes second.

One does not think of thought until after having thought of the thinkable 'good by existing' (the real or at least possible); the first act of thought is being independent of thought. The *cogitatum* of the first *cogito* is not *cogitatum*, but *ens*. One does not eat the eaten, one eats bread. To separate the object from the thing, the objective *logos* from the metalogical being, is to violate the nature of the intellect, at once rejecting the primary evidence of direct intuition and mutilating reflective intuition (that same reflective intuition on which everything is made to depend) in the first of its immediate presentations. Idealism sets an original sin against the light in the very heart of its whole philosophical construction.

Since Leibnitz the whole endeavour of idealism has been directed to the suppression of all material or subjective causality in order to leave only formal causalities and at the same time to annihilate the 'thing', every cis-objective or transobjective subject, in order to leave only pure objects. Unless its full value is fully restored to the thing it is a vain endeavour to call oneself a realist. Philosophy has become more and more purely reflective, it is only equivocally that it can now call itself

empiric registrations, but rather analyses of a special type, capable of discerning the intelligible constituents and even the nature, as St. Thomas says, of the intellectual act and the intelligence. If on the other hand it is proper to distinguish what is the object as object from what is the object as thing, I do not hold that that is the place to pause between the first and second considerations to solve certain epistemological questions (cp. *op. cit.*, p. 228); as if the notion of a *pure* object which should not be either a thing or that a thing could not be based upon, was, even by abstraction, thinkable.

either the philosophy of nature or metaphysics: for what is the proper object of natural philosophy if not the world of things subject to time and movement, which is also that of the experimental sciences at work on it from another angle? And to what is metaphysics directed except towards a world of truths above time which are realised in temporal existence, and towards a supreme super-temporal reality pre-eminent above all things? While an exclusively reflective philosophy does not judge what is, but the idea of what is, and the idea of the idea, and the idea of the idea of the idea of what is, and all this with a tone of superiority because it has not stained its hands with the real or run the risk of its scraping the skin off them, the courage proper to natural philosophy as to metaphysics is to face these extramental realities, to turn its hand to things and judge of what is. And their rightful humility is to take their measure from things—which is what idealism will not do at any price.

It is scandalised by the idea that an intelligence may be measured by a thing, by an ontological 'for itself' which exists apart from it—in an existence less noble than that which knows it, and to which the intellect needs to unite itself by an effort of submission, which it has no power ever to exhaust. This scandal arises from the fact that intelligence exists not only in the created, but at a very low point on the ladder of spirits; an angelic intellect is not intelligence *per se*: how much less then the human intellect! But indeed the privileges of intelligence suffer no detriment by this, for, far from opposing to the intellect I know not what obstacle of matter absolutely without any connection with its nature, the being of things has a secret and as it were sleeping aptitude for the embrace of the mind, and in taking its measure from them our intellect in reality takes its measure from the intelligence, intelligence in pure act, by which things are measured and from which they draw their being and their intelligibility (and on the other hand, it is again intelligence —the intelligence which illumines, the created participation in the intellectual light of God—which renders things intelligible in act and which by means of the senses and of things determines the intellect which knows;[1] and finally it is it which, under the same illumination

[1] 'Quae a nobis materialibus conditionibus sunt abstracta, fiunt intelligibilia actu per lumen nostri intellectus agentis.' (St. Thomas, *Comm. in de Sensu et Sensata*, lec. 1.) See *infra*, p. 152, note 1.

derived from the Primal Truth, achieves actualising its object within itself, and makes it so much its own—this is the office of the mental word and its letters of spirituality—and it only sees—here below—what it itself expresses, transparent with its own transparence.[1]) The mystery of creation alone can allay the scruples of idealism; and it is this *ascesis* proper to a created intelligence that idealism expressly rejects.

But an obscure and powerful teleological motivisation also intervenes, which idealism unconsciously obeys, so playing false at its own game. The point for it is precisely *not* to be led to a certain end, to avoid a certain final conclusion. If from the very beginning there is so careful an avoidance of things and their extramental consistency regnant over our thought, it is in the need above all, by a secret instinct all the more imperious that it remains unavowed, *not* to come finally face to face with a supreme and transcendent reality, an abyss of personality to which all hearts are open and before which all our thoughts must needs adoringly bow. The bastions and fortifications of idealism thus show themselves like huge works of defence against that Personality who is divine.

Nothing is more significant than these colossal works. It suffices for things to exist for God to become inevitable. Accord to a point of moss, to the smallest ant, the value of their ontological reality, and we cannot escape any longer from the terrifying hands which made us all.

Under these circumstances the humblest definitions of grammar take on a singular and powerful significance. 'The first person is he who speaks.' This describes what I have called the cis-objective subject. He says 'I'—not certainly in the sense of Husserl's 'pure I', stripped of all entitative subjectivity—but because a mysterious ontological and metalogical depth, a universe unto itself and core of liberty, knows itself in this *I*.

[1]Cp. *infra*, p. 153. It goes without saying that I am speaking here of an entirely interior and spiritual expression. The deeper is the intellectual intuition, the more vital and intimate is this spiritual expression by which it is accomplished, and the more inexhaustible it appears in relation to oral and material expression. Cp. the preface to my *Philosophie Bergsonienne*, 2nd edit. It is by design, on the other hand, that I have used the phrase: 'it only *sees*, etc.,' for when the intelligence knows without *seeing* an intelligible, for example, divines or obscurely experiences, or plays with a beautiful thing, the fact is that it knows, I do not say without concepts, but by making use for formal means of something other than concepts, *e.g.* affective connaturality or, as in aesthetic perception, of the intuition of the senses themselves.

Surrounding it there is an immense multitude of transobjective subjects, who are described by the second person, the one 'to whom one speaks' and who speaks to us, each a mysterious core, rich also in a certain metalogical and ontological depth, and whom in this relation of *me* and *thee* wish to be treated with respect, and with love. Thou spring, thou fish, thou swallow: it is charity which comes to supernaturally perfect our feeble philosophical aperception of the relations between beings, and St. Francis will speak of Sister Water and his brothers, the birds and the fishes. No attitude has a more profound metaphysical truth, and it is one which is essentially realist. Evidently for M. Brunschvieg there is no sense at all in a conversation with a bird.

And all these things to which 'I' speak familiarly, what is it that they say? 'The third person is he of whom one speaks.' *He* is in all their mouths, all things speak of him. And while I know him not myself I only hear the voices of all creatures speaking to one another of him: but when I do know him myself—with no other intermediaries than the light and the enunciations of faith—then oh then, it is *Thou*, yet more hidden and more mysterious and more free than all created things or than all men that might be created, it is thou that I hear!

Things are opaque to us and we are opaque to ourselves. Pure spirits see themselves and see all things transparently. For them the object is the subject grasped in its entirety and its inwardness, not parcelled out in aspects as it is for us. But for them, as for us, the distinction between the object and the subject persists, their glance does not exhaust the obediential potency which is in them, nor the sum of all the predicates which will come to things in the progress of time. Subject and object are absolutely identical for God alone, like existence and intellection. He knows himself completely and all things in himself, for his act of knowledge is itself his infinite essence.

Thus then the world of authentic realism is a world of things existing in themselves, a world, an immense family, a *symposium* of individuals and personalities in interaction, as the thing which knows is itself either an individual or a person, and this thing which knows is there in the midst of the others in order to draw them in a certain way into the heart of itself and to feed itself on exactly that which they rightly are.

'There are two ways', says St. Thomas, 'in which a thing can be found perfect. In the first, according to the perfection of its own being, in what is proper to it according to its own rightful species. But because the specific being of one thing is distinct from the specific being of another thing, the result is that in every created thing the perfection which it possesses lacks absolute perfection in the degree to which equal perfections are possessed by all other species, in such a way that the perfection of any thing considered in itself alone is imperfect, as being only part of the total perfection of the universe, which is born from the union of all these particular perfections gathered together in it.

'And therefore, in order that there may be a remedy for this imperfection, another mode of perfection is found in created things, according as the perfection which is the property of a thing is itself found in another thing. Such is the perfection of knowing in so far as it is such, for in the degree to which it knows the known in a certain way exists in it. . . . And according to this mode of perfection it is possible that the perfection of the entire universe may exist in a single and particular thing.'[1]

III. OF KNOWLEDGE ITSELF

This passage from St. Thomas introduces us into the very mystery of knowledge itself. It is time to ask ourselves in what this mystery consists, what is the intimate nature of what we call knowing. It is, it must be admitted, a question which modern philosophers have not begun to treat, because they have never made up their minds to ask it. Neither Descartes, nor Kant, nor the neo-realists, not even the phenomenalists (except, it seems, M. Nicholai Hartmann, who has at least profoundly felt the antinomies with which it is pregnant),[2] have rightly faced it. It is

[1] *De Veritate*, 2, 2.

[2] Cp. N. Hartmann, *Metaphysik der Erkenntnis*, 2 Aufl., Berlin, 1925. In a recent address to the Kant-Gesellschaft (*Zum Problem der Realitätsgegebenheit*, 1931, Heft 32), Nicolai Hartmann has stressed in the most remarkable way the insufficiency of the standpoint of ordinary phenomenology, and the fact that knowledge implies a relation with a being independent of the mind, a 'transobjective' reality. With the current conceptions of phenomenology 'man vergisst die Hauptsache, die Beziehung auf das Seiende, dem die Erkenntnis gilt; ja man hat schon in der Problemstellung das Erkenntnisphaenomen verfehlt. So ergibt sich die paradoxe Schlage, dass gerade diejeni-

the peculiar merit of St. Thomas and his great commentators to have frankly formulated this problem, which is the most important one of all noetics, and which cannot be treated as it should be without the bringing into play of the most sensitised metaphysical equipment; and not only indeed to have formulated it, but to have provided the most profound solution. Before attacking it, they remind us of the need to raise our minds to a higher level, for we then enter into another order of things, *et disces elevare ingenium, aliumque rerum ordinem ingredi*: the errors which are so frequent in this region proceeding from the fact that we too often confound a spiritual happening like knowledge with the material happenings which feed our common experience.

I shall take the liberty, *brevitatis studio*, of proposing here a very succinct résumé in seven points of the thomist doctrine of the nature of knowledge. The advantage of these forms of condensation is that they constrain the mind to the production of a synthesis occupied solely with essentials.

1. There is a rigorous correspondence between knowledge and immateriality. A being is knowledgeable in the measure of its immaterialism.

2. Why is this so? Because to know is, by an apparent scandal for the principle of identity, to be in a certain way another thing than what one

gen Theorien, die am meisten von Erkenntnis sprechen, die eigentliche Erkenntnisproblem gar nicht kennen.'

The return to a realist attitude which was shown by many at the meeting of the Kant-Gesellschaft in May 1931 is a most striking fact. Unfortunately a misunderstanding of the rightful nature and proper value of the object of the intelligence as such, as on the other hand of the bearing of the intuition of the senses, has resulted for N. Hartmann, in forgetfulness of the fact that the transobjective intelligible must be sought for in the *possibly* real, and, again, that the senses attain to the extramental real as such, as existing and acting *hic et nunc*, in a demand for the *data of reality* from 'emotionally-transcendent' facts (*i.e.* facts where emotion implies and declares the extramental reality of what affects us). His book contains a brilliant analysis of such facts; and it is obvious that in the concrete our life of knowledge and of emotion are mutually inclusive. But it is also clear that the facts in question, and the sense of the 'toughness of the real', imply the primary value of certain facts of knowledge included in them; by refusing to consider, thanks to philosophic abstraction, the proper order of knowledge apart from anything else, and the treatment in this order of the problem of the thing and the object, the realism of N. Hartmann limits itself to the classification of the evidence of the general consciousness, and remains powerless to base it on reason, to defend and confirm it by a truly critical analysis of the value of knowledge in its various degrees, as is required of metaphysical wisdom.

is; it is *to become another thing than oneself,* 'fieri aliud a se', *to be or become another in so far as it is another,* 'esse seu fieri aliud in quantum aliud'.[1] Which presupposes, on the one hand, the emergence of the subject capable of knowledge from matter (which restrains or imprisons things in the exclusiveness of their own being); and on the other, a form of union between the knower and the known transcending any material one; for when matter receives a form it is in order to constitute with it a third term, a *tertium quid,* which is informed matter. Thus a material being can become *other, i.e.* can change or modify itself, it cannot become *the other.* While the knower, while all the time keeping its own nature intact, becomes the known itself and is identified with it, the knower being thus incomparably more *one* with the known than the matter with the form.[2]

3. *To know* is to the senses and the intellect, taken as such as cognoscitive functions, as *to exist* is to the essence, to the quidditative function. It is a form of existence which defines knowledge. To know does not consist in doing something, nor in receiving something, but in a degree of existence greater than that of being removed from nothingness: it is an active, immaterial super-existence, by which a subject exists no longer only in an existence limited to what it is as a thing included in a certain kind, as a subject existing in itself, but with an unlimited existence in which it is or becomes so by its own rightful activity and that of others.

This is why in God, because he is infinite, existence and knowledge are purely and absolutely one and the same; between the *esse divinum* and the *intelligere divinum* there is not the slightest, even virtual, distinction;[3] his existence is his very act of intellection.

Having come to this point we can comprehend that the formula 'to become the other in as much as other' most certainly defines know-

[1]Cp. *Réflexions sur l'intelligence,* p. 53. John of St. Thomas, faithfully reproducing the thought of Aristotle, St. Thomas and Cajetan, does not say, as H. D. Simonin does in an otherwise perspicacious article, but not on this point (*Rev. des sciences phil. et théol.* May 1931): *become the similitude of the object,* but *become the other, become* (immaterially and intentionally) *the object* itself.

[2]Averroes, *In III, De Anima,* comm. v, *digressionis parte ultima,* q. 2.

[3]Cp. R. Garrigou-Lagrange, *Dieu, son existence et sa nature,* 5th edit., p. 399.

ledge, but as taken first of all in what characterises human knowledge, which is primarily directed towards another. An angel knows itself before it knows things; God knows himself, he is himself the sole specific object worthy of his intelligence, and it is in his essence that he knows all things, things possible and things created. In order to give a definition of knowledge capable of including the whole of this analogical span, it would be necessary to say that to know is to be or become a thing—oneself or another—otherwise than by the existence actuating a subject.[1] An angel in knowing is itself and other things otherwise than by its own existence as a limited subject; God by his wisdom is himself and things otherwise than by the existence which actuates a subject.

4. The act of knowledge is not any of the actions which we customarily observe about us, it does not come under either the heading of 'action'—nor that of 'passion'—in Aristotle's table; taken purely in itself it does not consist in the production of anything not even in the depth of the knowing subject. To know is to advance oneself to an act of existence of super-eminent perfection, which, in itself, does not imply production.

In fact there is the production of an image in sensitive knowledge,[2] of a mental word or concept in intellectual knowledge; but this interior production is not formally the act of knowledge itself, it is at once a condition and a means, and an expression of that act.[3]

This is why the ancients called the act of knowledge an action properly immanent, and perfectly vital, which belongs to the heading 'quality'.

5. Wherever it is a question of a knowing being other than God, who is in himself super-eminent over all things, we are constrained, if we wish to conceive of knowledge without absurdity, to introduce the

[1]'Esse non per modum subjecti,' writes M. Pierre Garin, in his thesis, *L'Idée d'après les principaux thomistes*, Paris, 1932.

[2]Not in the external senses, but in the internal (imagination, memory, etc.). The external sense 'non format sibi aliquam formam sensibilem.' (St. Thomas, *Quodlib.*, v, 9, ad. 2.)

[3]Cp. *Réflexions sur l'intelligence*. On the production of the mental word by the act of intellection, immanent as such and virtually productive, see Cajetan, *In Sum. theol.*, i, 27, 1; 34, 1, ad. 2; 79, 2: John of St. Thomas, *Curs. Phil.*, *Phil. Nat.*, iii, P. q. 11, a. 1; *Curs. theol.*, i, P. q. 27, disp. 12, a. 5.

notion of a kind of existence which is entirely particular, which the ancients called *esse intentionale*, intentional being, and which is opposed to the *esse naturae*, to the being which a thing possesses when it exists in its own nature. For indeed the scandals suffered by the principle of identity can only be apparent, and it is certain that if the characteristic of the knower is to be another thing than what it is, we must needs, to avoid absurdity, distinguish two ways of having existence, conceive of an *esse* which is not the rightful existence of a subject as such or of its accidents.

How is it that the knower is the known? It cannot be according to its natural being that it can be what it is not.

How is the known in the knower? It cannot be according to its natural being that a tree or a stone is in the mind.

It is therefore necessary to admit another form of existence, according to which the known will be in the knower, and the knower will be the known: an entirely tendential and immaterial existence, whose office is not to posit a thing apart from nothingness in itself and as subject, but on the contrary, for another thing and in relation; which does not seal up a thing in its natural limits but disengages it from them; by which the thing exists in the soul by another existence than its own, and the soul is or becomes the thing according to another existence than its own: *intentional* being, which is, according to Cajetan, there to remedy that imperfection essential to every created knowing subject of the possession of a limited nature and the lack by being itself of all the rest.

In another order than that of knowledge, in that of efficient activity is it not equally necessary to admit an intentional manner of existing—the way, for example, in which artistic talent *passes* into the hand and the brush of a painter? For the entire picture is the work of the brush, there is nothing in the picture not caused by the brush, and nevertheless its beauty and intelligible radiance, the spiritual values with which the picture is charged, surpass all the capabilities, in its connection with the material universe, of the causality proper to the brush itself: a causality higher than its own, and superimposed upon its own, must then have passed into it. If you scrutinise everything 'entitative', or existing *secundum esse naturae* in the brush, you will find no element of the painter's art, only the substance and the qualities of the brush and the movement to which it is directed by the hand; nevertheless the art has passed

into it. Scrutinise everything entitative in the transmitting medium of the sensitive qualities, you will only find the properties and the wave and other movements that the physician recognises, you will not bring the soul under the scalpel: its quality has nevertheless entered in, *secundum esse intentionale*, since the senses will perceive it when the waves of the vibrations reach the organ. It is a dream of the materialist imagination to think, like Democritus, that it enters in entitatively, or because it is not so to deny, like modern 'scientists', that it can enter in at all. The *esse intentionale*, even when not concerned with the world of knowledge, is already for forms a means of escape from the slavery of matter; the scholastics frequently call *esse spirituale* this existence not for itself, this *tendenz*-existence by which forms which are not their own supervene in things. I hold that a great field of interests lies open for philosophers in the study of the part it plays even in the world of physics, which is doubtless the cause of that form of universal animation by which movement brings to bodies more than they are in themselves, and colours all nature with a semblance of life and feeling.[1] However this may be, our concern here is with the part it plays in knowledge and the immaterial operations of the latter, the intentional presence of the object in the soul and the intentional transformation of the soul into the object, the one and the other functions of the immateriality (imperfect for the senses, absolute for the intelligence) of the cognitive faculties.

6. What is the means of union of the knower and the known? The medium thanks to which the known is intentionally in the knower, and by which the knower becomes intentionally the known? It is the whole world of intra-psychic immaterial forms which in the soul are like the deputies of the object and which the ancients called similitudes or *species*. This word, *species*, has no equivalent in modern language, and I

[1]The movement of projectiles, which caused so much difficulty for the ancients, could be perhaps explained by the fact that at the first instant of movement and because of it, the qualitative state which exists in the agent and is the immediate cause of the movement (speaking in ontological terms, it is by design that I do not use the terms which belong to the vocabulary of mechanics) passes *secundum esse intentionale* into the mobile object. From this standpoint it would be possible to hold the Galilean principle of inertia viable not only from the point of view of physico-mathematical science (at least, according to the mechanics of Einstein, for a space ideally supposed which would be totally devoid of curvature), but also from that of the philosophy of nature.

have decided that the aptest rendering of it is the expression, *presentative* or *objectifying form*.[1] No more than that of the *esse intentionale*, the notion of *species* is not for the philosopher an element of explication which is already known and fully elucidated by others. They are rather supports which result from the analysis of the data and of which it constrains the mind to recognise the reality—with certainty if the analysis has itself progressed correctly and under the constant pressure of intelligible necessities. It is absolutely necessary that some determination should supervene in the knower, thanks to which what is not its should be in it *secundum esse intentionale* and not like an accident in a substance, and which will be able to exist with the same active super-existence as that of the knower become the known. The species is nothing other than this internal determination.[2]

In the case of sensitive knowledge, the external sense, itself in a state of vital tension, and which has only to 'open itself' to know (all is ready in advance for it, and in this it is comparable to an already acquired intellectual habitude),[3] receives the thing by its qualities acting on the organ, which so offers itself to be felt (we call it 'the sensible in act'), a *species impressa*, a presentative form imprinted on it—let us call it a 'received presentative form'—thanks to which it is specified as by a germ which

[1]The expression, 'presentative form' would be preferable if 'presentative' evoked the idea of *making present* rather than that of *presenting*, which is sufficiently inapplicable to the intelligible *species impressa* (it is the concept which *presents* the object to the mind). The expression 'objectifying form' is better, on condition that it is understood that it is the thing itself which, by this form, is become object (only in a radical manner in the intelligible *species impressa*, in express fashion is the concept); but it is to be feared that the habits of modern language may here induce a misunderstanding.

[2]Cp. St. Thomas, *Sum. Contra Gent.*, II, 98.

[3]'τοῦ δ' αἰσθητικοῦ ἡ μὲν πρώτη μεταβολὴ γίνεται ὑπὸ τοῦ γεννῶντος ὅταν δὲ γεννηθῇ, ἔχει ἤδη ὥσπερ ἐπιστήμην καὶ τὸ αἰσθάνεσθαι. καὶ τὸ κατ' ἐνέργειαν δὲ ὁμοίως λέγεται τῷ θεωρεῖν.' (Aristotle, *De Anima*, B. 5, 417, b. 16-19.) Cp. St. Thomas's commentary, lect. 12: 'Quod nondum habet sensum et natum est habere in potentia ad sensum. Et quod jam habet sensum et nondum sentit est potentia sentiens, sicut circa scientiam dicebatur. . . . Sensum autem naturaliter inest animali: unde sicut per generationem acquirit propriam naturam et speciem, ita acquirit sensum. Secus autem de scientia, quae non inest homini per naturam, sed acquiritur per intentionem et disciplinam. . . . Cum autem animal jam generatum est, *tunc hoc modo habet sensum, sicut aliquis habet scientiam quando jam didicit.* Sed quando jam sentit secundum actum, tunc se habet sicut ille qui jam actu considerat.'

has entered into its depths; and having so become intentionally the sensible in the initial or 'prime' act (the sense and the sensible then make only one principle of operation), in the terminal or 'second' act it becomes it, in its own immanent action, and then makes only one act with the felt—not without producing at the same time an image of the latter, a *species expressa* of the sensible order in the imagination and the memory.

The intelligence knows things in forming them in the fruit which it conceives in the bosom of its own immateriality. The Thomists, following Aristotle, recognise in it an active light (the *agens* or activating intellect) which, making use of sensible representations and disengaging the intelligibility which they contain *in potentia*[1] (which is not possible without leaving on one side the individualising notes enclosing the sensible as such), specifies the intelligence by means of a *species impressa*, of a 'presentative form' abstracted from the sensible and 'received' by means of it. This is then the prime or initial act of the intellect; it has become, as indeed a principle of action, intentionally the object, which in its *species* is hidden in its depths like a fecundating seed, a co-principle of knowledge (according as the intellect, the sufficing principle of its own proper action, is already itself).[2] And it is thus, actuated by this *species impressa*, and producing thus in it, like a living fruit, a mental word or concept, a *species expressa* of an intelligible order, an 'elaborated presentative form', in which it brings the object to the sovereign degree of actuality and intelligible formation, that it becomes itself in ultimate act this object. If the distinction between the prime and the second act re-appears again thus in the act of knowing, it is because this last, as I have already said, constitutes in itself alone a whole metaphysical order, where are re-united, transposed into the same line which

[1]Material things are sensible in act, but only potentially intelligible, and the whole process of human knowledge consists in bringing them progressively, first to intelligibility in act (in the *species intelligibilis impressa*), then to the state of intellection in act (in the mental word and the intellective operations).

[2]'Intellectum est intelligens . . . ambo se habent ut unum agens.' (St. Thomas, *De Veritate*, 8, 6, ad. 3.) Cp. Cajetan, in *Sum. theol.*, i, 14, 1: '. . . Cum cognoscens debeat esse *sufficiens principium* suae propriae operationis, quae est cognoscere—quia hoc omnibus perfectis naturis commune est—oportet quod sit *specificativum* principium illius, quod est esse *cognitum*.'

is that of knowledge, at once the distinction of the essential form and the existence in the line of being and that of the operative form and the operation in the line of action. Is not knowledge at once existence and (immanent) action? The soul, by its faculties of knowledge, becomes first (intentionally) the object in the prime act, in order to become it as a result in the second, as nature exists before it acts.

7. In what is concerned with the *species* or presentative forms, it is necessary to distinguish carefully between two very different parts or functions. On the side of immaterial forms, these *species* are modifications of the soul, and by this right they determine the faculty in the same way as any other form determines any other subject, but these modifications of the proper nature of our soul, these entitative modifications, are not pre-requisite to knowledge; they make no part of knowledge.

On the other hand presentative forms are, in so far as they are means to knowledge, purely and formally deputies of the object, simply its similitudes, *i.e.* in the soul they are the object itself detached from its own existence and made present in an intentional and immaterial state; in this way they do not determine the faculty as a form determines matter or a subject, but in relation to the entirely immaterial and supra-subjective union by which the one becomes, first intentionally in the first act, then in the second act and by its vital operation, the other in itself. And this entirely immaterial information, in which the soul only receives or experiences in order to exercise its own vital activity, to bring itself in act into an existence not limited to itself, is what constitutes knowledge.

In thus making a résumé of knowledge, it shows itself to us as an immanent and vital operation, which essentially consists not in making, but in being: in being or becoming a thing—itself or others—otherwise than by the existence actuating a subject; which implies a much higher union than that of the form and matter composing a conjunction or *tertium quid*, and which also presupposes that the object known is intentionally made present in the faculty thanks to a *species*, a presentative form; finally, that intellectual knowledge[1] is accomplished thanks to a

[1]It has not been my intention here to treat specially of sensitive knowledge. (For the mystery proper to this mode of knowledge, which implies immateriality while all the while being the act of an organ and which the philosopher can only in the last analysis

mental word or concept, a presentative form proffered from within itself by the intellect, and by which it intentionally becomes in the final act the thing taken as such or according to its intelligible determinations.

explain thanks to the universal motion of God working in all things, a motion which is not only generally prerequisite for all the actions of created things, but also in particular for the objective influence of bodies on our senses, see the remarkable writing of R. Garrigou-Lagrange in *Le Réalisme du principe de finalité*, 1932: cp. Yves Simon, *Introduction à l'ontologie du connaître*, 1933.) I would only here draw attention to the fact that while the object of intellectual knowledge is attained, as I have said on pp. 139-141, in the concept and in the mind, the object of the external senses on the contrary is attained not in the word or image, but such as it is outside the mind, in the very action, extramentally, of the thing on the senses: *sensus secundum actum sunt singularium quae sunt extra animam* (St Thomas, *In De Anima*, book II, lect. 12), *sensatio terminatur ad res prout extra sunt* (John of St. Thomas, *Phil. Nat.*, III, P. q. 6, a. 1 and 4), that is to say—for sensation is not a transitive act, but an immanent act which is accomplished in the senses—that the end of the sensation (like the end of every immanent operation, an end contemplated or loved, not produced) is in the subject itself, *in ipso operante*, but on the other hand the sensible reality is in the senses—by its transitive action, *actio in passio*—such as is outside the soul; sensation, while all the while terminating in the senses, thus terminates in the sensible externally, *prout est extra*, in the action of the thing on the senses; and the existence in act, outside the knowing subject, of the thing present in it by its action, is one of the constituent factors of the object as such of the senses; the wholly immanent act of sensation, whose beginning is the *species impressa*, has an end, an object which in its very objectivity implies the existence in act of the thing: to such a point that in the absence of a thing actually given by its action (even if a star had ceased to exist at the moment when its light reached us, it is yet present by its action), sensation in the rightful meaning of the word (I do not mean an imaginative perception or a hallucination) is absolutely impossible. 'Si organum sentiendi non moveatur a rebus extra, sed ex imaginatione vel alis superioribus viribus, non est vere sentire' (St. Thomas, *In IV Sent.*, dist. 44, q. 2, a. 1, sol. 3) 'Cum sensum non sentiat nisi per hoc quod a sensibili patitur . . . sequitur quod homo non sentiat calorem ignis si per ignem agentem non sit similitudo caloris ignis in organo sentiendi. Si enim illa species caloris in organo ab alio agente fieret, tactus etsi sentiret calorem, non tamen sentiret calorem ignis nec sentiret ignem esse calidum, cum tamen hoc judicet sensus, cujus judicium in proprio sensibili non errat' (*De Pot.*, 3, 7). Cp. *Sum. theol.*, III, 76, 8, and the very just remarks of J. de Tonquédec, *op. cit.* It is this resolution of the knowledge of the senses in the thing itself and in actual existence which finally is the primary foundation for the veracity of our knowledge. (Cp. John of St. Thomas, *Curs. Phil. Nat.*, III, P. q. 6, a. 1.)

In thus particularising the scholastic theory of sensation, *i.e.* in admitting that the intuition of the senses bears on the externally real in itself, not as taken from the standpoint of nature or of essence (which is the proper object of the intellect), but as it actually *acts* on the senses by its qualities, or as it is exterior in its *action* on the senses (an action which is something real but which is accomplished in the organ), it is possible to reply without difficulty to the principal objections drawn from the 'errors of the

THE CONCEPT[1]

Thomists distinguish between two forms of *sign* which are essentially different, what is called the *instrumental sign* and the *formal sign*. An instrumental sign is something which once known in itself makes another thing consecutively known: a trail of smoke rising to the sky, a

senses' (the apparent curvature of a stick under water, the Döppler effect, etc.). The sensible quality is perceived in effect *such as it is in the action* which a body exercises upon it, and in the instant that it attains the sense after transmission through the (internal or external) medium. The fundamental *realistic* value of sensible perception and at the same time the measure of *relativity* which it implies, on account of the materiality with which it is bound up, are thus at once safeguarded.

If it were desired to draw out a sketch-plan of the diverse moments of sensible knowledge and intellectual knowledge, one could do so like this:

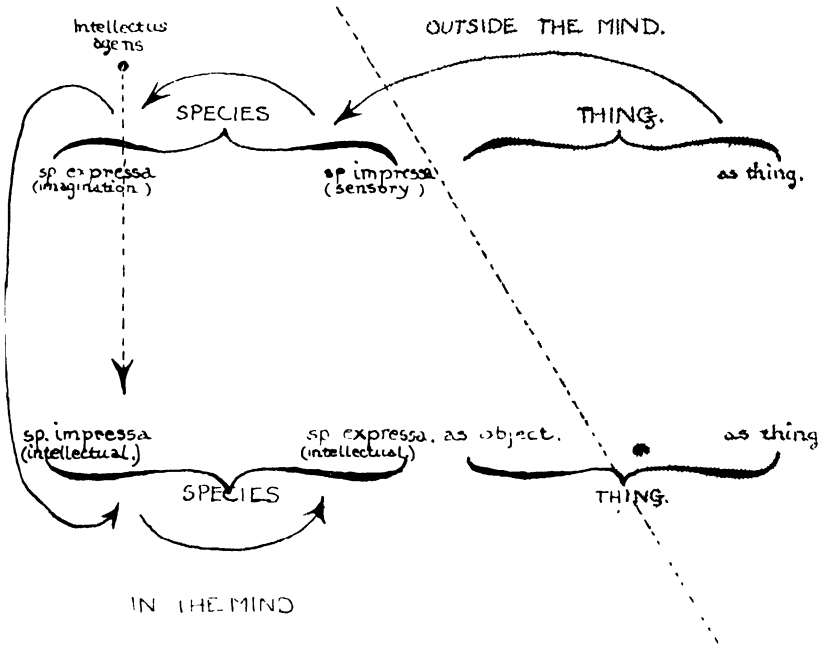


FIG. 6

[1]For a more detailed exposition, I would refer the reader to the chapters which treat the same theme in *Réflexions sur l'intelligence*, chaps. I and II (cp. *La Philosophie Bergsonienne*, preface to the second edition, Part II, chap. 2), which the following paragraphs, like the preceding ones, presuppose and complete.

portrait painted on canvas which we see in a gallery, are objects on which our knowledge rests for a moment and passes on from them to other objects which are known thanks to them, to the fire of which the smoke is the effect and the sign, to the sitter of whom the portrait is the image and the sign.

A formal sign is one whose whole essence is to signify. It is not an object which, having at first its full value as an object, nevertheless primarily signifies some other object; it is something which makes itself known before being itself known as an object, or more precisely, something which before being itself known as an object by an act of reflection, is only known by the knowledge which is conveyed by its means to the mind of the object, in other words, which is known not in 'appearing' as an object, but by 'disappearing' as object, because its essence is to relate the mind to something other than itself.[1] Everything which has been established up till now enables us to comprehend that the *species impressa*, or enlarged presentative forms which intervene in knowledge, are formal not instrumental signs. Remembrance or the presentative form held in the memory and which the memory uses *hic et nunc* is not *what* is known when we remember, it is the *means* by which we know; and what we know by this means is the past itself, the thing or event held in the substance of our past. The concept or mental word is not *what* is known when our intellect is at work; it is the *means* by which intellection takes place; and what we know by this means is the nature or intelligible determination in itself of some actual or possibly existing thing. These (elaborated) presentative forms[2] are the sole realities which

[1]See *infra*, pp. 147-50.

[2]Received presentative forms (*species impressae*) are not called formal signs by the scholastics, because they are at the beginning, not the end, of the act of knowledge, and thus are not themselves known (*in actu exercito*) in the same knowledge as attains the object. They form part of the pre-conscious equipment of knowledge; if consciousness can attain to them (cp. *Sum. theol., i*, 85, 2: *Contra Gent*, II, 75; *Compend. Theol.*, cap. 85), it is by the mind's reflection on its acts ('secundum eamdem reflexionem intelligit et suum intelligere et speciem qua intelligit,' *Sum. theol., ibid.*), and only in so far as it is conscious of the object of which it is the *species* ('intellectus cognoscit speciem intelligibilem non per essentiam suam, neque per aliquam speciem, sed cognoscendo objectum cujus est species, per quamdam reflexionem,' *De Veritate*, 10, 9, ad. 3). The intelligence actualised by intellection of the object has become (but only in so far as it is so actualised and it perceives the object) intelligible in act to itself (for nothing is

correspond to the notion of formal signs, a notion 'cut to their measure', according to the exigencies of an analysis which respects the rightful nature of knowledge, and belong only to it. All the other signs of which we have experience are instrumental ones. This is why, the moment one neglects or forgets the irreducible originality of the things of knowledge, presentative forms are so easily confounded with instrumental ones, just as the immanent activity of sensation and intellection is confused with the transitive activity proper to bodies, and at once knowledge perishes.

St. Thomas, refuting beforehand certain idealist positions, took great care to point out that the *species* or presentative forms are not the objects of our knowledge, but pure means thereto. They only become the objects of knowledge reflectively, and thanks to the production of a new concept. If, he explains, our knowledge stops at them, in other words, if it is our own representations that we know, then, on the one hand, all sciences would be absorbed by one unique one, psychology; on the other hand, contradictions would be true, since a true judgment would be a judgment in conformity with our representations: he who decided that 2 plus 2 equal 4 and he who decided that 2 plus 2 do not equal 4 would be equally right in each declaring according to their respective representations. Thus presentative forms, concepts in particular, are pure means of knowing; the scholastics call them *objectum quo*, mental objects *by which* knowledge takes place. What is known thanks to these immaterial *species*, they called *objectum quod*, the object *which* is known.

If we should group the various elements which coalesce in an act of in-

intelligible otherwise than it is in act); and it is by the same reflection on its *intelligere* extending itself by degrees, by the same and only act of consciousness of its knowledge of the object, that it takes consciousness, in the degree of their existence and nature (in so far as it knows them as origins of that act, which they are by their very essence) of the *species impressa, habitus* and potency—and, only as to its existence, of the soul itself (which 'non est principium actuum per suam essentiam, sed per vires suas,' *De Veritate*, 10, 9. Cp. *supra*, p. 108, note 1). An act of consciousness which is singular and concrete and an entirely different thing than the abstract and universal (and also reflective) scientific knowledge of the nature of *species*, of *habitus*, of potency and of the soul.

It was by an inadvertency, which I hasten to correct here, that in certain passages of *Réflexions sur l'intelligence* the *species impressa* was called 'formal sign'. This should be corrected and 'pure means, *quo*' read in its place.

tellectual knowledge in a synoptic table, we should obtain the following scheme, whose scholarly aspect needs excuse, but which is of assistance in clarifying certain important distinctions which in my opinion are capital.

	In the Mind		*Outside the Mind*
ST. THOMAS	Concept (Quo)		Thing (Quod)
	as modification of the subject	as *species* (formal sign)	object (formal object) / as thing (material object)
	having		
	intentional existence		existence in nature
Descartes	Idea (Quod)		Ideat (Quod)
	'formal' reality of the idea	'objective' reality (of the idea)	thing which resembles the idea
	[The Intentional has disappeared]		
Berkeley		idea-thing	no things
Kant			phenomenal thing-in-itself unknowably built up.
Hegel	[In Absolute Thought]		
	(productive spontaneity)	auto-objectification of the mind	No thing-in-itself if not thought itself
	[In Intentional Consciousness]		
Phenomenologists and 'Critical Realists'	(The intentional object-essence thing has re-appeared)		No thing-in-itself
	[In Consciousness]		
American Neo-realists			The immanental thing-thought in so much as it is thing

I have distinguished two elements in the concept: an entitative function, by which it is a modification or accident of the soul, and an intentional function, by which it is the formal sign of a thing, in which

the object is grasped by the mind. This object which is grasped by the mind in and by the concept is the thing in itself, taken according to one or other of its determinations, and which, first by sensation and then by abstraction has been brought—though stripped of its proper existence—within the mind. For the three first terms of this diagram are all inside thought; it is in the depth of thought that the object is attained,[1] in the heart of the intelligence that it is known (which is why the ancients often called it *objectivus conceptus*), it is only the thing in its own proper existence (possible or actual) which is extramental and metalogical. But what is capital is that while existing under two different conditions, in the concept in a state of universality and of abstraction which enables it to be manipulated, divided, compared by the mind and also enter into the connections of discourse—and in the thing in one of individuality and concretion, nevertheless the *object* and the *thing* are not two known terms, two *quods*, but one: it is one and the same *quod*, which exists for itself in the thing, and which is attained by the mind as object.

Let the *thing*, for example, be Peter. He exists outside the mind under certain conditions: he is not only man, but animal, substance, etc., philosopher or musician, ill or well. Let the *object*, for example, be Peter as the object of thought 'man', which has in Peter and outside the mind a natural existence, and in the concept and in the mind an intentional existence (and which in the degree to which it is known or posited before the mind has only an ideal or rational existence).[2] It is essential to

[1]'Objectum quod intelligitur debet esse intra intellectum et intra ipsum attingi' (John of St. Thomas, *Curs. theol.*, i, P. q. 27, disp. 12, a. 7, n. 4.) 'Intellectus non intelligit nisi trahendo res ad se, et intra se considerando, non extra se inspiciendo. Et D. Thomas docet rem intellectum non posse esse rem ut ad extra, sed *ut intra*, et ut est unum cum intellectu, ut q. 9 *de Pot.* a. 5, et q. 8, a. 1, et locis infra citandis.' (*Ibid.* a. 5, n. 5.) Cp. *De Veritate*, 4, 2, ad. 7

[2]Three forms of *esse* must therefore be distinguished: the *esse naturae*, by which the thing exists outside thought, is, in itself, singular and concrete: entitative existence or as thing. The *esse intentionale*, by which the thing exists in thought in order to be known, is, in itself, abstract and universal: representative existence or as sign. Equally abstract and universal, the *esse cognitum seu objectivum*, by which the thing exists in and for thought, in the degree to which it is known, is purely ideal, and implies no real determination neither in the thing nor in the mind (unless presumptively in the degree to which the *being thought* of the object presupposes the *thinking* of the mind): ideal existence

concept to be abstract and universal.[1] It is essential to the extramental thing to be singular and concrete. The object, on the other hand, which in the thing exists with natural existence, is singular and concrete, as is proper to the thing, and which exists in the concept with intentional existence, which is abstract and universal, is indifferently one or the other.[2] It is posited in the mind in a state of abstraction and universality, which comes to it from its existence in the concept, where it is attained by the mind, but this state is not essential to it, since in the judgment, in the declaration 'Peter is a man', for example, I identify Peter and the object of thought, man.

As to the concept or mental word which I have in mind when I think 'man', it is held to be the sign of the thing, the similitude or deputy of the object, an inward end in which the object is intellectually perceived (*terminus in quo*). But let us be on our guard against that materialisation or spatialisation which language always brings in its

or as signified *reduplicative ut sic* (this existence, otherwise, is only of interest to the mind's logical reflection on itself, which is why it has not been dealt with here. On the *esse cognitum*, cp. John of St. Thomas, *Curs. theol.*, 1, P. q. 12, disp. 15, a. 3: R. Dalbiez, 'Les Sources scolastiques de la théorie cartésienne de l'être objectif', *Rev. d'hist. de la phil.*, Oct.-Dec. 1929.)

The two other forms of existence, on the other hand, are of a real or 'physical' (in the scholastic sense of the word) order: the first positing the thing in nature as divided from nothingness; the second positing its presentative form in thought and directing the mind on the thing—and being also the form of existence whereby the mind is the thing. Immaterial existence is immaterial and non-entitative, not for itself, yet real; it has this formal effect not by what the thing is (if not in the mind, by its presentative form), but by what the mind which is the thing knows; it really, physically, affects the *species* which makes known and the mind which knows It brings a tension, a stimulation to the mind, a plenitude; it makes it fecund (in the *species impressa*) or proceeds from it as it perfects itself (in the *species expressa*).

[1]Which does not, I would remark *en passant*, prevent there being a *reflex* concept, which is rightly and distinctly so, of the *singular*. Cp. John of St. Thomas, *Curs. Phil. Nat.*, iii, P. q. 10, a. 4.

[2]So considered *secundum se, seu in statu solitudinis*, nature is neither singular nor universal. Considered *secundum esse quod habet in rebus* (*esse naturae*), it is, in fact, singular. Considered *secundum esse quod habet in abstractione intellectus* (*esse intentionale* and *esse cognitum seu objectivum*) it is, in fact, universal. The whole of this doctrine supposes the real distinction (in everything which is not God) between nature and *esse*. Cp. St. Thomas, *De Ente et Essentia*, chap. 4; John of St. Thomas, *Curs. Phil.*, log. ii., P. q. 3. a. 1.

train if we are not careful. The object is by no means in the concept as a material content in a material container, it is no material thing enclosed in another; it is an immaterial 'word', omitted by the mind in explaining the object; to contain, for it, is simply and purely to know. The object exists in the concept and is attained in the concept in the sense that in proffering the concept, in the fulfilment of this intellectual production, the immanent act of intellection attains by this and immediately the object, and attains it clad in the conditions of the concept; and this is only possible because the concept is only a sign, a deputy or similitude of the object by right of the formal sign, as was pointed out above.

What does this mean, if not that the notions of deputy or similitude or image must be purified here of all those features which would belong to things coming before the eyes of the mind, like a portrait before our bodily eyes? But then, if the concept is not a thing resembling the object, what remains of it? It remains being—as existent intentionally in the soul, and so carrying the object to the ultimate degree of spirituality, as *making known* what the thing or object is by right of the term *known*. The concept and the thing make two from the point of view of entity; but as formal sign and in the line no longer of being, but of knowledge, it must be said that it and the object do not make two. The fruit of intellection in act, its content, is the intelligible object itself, but this intelligible content, which as object is set before the mind, as concept is vitally proffered by the mind, and has for its existence the act of intellection itself; as to its intelligible constitution therefore the concept is identical with the object—indeed I do not say in as much as it will be *what* is known, but exactly in as much as it is the sign and inward end *by which* the intellect becomes, in ultimate act, what it knows. It has just been pointed out that the formal sign is not something known at first which consequently leads to the knowledge of another. Now it is understood that it is something known in the very degree to which it makes known and by the act of making known. The immanent reason of the presentation of the object to the intellect in act, the concept or mental word is steeped in intellectuality in act; to be thought in act, to terminate intellection in act, is its intrinsic denomination, since it is in it that the object like the intellect achieves the ultimate act of intellectuality. But it is not as object that

it is thought and known, it is not as signified end that it is *intellectum in actu*, grasped and conpenetrated by intellection in act, it is as signifying end.[1]

Finally, the concept in its entitative function and as modification of the subject and the concept in its intentional function and as formal sign are not two distinct things (just as intentionality is not precisely a thing-in-itself, but rather a mode). These are two formal aspects of two formally distinct values of the same thing, the intentional function only applying to knowledge, the entitative function to the being of nature (on this occasion, the soul itself). As the divine essence has itself, in being intellection in pure act, the value of both *species impressa* and *species expressa* for the intelligence of the blessed, as the substance of an angel is itself the *species impressa* for its intelligence, the entity of the concept is in itself for us the formal sign of the object. As thing or entity the concept is an accident, a quality of modification of the soul[2]; but as arising in the soul as a fruit and expression of the intelligence already formed by the *species impressa*, already 'perfect',[3] and under the action

[1]Verbum est 'quiddam mente conceptum *quo* homo exprimit mentaliter *ea* de quibus cogitat'. (*Sum. theol.*, I-II, 93, 1, ad. 2.)

On the nature of the concept and its identity, with regard to intelligible constitution, with the object, *see* the long discussion in Appendix i, apropos of the criticism offered by M. D. Roland-Gosselin. It gives me pleasure to mark the agreement which J. de Tonquédec has exhibited towards my position on this important question (cp. *op. cit.* pp. 145-6).

[2]The scholastics class it among the qualities of the first kind (dispositions and habits), because it suitably disposes nature in regard to knowing (cp. John of St. Thomas, log. II, P. q. 18, a. 2). But with this difference from habitude in the ordinary sense of the word, which belongs to the subject and its dynamism, the concept comes from the side of the object, which it presents to the mind.

[3]Actuated *in actu primo* by the *species impressa*, the intelligence is the sufficing principle of its own operation. This is why Aristotle and St. Thomas call intellective action *actus perfecti*, the act of that which is already in act. 'Hujusmodi autem actio est actus perfecti, id est existentis in actu, ut dicitur in 3 *De Anima* (lect. 12).' (*Sum. theol.*, i, 18, 3, ad. 1.) The apocryphal opuscule *De Natura verbi* has a precious passage on this theme but which needs to be carefully understood: 'Prima actio ejus per speciem est formatio sui objecti, quo formato intelligit, simul tamen tempore ipse formatum est, et simul intelligit, quia ista non sunt motus de potentia ad actum, quia jam factus est intellectus in actu per speciem, *sed processus perfectus de actu in actum*, ubi non requiritur aliqua species motus.' John of St. Thomas for his part writes: 'Ex quibus patet pertinere ad ipsum intellectum, suo actu qui est intelligere, formare sibi objectum in aliqua similitudine repraesentante et intra se ponere, ibique unire per modum termini seu objecti ad quod intelligere terminatur, sicut per speciem impressam unitur ut principium

of this created participation in the intellectual power of God, of that centre of immateriality perpetually in act, the highest point of spiritual tension naturally present in us, what should be called the active intellect (*intellectus agens*), whence the intellect which knows derives all its formative energy,[1] this quality, this modification of the soul which is the

determinans intellectum ad pariendam notitiam. Ille autem actus quo formatur objectum est cognitio. *cognoscendo enim format objectum, et formando intelligit,* quia simul format, et formatum est, et intelligit. . . .' (*Curs. theol.*, i, P. q. 27, disp. 12, a. 5, n. 5). It nevertheless remains that in as much as the object is not formed in the word, the actuation of the intelligence is imperfect with regard to its end, and this is why this *processus de actu in actum*, 'perfect' in regard to the principle of intellection and as the *species impressa* has formed and actuated the intelligence, at the same time in itself constitutes a *fieri*, where, in the very instant that it is made, it *perfects* the actuation of the intelligence with regard to its end in producing the word and in forming by it the object. Moreover, the word itself is not perfect with us at the first stroke; rather on the contrary, it is ceaselessly retaken up, progressively elaborated and ripened in the process of discourse. (Cp. St. Thomas, *In Joann.* 1, 1.) 'Verbum debet exprimere rem ut vitaliter attactam ab ipsa cognitione, ergo non solum ut intelligibilem in actu primo, sed ut intellectam in actu secundo. . . . Aliquando procedit verbum ex necessitate in indigentia, quia objectum ipsum non sufficienter explicatum, et evolutum, et ita proceditur ab imperfecto ad perfectum, sicut in nobis fit per discursum et cogitationem, et sic praecedit verbum intelligere perfectum, sed procedit ab intelligere imperfecto et in fieri; et generaliter quandocumque formatur verbum, ipsum fieri verbi etiam est intelligere in fieri. Aliquando vero procedit verbum ex abundantia intelligendi. . . .' (John of St. Thomas, *Curs. Phil., De Anima*, q. 11, a. 1.)

Causae ad invicem sunt causae in diverso genere. Without there being the least priority in time on one side or the other, the concept is at once produced by intellection in act and a condition of it (on the side of the object). It is the intelligence itself which actualises itself *in actu ultimo* in forming it.

[1]It would be in effect erroneous to think that the rôle of the *intellectus agens* stops at the formation of the *species impressa*. St. Thomas had a much higher idea of it, whose metaphysical importance is often misunderstood. The active intellect is the signature in us of the divine light. While the force or intellectual light of an angel and its vitality are identically one and the same, with us there is a double action. The knowing intelligence, which is at first void of forms, has in itself the vitality characteristic of knowledge, is capable in itself of vitally becoming the object. Nevertheless the virtue which it thus possesses is only actualised by the effect of an intellectuality ceaselessly in act which can alone account for the process of immaterialisation or intellectualisation of which we are the authors, and which is already in itself at the supreme degree of actuation, but without an object, and in order to illuminate, not to become. The *intellectus agens* is thus the *activator* of the intelligence, its light, the core of all its force: 'principium activum proprium, per quod efficiamur intelligentes in actu. . . . Philosophus dicit, ut quod intellectus agens est ut habitus quidam et lumen . . . et in Psalmis dicitur: signatum est super nos lumen vultus tui' (St. Thomas, q. disp. *De Anima*; cp. *De Veritate*.)

concept has (like all the objectifying forms) the privilege of transcending the function of entitative information exercised by it, and of being present in the faculty like a spirit. It is from the intelligence itself, from the intelligence in living act, that it holds this privilege, as though the intelligence gathered all its own spirituality into this one active point, there to bring it to a maximum. Thus the concept is in the intelligence not only entitatively or as a formative form, but also as a spiritual form not absorbed in the actuation of a subject in order to constitute with it a *tertium quid*, but on the contrary as actuating or rather terminating the intellect *per modo intentionale* and in the line of knowledge, in the very degree to which it expresses and volatilises the object.

On the other hand, this form which the intelligence, primarily put in act by the *species impressa*, engenders in itself through the discontinuous light of the active intellect, is truly, as I have said, the pure similitude or spiritual ignition of the object, or rather the object itself made mind,[1] and *intentionally* present, not as object, but as sign: because its entire specification comes from the object, the intelligence which illumines and that which knows being for it equally indeterminate. Thus the concept (in its intentional function) and the object are indiscernible,

And again: 'cum erit anima a corpore separata, per intellectum possibilem recipiet species effluentes a substantiis superioribus, et *per intellectum agentem habebit virtutem ad intelligendum.*' (*Ibid.*) And in the *Contra Gent.*, III, 15: 'Cum anima a corpore tali fuerit separata, intellectus possibilis intelligere poterit ea quae sunt secundum se intelligibilia, scilicet substantias separatas, *per lumen intellectus agentis*, quod est similitudo in anima intellectualis luminis quod est in substantiis separatis.' The conclusion can be drawn from this that, in the state of union with the body, it is under the actuation of the *intellectus agens* that the intelligence, already made fruitful by it by means of phantasmata, and formed in the first instance by the *species impressa*, produces in itself the *species expressa* and actuates itself *in actu ultimo*.

[1]If it is better to know than to love inferior things (*Sum. theol.*, I, 82, 3), it is because they exist in the mind in a higher mode than their own. This is why 'in a general way, material realities are more efficaciously known *per similitudinem* than they would be *per essentiam*' (M. Roland-Gosselin, *art. cit.*) Cp. *De Veritate*, 3, 1, ad. 1, 2; *De Pot.*, 7, 7, ad. 2. These passages (which refer to God's knowledge of things in his essence) must nevertheless be understood in a very formal sense. It is from the standpoint of the immateriality of the *esse* that material things are better known *per speciem* than they would be by their essence, supposing that the latter could be, despite its materiality, a medium of knowledge. It is clear that from other standpoints we know much less of things in knowing them *per speciem* than if we were able to know them in their essence. The essence of God is itself 'supereminens similitudo rerum'.

save as the one makes known and the other is known, the one is a sign and the other the signified, and that the one exists only in the mind and the other in the mind and in the thing.

By this we comprehend that the intuition proper to the intelligence lives (at the lowest stage) in abstract perception working by means of the concept,[1] and that for the things which fall in the first place within the grasp of our intelligence this perception may be absolutely infallible, giving us those first principles, known by themselves, which direct the whole development of apprehension. And yet—because our intelligence must so form its objects for and by itself, and in the degree to which it advances in knowledge, actively draw from the same received presentative form (*species impressa*) those varied concepts which disconnect the aspects of one intelligible nucleus according to the diverse directions of attention prevailing in the mind (for things are not only brought in the *species impressa* to intelligibility in act, they are also, in the heart of the intelligence, inventoried and debited in multifarious ways in order to be brought in the concept to the final degree of intellection in act)—it is equally comprehensible that the work of concepts may be complicated and tortuous, progressing from the indeterminate and generic to the determined, admits a large measure of artificial construction, causing us often to take wholly indirect views of things or 'confused, partial, derived or negative'[2] ones, and in short, runs the risk of error in the degree to which it advances, and that not only in facts of judgment or reasoning, but also in the very facts of abstract perception. For when our intelligence is already occupied by these forms, the new concepts which it engenders, and whose formation does not only depend on the thing, but also on the already possessed objects by means of which the new object is set before the mind, may well be formed awry. Doubtless, when these are not pseudo-concepts presenting to the mind a complex of contradictory elements (*e.g.* the greatest whole number or the most perfect world), they always present to the mind some aspect of the real—or some rational being founded on the real—but one which can be so arbitrarily reconstructed and cut about that the product is meagre,

[1]Cp. J. de Tonquédec, *op. cit.* He points out that Aristotle in this connection used the word '*ὄψις*, view', *Nic. Eth.*, I, c. 5 (al. 4), cp. *De Anima*, III, c. 4.

[2]M. D. Roland-Gosselin, *Bulletin thomiste*, Jan. 1928.

if not illusory. Thus we see certain concepts, made use of by science truly for long enough, and which are certainly not absurd, vanish for ever, leaving no trace: the ancient concepts of chemistry with its phlogistic,[1] for example; we can find in the sociology which stems from Comte and in modern psychology concepts equally perishable.

CERTAIN IDEALIST POSITIONS AND ATTEMPTED REACTIONS

If now we return to our diagram, it is easy to pick out the classically significant moments for modern idealism. The latter is characterised, truly we must admit, by a radical misunderstanding of the very nature of the idea itself, and of the intentional function of knowledge, which is henceforth conceived in the terms of an event in the material order. Descartes clearly perceived that the known object is known within thought; his capital error was the separation of the *object* and the *thing*, in the belief that the object is inside thought not as an intelligible made present in the mind by an immaterial form, with which the mind identifies itself intentionally, but like an imprint stamped on wax. Thereby the intentional function disappears, the known object becomes something belonging to thought, an imprint or portrait which is innate, and intellection stops at the idea (regarded as an instrumental sign). This portrait-idea, idea-thing, has for double a thing which it resembles, but which is not itself attained to by the act of intellection. Here, therefore, are two separated *quods*, and there is need of the divine veracity to assure us that behind the *quod* 'idea' to which we attain there rightly is a *quod* 'thing' which corresponds to it: thought cannot achieve it by itself.[2]

[1]See, on this point, certain interesting comments in E. Meyerson, *De l'explication dans les sciences*, vol. II.

[2]Certain flaws in scholasticism (*e.g.* the Vasquezian notion of the *conceptus objectivus*, pointed out in P. Geny's *Critica* and in my *Réflexions sur l'intelligence*, and the Scotist notion of the *esse objectivum*, pointed out by R. Dalbiez, *art. cit. supra*) prepared the way for this great cartesian error. The latter is vigorously denounced by L. Noël (*op. cit.*). 'Few scholastics, if any,' R. Kremer has written, on his side ,'would maintain that what we know directly is only a copy, a subjective print of the object. In any case, for the ancients and St. Thomas, it is indubitable that we know, not the representations of things, but things themselves (*vide e.g. Sum. theol.*, i, q. 85, a. 2); and to know is to have this object for the normal end of intentional activity. The subjective intermediary which

Thus the idea becomes, as Locke said, the immediate object of thought.

Berkeley perceived, not without reason, that under these conditions there is no legitimate reason for preserving this thing which is the double of the idea, and he believed he was returning to the evidence of commonsense when he affirmed that we have an immediate perception of objects, but that these objects are our ideas.

Finally Kant, admitting anew, like Descartes, a *thing* (*das Ding-an-sich*) hidden behind the *object*, but regarding it as constructed by the activity of the mind according to its *a priori* laws, arrested our knowledge at that of so-constructed phenomena, the thing in itself remaining unknowable.

All these philosophers equally neglect the rightful nature of knowledge. They envisage the work of knowledge on the plan of material activities, holding that an activity *ad extra* which is essentially immanent. For cartesian innateness, thought is essentially passive; it is matter which has received an imprint: it is equally so for the empiricists, who regard this imprint as stamped on thought not by God, but by things. Kant wished to restore the activity of thought, but always in accord with the same type of a transitive or productive activity imposing a form on matter: in this case the form belongs to the side of the mind: concepts are empty forms, and it is sensible matter which will be subsumed and organised by these forms. The inexhaustibility of the thing as subject having been thus transferred, by virtue of the 'Copernican principle', from thought as generative to the subject, the former appears as an indefinite process for the manufacture of objects.

Indeed, the intentional function having disappeared, knowledge becomes perfectly unintelligible. For in the entitative order it is clear that a thing cannot be another than what it is. Our idealists think it absurd, as they say, to look for something *outside* thought. Everything is absorbed into it, and henceforward knowledge is its self-development in the

serves to make things known is not known by us in the first instance; its existence manifestly depending on that primary direct knowledge, This is, in my opinion, the essential thesis of "immediate" or "direct realism".' (*Art. cit.*, *Philosophia Perennis*, vol. II.) On Descartes and scholasticism, see also E. Gilson, *Etudes sur le rôle de la pensée médiévale dans la formation du système cartésien*, Paris, 1930, and J. Maritain, *Le Songe de Descartes*, Paris, 1932.

same way as an animal or a plant, a lichen or a polypus, vegetates and grows.

As to the present-day reactions against idealism, reactions which certainly in my eyes appear seriously incomplete, they are seen under two principal aspects. On the one hand the neo-realist school (Perry, Spaulding, Marvin, Montague, etc.) by insisting on the immanence of the thing in knowledge seem to misconceive the whole distinction between *thing* and *object*, and to enclose the extra-mental thing itself in thought, which has all the air of a contradiction.

On the other hand, a more important group—to which it is possible despite their differences, to attach at once thinkers like Russell and Whitehead, and those who have chosen the name of 'critical realists' (Strong, Sellars, Santayana, etc.) as well as the German phenomenologists—stop knowledge at an *object* which is no longer a product of the mind, as it is for the idealists, but rather an *essence*, an *irreducible datum*, an intelligible independent of the mind or at least proffered to it by an intuition. But this object-essence remains for them, as for Kant and the whole modern tradition, separated from the transobjective subject or extramental thing. The latter is only hypothetical and enigmatic, and indeed, by the principle of economy and Occam's razor, it would be better to pass it by. Or indeed it is held 'absurd'; and, remaining without observing it in a certain dependence on Hegel, against that panlogism against which at bottom they are reacting, but from which they have learnt to confound logic and ontology, they endeavour like Hegel to re-absorb the thing into the idea, and characteristics are attributed to the object, taken in entire separation from any transobjective subject, which only in reality come from thence: no longer that reality in itself which Hegel accorded to the Idea, but unproducibility by the mind, and irreducible consistency of essence.

This process makes of the object, which is neither an aspect of a thing nor a modification of the mind, something entirely irrational, and knowledge itself an entirely unintelligible process, neither vitally immanent nor productive; which, moreover, if it is neither productive nor transformative as Kant wished it to be, thereby remains rightly without an end: not in the very true sense that knowledge continues to penetrate endlessly into things in adding truth to truth, but in the sense that,

only laying hold on a thing by rules, it can only, despite the ephemeral constructions reared by the theoreticians of this idealism *redivivus*, endless over-reach itself by substituting one truth for another, without ever being possessed of any one.

THE UNIVERSE OF EXISTENCE AND THAT OF INTELLIGIBILITY

Everything which has been said of the concept implies the aristotelian theory of *abstraction*, according to which the intelligence actively draws from sensible data, from things as they are first of all attained by the senses, a content in which intelligibility is potentially found—an operation which is only possible by leaving out all those individualising characteristics which are found in the thing as such. It is this intelligibility that the intellect actualises, and proffers in the concept, and is the object known by it. If one thus distinguishes, as Aristotle and St. Thomas did, the *thing* and the *object*, but without separating them, and, while maintaining their unity, what comes from the thing and what comes from the mind are considered apart in knowledge, then it is comprehensible how, from the things which exist outside the mind, which make up what we may call the universe of existence, the mind draws a world of abstract conceptual objects and universals, which may be called the universe of intelligibility or of human knowledge, which, on the one side, in order that it may be known is detached from the universe of existence, and, on the other hand, is identified with it for its subsistence. Thus it is most certainly the things of the world or existence which we attain to in attaining to the world of intelligibility, but neither in their singularity nor in the contingence of the flux of their singular eventualities. Our senses so attain to them: science only attains to them directly in the natures and universal determinations which give the grounds for their intelligible necessities. And it is in returning, as Cajetan says in a passage quoted above,[1] by the ministration of the senses, to singular and contingent things that the universal is realised; in the re-integration of the intelligible in the existent, whether in the sensibly existent, or in the spiritually so, that it achieves its grasp of the

[1]Cajetan, *In Anal. Post.*, i, 1, c. 8. *Vide supra*, chap. i, p. 35.

real.[1] (The one, the sensibly existent, is the origin of all our knowledge: the other, the mentally existent, may be reflectively experienced when the mind knows itself by its acts, or may be attained to by reasoning when it knows God and the spiritual world—by analogy with sensible existence, with which our mind must still be in relation in some degree even in the knowledge of the supra-sensible.)

It must not be forgotten that if, in effect, the singular as such is not the object of science, and is not directly seizable by the human intelligence, it is nevertheless indirectly seizable, in reflex concepts; and it is in it (as transobjective subject) that science ends, completing the circle of its intelligible motion. This is why we have need of the senses, not only to draw from thence our ideas of things, but for the resolution of the judgment, which in one way or another (and even when the judgment is not verified by the sensible)[2] must needs take place in the senses, *sicut extremo et ultimo, ad quod resolutio fiat*,[3] because judgment is concerned with (actual or possible) existence, and 'sensible and visible things' are for us the paradigm of the existent.

For St. Thomas a science of nature which did not return to the singular real would be not science, but a dream. And it is the same, analogically, for metaphysics, which also returns to the singular, and for mathematics, in so far at least as it comes back to an intuitively constructible singular, where its fundamental entities have an imaginable existence.[4] In effect, 'the end in which the knowledge of nature is achieved is the

[1]Even in mathematics, which makes an abstraction of the order of existence, there must be a return to the *imaginably* existent, *i.e.* the constructibility of imaginative intuition, at least indirectly or by analogy and in relation to directly constructible entities. Thus non-euclidian geometries, for example, definitely keep their full logical security from the possibility of our ability to construct euclidian models of them, the intrinsic coherence (*i.e.* exemption from internal contradiction) of euclidian entities being itself assured by their existence for the imagination.

[2]See *supra*, chap. 1, pp. 67-71.

[3]St. Thomas, *De Veritate*, 12, 3, ad. 3. It is notable that the judgment, the intuition of the senses, and also the appetite are all three of them related, though in very differing fashions, to the *esse rerum*: the judgment as declaring how the thing attained in our notions compares with this (actual or possible) *esse*: sensible intuition as so attaining the sensibly existent in act; the appetite as bringing the subject to bear on the thing as it exists in act.

[4]See note 1, *supra*.

thing attained by the senses, above all by that of sight. As the cutler does not seek for further knowledge of the knife than is required by the work he has in hand, that is, to make this particular knife, in the same way the wise man only seeks to know the nature of a stone or of a horse in order to find the reason of the things which the senses are aware of: and as the judgment of the artisan of the knife would be deficient if he ignored the work in hand, the judgment of the scholar would be equally so if he ignored the evidence of the senses. On the other hand, all that is known by our intelligence (even mathematical beings and metaphysical realities), in the present state of the soul's union with the body, is known in some relation to the sensible things of nature. Thus it is impossible that the judgment of our intellect should not be deficient when the exterior senses are closed up by sleep.'[1]

It is indeed not true to say that there is only one world of intelligibility drawn by abstraction by us from the world of existence. There are as many universes of intelligibility as there are degrees of materialisation or otherwise in the object.

RATIONAL BEING

The mind does not only abstract from the sensible those intelligible natures which are realised in the world of existence: it does not only set before itself those natures or the notions which are born from such, in consideration of the world of existence, all of which are able to exist: in brief, it does not only conceive of real beings, *i.e.* beings capable of existence, it can also construct in the image of such natures, *ad instar entis*, objects of thought *incapable of existing* outside the mind (*e.g.* gender and species, the subject, the predicate, etc.) which the ancients called rational beings, *entia rationis*.

These objects of thought, which do not merit the name of essences, for essence is the capacity to exist (*esse*),[2] are not wholly created by the mind. They are made up of elements which are essences or intelligible aspects first of all grasped in things. For example, the object of thought

[1] *Sum. theol.*, i, 84, 8. Cp. *De Veritate*, 12, 3, ad. 2.

[2] 'Essentia dicitur secundum quod eam et in ea res habet esse' (St. Thomas, *De Ente et Essentia*, c. 1). 'Non habet (ens rationis) essentiam aliquam.' (Cajetan, *Commentary*, c. 1, q. 1.)

'nothingness' is made up of 'being' to which is joined the notion of negation. In themselves these are only non-essences (*negations* or *privations*)—a chimera is a non-being conceived in the likeness of an animal—or *relations*, which although they indubitably cannot exist outside the mind, have nevertheless the same intelligible content and definition (προς τί) as real relations. Such objects are not things, nevertheless they are not *pure objects* separated from any transobjective subject like the 'phenomena' of the moderns,[1] for they are conceived in the image of such subjects (a preliminary knowledge of which they presuppose) and they are constructed from elements drawn from the real: far from being separated from these they are thus doubly bound up with them. The (actual or possible) real remains their foundation and their occasion; from thence they draw all their objective consistency. If we can make judgments about them, it is because we treat them *as if* they were things: 'ratio de eis (non entibus) negotiatur quasi de quibusdem entibus, dum de eis affirmat vel negat aliquid.'[2] And if the mind can be true or false with regard to them, it is by an indirect connection with the reality which makes their foundation and occasion. If you suppress the nature of a circle or that of a square, you cannot say that a square circle is unthinkable; if you suppress the whole of apprehensible nature in its

[1]Let it be added that they are *made* by the mind before being *known* by it as rational beings. I employ the ideas of blindness or of death to signify that a man has lost his sight or ceased to live, long before knowing these rational beings as such, or perceiving that I am thinking of death or blindness as if they were things. From this angle '*esse est percipi seu intelligi*' is not even true of a rational being: it exists in the mind before being known: and without doubt (and that is how the idealist formula is applicable to rational being) this existence in the mind is itself only an *esse objectivum seu cognitum*, but which refers to the *cognosci* of the real elements with which the rational being has been constructed and at the instance of which it is conceived, not to the *cognosci* of the rational being as such. It is only possible to say purely and simply '*esse est intelligi* (ipsum intelligi intrinsecum)' of the mental concept. 'Cognitio formans ens rationis non est reflexa respiciens ipsum tamquam rem cognitam ut quod, sed illa cognitio directa, quae *ipsum non ens reale, vel quod realiter relativum non est*, denominat cognitum ad instar entis vel relationis realis. . . . Non . . . cognitio reflexa quae praecise ens rationis denominatur cognitum ut quod, sed cognitio directa qua denominatur cognitum ad instar entis id quod non est, formaliter et per se primo format ens rationis.' (John of St. Thomas, log. ii, P. q. 2, a. 4, *dico ultimo*.)

[2]St. Thomas, *In Metaph.*, book iv, lect. 1, n. 540.

various degrees of determination, you cannot say that the species is a portion of a genus.

If, as the critical realism of Aristotle and St. Thomas teaches, extramental intelligible being is the first object of the intellect, and if the existing real is first of all given us through the senses, we can be certain that our first intellectual apprehensions do not bear upon rational beings. *Ab actu ad posse valet consecutio*: since there are ants the ant is possible. And as to the possibility of being in general, it is certified for us, independently even (by right) of all actual perception of existence,[1] by the very first intuitive judgment of our minds, which precisely affirms that being is not not-being.[2] But how can a philosophy which only starts from thought, and according to which the mind attains at first only to itself, be sure that all the objects of our thought are not rational beings? This is where the malign Genius plants his barb: the problem which was crucial for Descartes (and for Leibnitz). By that violent retorsion, that living contradiction which is in the heart of idealism, how is it possible finally to avoid the question whether being itself, in the image of which rational being is made by thought, and which in the first instance is conceived by the intellect as a (possible) reality—whether being itself is not a rational being?

God does not make rational beings; it is a mark of the weakness of our abstract intelligence that in so many cases it has no power to conform itself to reality except by constructing these rational beings. We can only grasp the wounds of being in conceiving of them in the image of being.[3] 'Tunc efficitur ens rationis, quando intellectus nititur

[1]Cp. *supra*, p. 111, note 1.

[2]Thus 'we see at once that it is not only inconceivable, but *really* impossible for a thing at once to be and not be And we thus affirm already the objective and ontological value of the principle of contradiction *before making any judgment on existence*, before reflecting that this primary affirmation presupposes ideas, and before *verifying* that these ideas come to us, by abstraction, from the sensible things laid hold of by our senses.' (R. Garrigou-Lagrange, *art. cit.*)

[3]And we can only perceive relations in forming a separate concept of them, abstracted from the subject where they have or have not their foundation. Being in itself only one of a pair, one, if I may put it so, among things, not implying in its notion either the exigence of existing in itself or of existing in something else, but a pure connection between this and that, relation is an intelligible object which does not necessarily in itself imply ontological grounds, and is only real by reason of its basis in its

apprehendere quod non est, et ideo fingit illud, ac si ens esset.'[1] Let it be noted here that if there are rational beings (like the square circle, the greatest possible whole number, the chimera, the best of all possible worlds) which cannot exist because they are intrinsically contradictory —they are the thieves and forgers among rational beings—there are, on the other hand, numerous others, honest rational beings, which cannot exist, not because they are composed of impossible characteristics, but because their place in existence is incompatible with one of their objective features. The notion of the predicate is not absurd, but it would be absurd to attribute an existence outside the mind to a predicate, which is defined by a certain function which a thing possesses in so far as it is known.

Implicit in the notion of them as some relation to something real attained by the mind is, we say that these rational beings are *founded on reality*. It thus happens that a rational being, which cannot exist outside the mind as it is itself presented to the mind, *i.e.* as a being, can very clearly show, by reason of its foundation on the real, what exists outside the mind, and it is indeed only constructed for that end. To say that Neptune is observed by an astronomer is to posit a rational relation in Neptune, but it is certainly real to say that the astronomer observes Neptune. Evil is a rational being in the sense that to think of the bankruptcy of good which there must be in a subject I am forced to conceive of it as if it were a thing. But evil exists most really and positively in the sense that the subject in question is thereby mutilated or deprived of something which should be vitally in him. The physician does not find deafness in the ear and he does not look for it in order to destroy it as he would a colony of bacteria, nevertheless it is a very real thing to be

subject. 'Quia ex proprio conceptu est *ad aliud*,' John of St. Thomas profoundly says, 'requirit fundamentum, non solum ut existat, sed etiam *ut sit capax existendi, id est ut sit entitas realis*.' (Log. II, P. q. 17, a. 2.) Abstractive understanding can thus conceive of this object of thought as well where it has a real foundation in the subject connected with one term (the relation is then real, thus the ship really draws away from the shore) as where it has no real foundation in the subject (if there is then for all that a real foundation, or a rational relation founded on the real, as when it is said that the shore draws back from the ship). On the conditions necessary for a relation to be real, see John of St. Thomas, *art. cit.*

[1]Oposc. (apocr.), *De natura generis*, c. 3.

deprived of the sense of hearing: the rational being 'deafness' is founded on a very real derangement in the internal organism of the ear.

Moreover it is in very differing degrees that such and such an object of thought can be affected by the note of unreality characteristic of rational being. Evil and deafness, while all the while referring to the very real fact that a subject lacks a good which should be there, are, in so far as they are objects set before the mind like a substance or a quality, not-beings. A geometric surface is a possible being (if it is a euclidian surface) affected by a rational condition which prevents it existing in nature with that absolute absence of density which its definition implies: movement is *par excellence* the reality of sensible nature, but we can only conceive of it by retaining in the memory that part of it which has already lapsed, so that 'if the soul did not exist' time and movement 'would not be',[1] *i.e.* with that unreal consistency (rational condition) with which our apprehension endows them.[2] It is very important, as we shall see in the next chapter, to consider the part played in our knowledge by these rational beings founded *in re*.

[1] '*Ἀδύνατον εἶναι χρόνον ψυχῆς μὴ οὔσης. . . .*' (Aristotle, *Phys.*, IV, 14, 223-6.) See J. Maritain, *Philosophie Bergsonienne*, and *Theonas*.

[2] In the two latter cases the mind has 'completed' the real with some unrealisable element, and it is only for this reason (*completive*) that the object conceived by it is an *ens rationis*. Cp. Cajetan, *In I*, 28, 1, *Ad primum vero dubium*; St. Thomas, *In I Sent.*, dist. 19, q. 5, a. 1.

CHAPTER III

OUR KNOWLEDGE OF SENSIBLE NATURE

I. THE MAJOR TYPES OF KNOWLEDGE

I HAVE SAID that science—in the precise though very general sense of knowledge in a perfect and irrefragable mode—attains to those intelligible universes immanent in the universe of existence; but these it considers apart, in order to impress them in some way on the universe of existence. These universes of understanding are made up of abstract natures (grasped in themselves or their substitutes), of laws and necessary relations, while the universe of existence is a universe of individuals and events. In this universe there is contingence and hazard, an irreversible flux of singular formations in interaction, none of which ever reappear again in exactly that form; there is liberty. This is the universe in which we live, in the midst of particular and contingent circumstances. It is absurd to imagine that it can ever be wholly under the dominion of science, for all these features which I have enumerated are not, as such, objects for science, in the precise sense of the word. The knowledge of the world of existence, exactly in the degree to which it is concrete and existing, belongs, from the point of view of speculation, to experience and to history, to the certitudes and perceptions of memory, the constatation of facts, to conjecture and well-founded opinion, in short, to the work of the intelligence when occupied with the senses: from the practical point of view, it belongs to art, to prudence, to knowledge by connaturality. Science, apprehension in the strict sense of the word, only considers those intelligible necessities which this world invests with its reality. Each of our types of knowledge considers in the world its own universe of intelligible necessities and that alone. Nevertheless there is a supreme form of knowledge, a prime-knowledge, a knowledge of first principles, which can consider all these differing universes together, not in order to substitute a particular form of knowledge which it ap-

plies to each in turn, but in order to comprehend its own form of apprehension, to defend and justify its principles, and thus to establish unity.

What then, at least in their most general types, are these diverse universes of intelligibility which our intellect sets before itself when it endeavours to disengage itself from the senses? The aristotelian tradition which I have already recalled,[1] recognised three principal types, which correspond to what Thomists call the three degrees of abstraction: the universe of the principles and laws of mobile and sensible nature, the world of PHYSICA: the universe of quantity as such, the world of MATHEMATICA; the universe of being as being, and of intelligible objects which, as such, do not require matter as a condition of their realisation, the world of METAPHYSICA.

Is it desired to give to these three degrees of abstraction, names more in conformity with the habits of the modern didactic vocabulary? We can say, making use of the terminology proposed in chap. i that if the assemblage of what the knowing subject can attain to in the transobjective subjects submitted to the grasp of its intelligence (*i.e.* which proffer themselves to it in order to be turned into its objects),[2] constitutes in a general way the *transobjective intelligible*,[3] the first zone with which the human intellect is in relation in this vast totality, is the universe of those objects which can only be realised in sensible or empiric existence, what we may call the universe of the *sensibly real*. How is it possible to surpass this universe? Either in rightly escaping from the real and the renunciation of the endeavour to co-ordinate knowledge with that supreme value which is existence apart from the mind, *i.e.* by application to objects which (if they are realisable) can only be realised in sensible existence, but which are conceived of without relation to existence, as it is in the second zone of transobjective intelligibility, the universe of the *preter-real*, the universe of the mathematician: or by rising beyond the sensible, in application to objects which are conceived in relation to that supreme value of extra-mental existence, but which are realised in a non-sensory, non-empiric existence: this is the

[1] Cp. chap. i, pp. 44-7.

[2] These subjects which are proportionate (connatural) to the human intellect are corporeal and sensible things.

[3] In the didactic terminology proposed here the word 'intelligible' is taken in the sense of intelligible *to us*.

third zone of transobjective intelligibility, the universe of the *trans-sensible* —the universe of the metaphysician—which opens out into the world of the (to us) trans-intelligible, which can only be known by analogy.

These three general types of understanding belong to the order of speculative knowledge.

If it is a question of the order of practical knowledge, then, from the heights of metaphysical understanding, the mind returns towards the world of existence as such, and comes, by the stages of moral philosophy and the practical sciences which are its continuation, then of prudence, finally to the point of immediate contact with the singular action requiring regulation. This practical order, however, is not in this present instant, our theme.[1]

In the speculative order, metaphysics is that supreme and master-form of knowledge which was referred to above. It is possible to ask with Kant if metaphysics can be a science (to which I answer, Yes), or with Maine de Biran and Bergson if it is in itself an experimental science (to which my answer is, No). In any case, no other form of knowledge, in particular none of the experimental sciences share with metaphysics the universe of the trans-sensible, or the third degree of abstraction. Inversely, neither philosophy or any ontological form of knowledge shares with mathematics the universe of the preter-real, or the second degree of abstraction.

On the contrary, in the first degree of abstraction we find two differing forms of understanding, one of an ontological order, the *philosophy of nature*, one of an empiriological order, the *experimental sciences* ('Science' κατ' ἐξοχήν in modern terms), which share out among themselves the sensible and mobile universe. Thus it is in this degree that we encounter in its most significant form the problem, or perhaps is it necessary to say, the conflict, of science and philosophy. We have already taken cognisance of this problem, as it first of all presents itself to reflection, *i.e.* from the primarily methodological standpoint of the theoretician of the sciences. Now we shall endeavour to penetrate it from the point of view of critical philosophy. For this it is necessary to return to the consideration of physico-mathematical science, in order to examine afresh this queen and goddess of the experimental sciences.

[1]This is considered in chapter vii.

MODERN PHYSICS CONSIDERED IN ITS GENERAL EPISTEMOLOGICAL FORM

Such a science, we have seen,[1] appears first of all as a mathematisation of the sensible; claiming from induction well-founded empiric data, but in order to subject these to a form of deduction and a rule of explication which are of a mathematical order, it belongs to that epistemological type which the ancients called 'intermediary sciences' (*scientiae mediae*), sciences which overlap the borders of physics and mathematics, which are materially physical and formally mathematical so that they have at once more affinity with mathematics than physics in their laws of explications, and are in the end by which they verify their judgments, more physical than mathematical.[2]

One primary point must here again be made clear, which has already furnished a theme in the chapter consecrated to scientific experience: it is not the nature of physical causes considered in itself which forms the object of physico-mathematical research. Physico-mathematics works in the terms of the physical real, but in order to envisage them from the formal standpoint of mathematics, and of mathematical laws which connect together the measurements collected by our technical instruments from nature. All its concepts are resolved in the measurable. And what verifies the deductive synthesis which it erects is simply the coincidence of its numeric results with the measurements given by experiment; it does not follow that the mathematical beings which intervene in this synthesis represent determinatively real causes and entities which are like the ontological articulations of the world of sensible nature.[3] Physical theory is verified *en bloc*, by means of the correspondence established between the system of signs which it employs and the measurable data which have been recognised by experiment.

But a second point needs also to be signalised, which relates to the observation I have just recalled, the point that physico-mathematical knowledge, while all the time taking its formal texture from the mathematical order, nevertheless remains, in the end to which it is directed, more physical than mathematical: and ontological pre-occupations

[1] Cp. *supra*, chap. i, pp. 52-6. [2] Cp. *ibid.*

[3] Cp. *supra*, chap. 1, pp. 76-7.

enter obliquely into it. Without constituting a science of physical being as such, it *obliquely* admits ontological values.

The system of mathematical relations which it seeks to establish between sensible phenomena, and which constitutes its highest formal object, does not in itself sufficiently satisfy or stimulate the mind of the scientist. His interest is directed towards the physically real. By reason of the reality on which his science is founded and towards which it leads, of the invincibly ontological tendency of the human mind, and the pressure exercised on all sides, despite himself, on him by the principle of causality, he is necessarily led to integrate in his mathematical deductions—in the very domain of his own science—into his formally mathematical explanation of observed appearances, a system of principles and causes of an (ontologically) physical order which he has built up anew for that end. (In the same way we often find, in the initial principle of a new theory, the intuition of some explanatory entity which is physically conceivable.)[1] And thus such a science admits of a relation with real being, not only considered as the inexhaustible source of obtainable measurements, but also as the foundation for those reconstructions of which I have just spoken.

One thing must be particularly observed: the so constructed entities may be real or rational beings—to him the point is entirely indifferent. It is for the philosopher, if he can, to draw any such distinction between the diverse entities set in action by the physicist. The physicist himself is not troubled by any such question, for all that is important to him is the

[1]These mathematical manipulations bring certain consequences in their train, to which M. Emile Picard has rightly drawn attention. 'If it is asked to what the wave-theories of Fresnel are attached, it is necessary to reply, and we here touch on a point which is capital for scientific philosophy—to a system of *differential equations*. Now these, as is too often forgotten, have only been formed, starting from the molecular conception of the ether-medium, by the making of numberless hypotheses on the relations of this ether with ponderable matter, and in passing from discontinuity to continuity so as to obtain these differential equations, which have moreover been reduced, in order to escape inextricable analytic difficulties, to linear form, as in so many of the questions in mathematical physics. More or less analogous conditions present themselves elsewhere and, under these conditions, it is comprehensible how difficult it is to definitely condemn the initial conditions of a theory.' (E. Picard, *Un coup d'œil sur l'histoire des sciences et des théories physiques*, a lecture, delivered to the Académie des Sciences, Dec. 16th, 1929.)

explicative value of these entities as functions of the system of equations of physical theory. So that his ontological appetite is as well, if not better, satisfied by rational as by real beings.

It is moreover possible that he will be shocked to hear the philosopher speaking in such a way: for a vast misunderstanding rises from the fact that the two attach a different meaning to the word 'real'. The philosopher opposes real being and rational being in the critical and logical sense which I have here explained, and it is very important to him to discover to which of these two categories the entities with which he is dealing belong. This opposition and this investigation are alike uninteresting to the physicist as such; more, he ignores them. And he assumes, on condition that they are defined by measuring operations which are at least theoretically realisable, that the entities of which he makes use are real, *i.e.* that they express in an authentically physical way the real bearing of nature. 'I entirely believe', replies the philosopher, 'that they have been made for that, but that is only more manifestly the proof that they are *entia rationis*'. The physicist immediately adds at that, as though to contradict his colleague, that these real entities are only 'shadows' or illusions, and that it would be ridiculous to ask of them anything concerning the essential nature of matter. . . .

REAL BEING AND RATIONAL BEING IN PHYSICO-MATHEMATICAL KNOWLEDGE

This is a typical instance of the important part, indicated at the end of the preceding chapter, played by rational beings in human knowledge. Because rational being—the order which is maintained by our conceptual objects taken exactly as known, *i.e.* according to the life which they lead in our mind—because rational being constitutes the specific object of logic (that is the privilege of that science), we are tempted to believe that these *entia rationis* only play a part in logic: a grave error indeed. Already, in general comprehension, rational beings are made use of at every instant: it is so, for example, every time we say '*Evil* has triumphed in his soul', or 'he is a victim of *deafness*', or 'the sun *rises*', for *evil* and *deafness* are privations, not essences capable of subsistence, nor does the sun mount in the sky. Mathematics is constantly creating rational beings, such as an irrational number, imaginary num-

ber, transfinite number, outline-spaces, etc.[1] And it is obvious that a form of knowledge of the physically real which does not scrutinise in themselves, in their own physical or ontological reality, its causes and essences, but which reconstructs this reality purely from the point of view of the relations of measurement which it contains and according to the exigencies of mathematical deduction in the most generalised form possible, will necessarily make use of a great number of rational beings as its indispensable auxiliaries. Among the entities which enable the physicist to think out his numerical records in use under the present conditions of physical observation, they will be of every kind, from the multitude of more or less elaborated *entia rationis* which only respond to experimental authentifications and which translate conceptually the observable causations and structures of the real,[2] to those entities, such as the atom or the electron, which appear, in what is concerned with the question *an sit*, as realities (something exists which the words *atom* or *electron* determinatively enclose), and, in what is concerned with the question *quid sit*, as images which are not only approximations to, but symbolical of primordial parts of the spatio-temporal organisation of matter (we may say that they are symbolic reconstruction of real beings);[3] up to those entities, of which Einsteinian 'time' offers to-day the most famous example, which are in the full sense rational beings, substitutes for realities whose ontological value has no interest for science. Naturally I am speaking of rational beings founded on the real, for they

[1] I hold 'transfinite number' a *real* entity (of absolute potency) with regard to the infinite *transcendental multitude* implied by the notion, but an *ens rationis* with regard to the *general unity* which fulfils its notion (which is only a unity of apprehension), and which so to speak, allows for the return to and the analogical re-imposition of a mathematical order, and mathematical considerations of equality, integrity, etc., in that purely metaphysical order to which the whole transcendental multitude taken simply as such belongs.

'God', said Kronecker, 'made whole numbers; all the rest is the work of men.'

[2] See *infra*, p. 195, note 2.

[3] M. Wolfers rightly complains that 'many students have taken to the habit of reasoning about electrons, protons, photons and atoms, as if they were pawns in a game of chess, forgetting that these terms still contain a crowd of hypotheses, obscurities and subjective ideas.' (*Transmutations des éléments*, Paris, Soc. d'édit. scientif., 1929.) On the physical significance of wave mechanics, cp. André George, *L'Œuvre de Louis de Broglie et la physique d'aujourd'hui* (1931). 'The attempts at physical presentation by more or less traditional means have all come to a non-plus.'

are founded on the real behaviour of nature, on measurements and facts really found in nature—for example on Michelson's results; there remain also other rational beings, entities incapable of existing as such, and which have no more intrinsic and direct ontological value than the material models constructed in space by Lord Kelvin.

How are we to comprehend this formation of explanatory entities, which all present in the most diverse degrees the aspect of *entia rationis*, and which nevertheless remain all the time founded on reality? It is by applying ourselves to an exact doctrine of quantity that we can answer this question.

Considering things from the standpoint, not of the physicist, but of the philosopher, and to express ourselves in his language, quantity, *i.e.* the extension of substance and the metaphysical unity of its parts which are diverse with regard to position, is a real property of bodies. There are, in nature, dimension, numbers, real measurements,[1] real

[1]Cp. R. Dalbiez, 'Dimensions absolues et mesures absolues,' *Revue thomiste*, Mar.-Ap., 1925. To make more exact what I have said in *Theonas*, when basing oneself on the aristotelian doctrine of the three kinds of predicative relations (*Met.*, v, 15: St. Thomas, lesson 17: cp. John of St. Thomas, *Curs. Phil.*, log. ii, P. q. 17), it is requisite to distinguish the measurement *of specification*, which is the basis for relations of the third kind and which rules measurement *secundum commensurationem esse et veritatis* (this measure is of another order than what is measured), from the measurement *of comparison*, which is the basis for relations of the first kind, and which in particular is the comparison of number and unity, standards of scale (mathematical measurement).

Our physical measurements imply a *transcendental relation* (or *secundum dici*) between our unities and instruments and the reality which is to be measured; a real (predicative) *secundum esse* relation of the *first* kind between our unities and the measured quantity (the measure of comparison); and a *secundum esse* relation which is rational (not real) of the *third kind* which makes the being of the measured depend on our measurements (in the fashion in which we conceive of them)(measurements of specification).

Outside these (ontologically) real measurements of specification—which can be concerned with quantity in itself (for, in my opinion, it is to this category that *mensura intrinseca* 'quae est in mensuratio sicut accidens in subjecto' (St. Thomas, *In Sent. II*, dist. 2, q. 1, a. 2, ad. 1; must be referred, as a body is intrinsically 'measured' by its own dimensions, ontologically determined)—there are in nature real measurements of comparison, which are ontological measurements, according to which things, and their dimensions in particular, are extrinsically determined and bound up with another in a unity of co-ordination and subordination ('unumquodque mensuratur simplicissimo sui generis', *Sum. theol.*, i, 10, 6: cp. *In Met.*, x, 2), and which the philosopher can call numbers (in the sense in which, according to St. Thomas, as is pointed out below, number exists *a parte rei* and as numberable before being numbered) but which has

space,[1] real time,[2] and it is under the conditions and modalities of this real quantity, quantitatively measured and regulated, that the interacting causes in nature develop their qualitative activities. *In mensura, pondere et numero.* Physical reality breeds a rich harvest of entitative riches irreducible to terms of quantity; but by reason of its materiality, and because it emanates from the substance of bodies mediatized by quantity, this world of qualities is intrinsically subject to quantitative determinations (that is why it is accessible by our extrinsic and artificial measurements). Quantity thus ontologically considered, as the first accident of corporeal substances and as the matrix of cosmic activities, is the object of consideration for the philosopher of nature, who is otherwise incapable of passing on from this to the consideration of those quantitative determinations to which the physical world is subject and of rediscovering for human use the heights and depths of nature.

But quantity can be considered in another way: when disengaged from its subject by *abstractio formalis*, set before the mind in itself, as constituting in itself a separate universe of knowledge (the universe of the preter-real), it is then treated no longer ontologically and from the point of view of being, but quantitatively or from the standpoint of those relations of order and measurement which sustain the objects of thought so discernible as the forms or essences which are proper to them. Thus considered it is the object of the mathematician. I am well aware

nothing to do with the numbers found by the observer (the numeration of the physicist). It is so, for example, that time is bound up with the most fundamental form of movement (what the ancients sought for in the movement of the stars, and to-day is rather sought for in the movement of light or inter-atomic motion), the measure of another time than that of the material universe. (Thus St. Thomas says, for the concept of measure can be applied analogically, that there is only one *aevum*, measured by the duration of the first angel.) But the measure or scale of nature escapes us, because in reality this is not a question of a scale which can be applied to a quantity, but only the ontological basis for such an application. Those measuring instruments belong to the Mind which created the measure and scale of the universe.

St. Thomas explains (*In Arist. Phys.*, iv, 23) that without a numerating mind *numeration* is impossible, but that there may be numbers: 'Sicuti possunt esse sensibilia sensu non existente, ita possunt esse numerabilia et numerus non existente numerante.' That is to say, that then this number is not numbered (in act). It cannot be called 'reckoned number' unless offered to numeration. 'Numerus numeratus dicitur . . . id quod numeratur in actu, vel quod numerabile.' (*Ibid.* lect. 17.)

[1]See *infra*, pp. 201-6. [2]See J. Maritain, *Theonas*.

that for many modern theorists of pure mathematics the latter has no object, but only purely formal logical relations, so that according to the celebrated definition of Bertrand Russell, it can be reduced to 'a study in which one ignores that of which one is speaking, and does not know if what one says is true', a discipline without content, and in which such objective content as survives is furnished by the physicists. But this nominalist tendency, in my opinion, only prevails in mathematics because an unjustified abandonment of intuition goes hand in hand with the precious rational acquisitions represented by the development of the axiomatic.[1]

This intuition is not intelligible intuition (nor pure intuition, in the kantian sense), as the geometricians for long believed, giving themselves for object a world of platonic models cut out from the amorphous background which these figures defined (*i.e.* the eternal and conditioning universe) and which was called 'space': neither is it an experimental intuition, springing from external perception, the observations and measurements which are affected thanks to the senses and our instruments. It is an imaginative intuition, an intuition of 'inward meaning',

[1]As M. René Poirier has rightly pointed out, 'the word, axiomatic, can be applied to a theory whose postulates and indefinables are made evident. Every strictly formal science is thus axiomatic. But this term can also designate, in opposition to another theory, where an endeavour is made to retain the accustomed meaning of the original notions, those theories where any such attribution is abandoned, where they are seen simply as terms whose significance consists in their use according to some formal convention. In this sense current intuitive geometry is not axiomatic, but Hilbert's is, almost perfectly. This ambiguity is apparent in formulas like the following, which the whole world accepts, but interprets variously: every exact science must tend to an axiomatic form. In the first sense this would imply that it must be set out in a rigorously hypothetico-deductive manner. In the second, we reach this much more seditious conclusion: every pure science consists in the invention of an alogarithm, in itself deprived of all objective significance, and used in such a way that the results produced correspond to those of experience, in a purely symbolic and verbal manner. In other words, a truly abstract theory of phenomena is made up of symbols emptied of sense.' In disagreement with M. Poirier, I do not hold that his first thesis implies the second.

It is possible to ask, on the other hand, if on the side of this development of the axiomatic, that of physico-mathematical science has not been in part the occasion of that epistemological up-set by which the moderns, misunderstanding one of the primary categories of knowledge, tend to integrate, in order to give it a content, mathematics with physics. In return, a just critical appreciation of mathematico-physics as a *scientia media*, in the very degree to which it requires an exact notion of the pure epistemological types so encountered, should restore to mathematics both its content and its superior position.

and which only depends on external perception presupposingly, as does imagination itself. The part played by imagination is explained by the fact that quantity, as the first accident of corporeal substance, precedes (in natural priority) the whole qualitative (energetic and physical) order, and thus the whole sensible order, and is so known by the senses by means of sensible qualities, not without, for all that, a whole synergic education of perception (it is, as it were, a 'commonsensible'). Imagination in the service of the intellect can therefore penetrate into the world of pure quantity, abstractively detached from sensible matter—and that in the very measure in which imagination, although it presupposes the external senses, is free of them (I mean that its objects are not subject to the relative conditions which affect *hic et nunc* those of perception, and which proceed for an actual dependence in regard to external physical circumstances). The intuitive schemas of the imagination—which are in no sense the object itself, but only the symbols or sensible illustrations of the object of mathematics—thus exhibit to us sensibly, but in a way independent of all experimental conditions, both the essences and the properties which in themselves precede the sensible order and are independent of it. And this action of the imagination, without in the smallest degree diminishing the strict and rigorous rationality implied by logical verifications, as the intuitionists seem too often to believe, is indispensable, because the object is not here, as in metaphysics, purely intelligible. The constructive power of imaginative intuition must make manifest *ad sensum* the intrinsic possibility of the entities considered by the mind, above all of those indefinables which are at the beginning of the science, and so assure us that, far from concealing some secret impossibility, these are veritable essences (on whose foundation moreover rational beings capable of ideal existence can in their turn be built up.)

Whatever be these entities constructed or reconstructed by the axiomatic method—which, when they are not directly figurable by intuition, at least indirectly or analogically fall into the field of the imaginable, such as non-euclidian multiplicities, the legitimacy of which became evident in relation to all geometry on the day when, following in the steps of Beltrami, a euclidian translation of them was seen as possible—they exhibit, by this connection with the intuitive sources of

mathematics, in themselves a content, a field of truth and rightful intelligibility—entirely in itself independent (if not in the pre-scientific paths which have led the mind thither) of physical formations and experimental existences. In the same way the confusion of mathematics and logic comes from a fundamental misunderstanding of the nature of logic. A non-reflective science, which does not find, as logic does, its object in the objects of the other sciences in so far as they are dealt with by the mind ('in as much as they are known') has necessarily its own domain of knowable natures, a rightly objective and direct content.

This objective content of mathematical observation, is then, as the ancients saw (but a whole new synthesis requires building upon the foundation of their principles), being under the terms of quantity as such, of quantity taken in itself, with its own 'qualities',[1] the relational structures and the properties of order and measure decipherable in limited and unlimited quantity; all the more so that the incessant conquests of modern mathematics oblige us, as by a series of logical exhaustions, to enlarge, revise and refine many of the notions previously held of these beings, and that, by a form of effort after a total spiritualisation of all mathematical knowledge, number for three centuries has tended to reduce and absorb the irrevocably potential field of content, and on the other to escape, if it were possible, from quantity itself and spatiality in order to extend its empire over the whole transcendental multitude. However this may be, these mathematical beings, as I have already pointed out, turn abstract not only existence, but the very order of existence, so that they can be *indifferently*, and while remaining the legitimate objects of science, *real* (in the philosopher's sense)[2] or *rational*. More, it is precisely in entering in the most decided fashion into the region of *entia rationis* and pure ideality that modern mathematics has made so many admirable discoveries.

[1]See *supra*, chap. i, p. 45, note 1.

[2]It goes without saying that the word *real* is not used here in the sense in which a mathematician distinguishes between real and imaginary numbers. Irrational numbers are real numbers in the mathematical sense of the word—and the philosopher would call both rational, not real beings, like imaginary numbers. Imaginary number is called so because it does not truly correspond with the *notion* of number; it is an analytic expression.

It is thus easy to comprehend how in making a mathematic exegesis of the physically real—which is precisely possible because quantity, which is the first accident of bodies, is grasped by mathematical knowledge at a higher degree of abstraction and immateriality than that of physics[1]—the mathematical physicist can have a mathematician's indifference to the character of *real* or *rational* being in the entities of which he makes use, and can even be led, as we can see among our own contemporaries, to employ in the explication of extra-mental reality mathematical terms essentially inapplicable to any existence outside the mind. In that very degree the universe which he constructs will become unfigurable—in the degree to which mathematical rational beings are employed in its construction, and as these are not directly representable by imaginative intuition like the *entia rationis* of euclidian geometry and the arithmetic of whole numbers.

The fact remains that mathematical rational beings are founded on mathematical real beings, and that the latter are disengaged from the experience of the real world by mathematical abstraction, as they are grasped in the depths of that real quantity which the philosopher considers ontologically. Quantity is there, it is it which definitely, and that in the most radical fashion, bases on the real the entities built up by the physicist in order to refind, starting from the constellations of mathematics, the natural earth; from it he draws his measurements

[1]'Mathematica dicuntur per abstractionem a naturalibus—naturalia autem se habent per appositionem ad mathematica: superaddunt enim mathematicis naturam sensibilem et motum, a quibus mathematica abstrahunt: et sic patet quod ea quae sunt de ratione mathematicalium salvantur in naturalibus, et non e converso.' (St. Thomas, *De Caelo et Mundo*, III, 3) This is why the student of nature can use mathematical principles in his demonstrations: ' Magnitudo addit positionem supra numerum; unde punctus dicitur esse unitas posita. Similiter autem corpus naturale addit materiam sensibilem super magnitudinem mathematicam; et ideo non est inconveniens si naturalis in demonstrationibus utatur principiis mathematicis ' (*Ibid.* i, 3.)

This use of mathematical principles in the knowledge of nature can either remain accidental and represent a borrowing from mathematics by the *naturalis*, or be an essential to the science under consideration, which is then properly a *scientia media*. It is clear that these various degrees of accidental 'mathematisation' must progressively change purely physical science into a *scientia media*. Modern mathematical physics realises the type-form of *scientia media* perfectly. On the other hand, in my opinion the use of mathematics in biology or psychology will never achieve the typical subordination of these disciplines to the rules of mathematical explication.

effectuated by means of his conventional ruler, and thence he sets off to climb the sky: an unceasing to and fro thanks to which mathematical physics incessantly grows.

Finally, although that science is little concerned with ontology as such, it accumulates in its own growth physical facts which, however wrapped up in theories, however difficult they may be to formulate apart from them, have nevertheless their own and independent value: and among the entities which it has constructed, those carry the strongest indications of reality and are least wrapped up in purely rational conditions which are most directly related (*i.e.* have the least theoretic interpositions) to experimental data. Thus the progress of theoretic physics, that is to say, the more speculative part of mathematical physics, which is accomplished by making more and more use of mathematical ideality, should not make us forget the immense treasure of purely physical results, of facts and observable configurations, in brief, of *entia realia*—for all that they are more particularised and less interesting to the philosopher—accumulated by the physics of the laboratory, that is, by the more experimental part of mathematical physics.

ONTOLOGICAL AND EMPIRIOLOGICAL EXPLANATION (AND THE TRANSFORMATIONS OF THE NOTION OF CAUSALITY)

In submitting itself fully to the attractions of mathematical explanations, and in translating itself into those terms, in the great revolution accomplished by Da Vinci, Galileo and Descartes, physics conquered its autonomy with regard to philosophy. More or less completely, more or less rapidly, the other sciences have followed its example. This enfranchisement of the phenomenological sciences has been in progress for three centuries and is still going on. If we wish to characterise the method by which this self-determination has been accomplished, it can be said that side by side with the conceptual dictionary of philosophy, which is ontological, a totally different one, which is of an empiriological order, has been constituted.

Our observation of some material object is the meeting point of two forms of knowledge, the sensible and the intellectual. We are in the presence of a kind of sensory flux stabilised by an idea; in other words,

of an ontological or apprehensible nucleus manifested by an assembly of qualities perceived *hic et nunc.* (For example, I find in the course of a botanical excursion a plant unknown to me. It belongs to some species —and by smell and sight and touch I eagerly seek to discover its characteristic features. I can either ask myself concerning it: what is a living plant? Or: how do I classify this in my herbarium?) It follows from a case such as this that there are two ways in which to resolve our concepts: one which rises towards intelligible being, in which the sensory remains observed by me, but indirectly, and as serving intelligible being: and another, which descends towards the sensible and the observable as such,[1] where doubtless there is no absolute abandonment of the idea of being (without which, indeed, there would be no thought), but where it is subservient to the sensible in itself, and before all to the measurable, and only remains in the mind as an unknown assurance of the constancy of certain sensible determinations and measures, and as allowing for the drawing of stable limits round the object perceived by the senses. This is certainly the way in which concepts are resolved in experimental sciences. I call these two methods respectively the *ontological* (in the widest use of the word),[2] and the *empiriological* or *spatio-temporal.*

It goes without saying that in 'ontological' explanation being continues to be considered (at least in so far as we remain, as in this chapter, within the limits of the first degree of abstraction) in the terms of observable data. But the mind in its consideration of these seeks for their inward nature and intelligible reasons, which is why it comes in following this path to the statement of notions like those of corporeal

[1]Cp. *supra*, chap. i, p. 48.

[2]The use made here of the word 'ontological' is much wider than that of that part of philosophy known as ontology or general metaphysics. It is used to designate a characteristic common to the whole philosophic discipline. I would add, to avoid any appearance of ambiguity, that *ontology* in this extended sense does not by any means monopolise all the claims and demands of the real. These, though manifest in an entirely different way, are certainly no less present in empiriological apprehension; and it would be wholly erroneous to make this a point of opposition between me and M. Emile Meyerson. In its construction of rational beings physics only endeavours to win a better grasp—in accord with its own rightful method of conception and explanation —of observed reality.

substance, quality, operative potency, material or formal cause, etc., all of which, though applying to the world of the observable, do not describe objects which are in themselves representable by the senses or expressible in an image or spatio-temporal scheme. They are not defined by observations or measurements which can be performed in a particular determined way.

In 'empiriological' explanation, on the other hand, ontology is still there, as I pointed out a moment ago, since it is a question of intellectual knowledge, and we do not cease to be reasoning animals by taking to experimental science; in that sense, the scientist, like every other man, remains invincibly ontological, but in this case the ontology is oblique and indirect. The ontological is never under these terms sought for itself, it is only there as a basis for empiric definitions and representation or of physico-mathematical entities. The mind considers the object as at the origin of the registration of certain constants, as a complex describable by its encounter with our senses and our instruments in a certain particular fashion; so that the essential conditions of the *observability* of the object play a determining part in regard to scientific explanation. All the derivative notions introduced by science in order 'to assist description, so that the trees should not conceal the forest', result in its condensation into the measurable and the observable. And if the analysis is conducted in terms which are not in themselves attained by the senses (or, if it is a question of psychology, by introspection, for all experimental psychology is not necessarily behaviourist), these always remain conceived in relation to recordings and imaginary perceptions (for example, factual impossibles, as in the case of the ether), and like hidden observables indirectly attained thanks to the patent observables which require them: so that all the motions employed are strictly held within the order of what has been, could have been or is experienced by the senses.[1] In this sense, and by an abridgement of language, one can say that empiriological explanation has no ontological (*i.e. directly* ontological) value; it only attains the being of things obliquely and as an indirect foundation, without making it known in

[1] It is here that the methods of the natural sciences give a foundation for the Kantian notion of phenomena (the philosophical system on which this notion is involved being cut away).

itself. It works in the natures or essences of the corporeal world, but these are not as such its object.

But in this very category of the empiriological two clearly different types of explanation can be distinguished, according as the empiric content (*i.e.* the measurable) receives its form and its laws of explanation from mathematics—then there is the type of 'empirico-mathematical' explication characteristic of mathematico-physical science—or as the empiric content (in this case, the observable in general) implies a form and rule of explanation which is purely experimental—then there is the type of 'empirico-schematic'[1] explication characteristic of the sciences of observation not subjected to, or at least not yet subject to, mathematical terminology. I shall return to this distinction later. At this point I only wish to point out that in the one case as in the other, the empiriological dictionary proper to the phenomenological sciences tends to set itself up in a more and more perfect independence with regard to the ontological terminology of philosophy.[2]

This kind of purification is particularly far advanced in physics. But maybe by the elaboration of new concepts or the re-phrasing of definitions, maybe by a new use, applied *in toto* to sensible verifications, of general concepts (of philosophic or pre-philosophic origin), sciences such as biology or experimental psychology, which can be included—it will be seen in a moment under what conditions and with what reservations—in the empirico-schematic type, tend, yes, they also, to create for themselves a notional vocabulary which is more and more self-determined. Since they abide in a much less precarious continuity with philosophy, it is more difficult for them than for physics to isolate this notional dictionary, to prevent the entry of philosophical concepts which, in this region, give space for pseudo-explanations. Nevertheless they persevere in the endeavour, and we can observe even a preference for the most rudimentary conceptual equipment (like the system of

[1]I mean by this phrase that in this case experience is not thought out or rationalised according to the laws of mathematical conceptualisation, but in accord with the *schemas* which have themselves been experimentally discovered by the reason in phenomena.

[2]This is what an eminent scientist has called 'an assertion of freedom for autonomous development'. (A. S. Eddington, *The Nature of the Physical World*, p. xvii.)

psychological notions employed by the Freudian school)[1] on the one condition that it will assure this independence.

Thus, in a general way, in all empiriological recording, the resolution of concepts is made in an infra-philosophic direction. It is not *what things are in themselves* which is the point of interest; what is important are the possibilities of empiric proof and of mensuration which they represent, and also of connecting together, according to certain stable laws, the data furnished by these means. Every definition must be made, no longer 'by the nearest gender and specific difference', but by observable and highly determined measurable properties, to each of which is assigned in each case the method of recording and of practical verification.

The possibility of observation and measurement thus replaces for such forms of knowledge the essence or quiddity sought for in things by philosophy.

The registration of conditionality (which keeps the mind attached to the sensible and the imaginable)tends in the same way to substitute that of causality, which, when it is pure, causes the mind to progress at once to reasons of being not representable by the senses.

Such, at least, is the *ideal* to which empiriological knowledge leads. In fact its noematic material is far from being homogeneous, and if one makes a cross-section of the procedure a whole series of conceptual strata are visible in the course of one notional function, of very different intelligible density and forms of refraction. Not only, for example, is the existence of natures or stable essences in the corporeal world a postulate of the pre-philosophy of the scientist, but, in the very operations of science, the natural notion supplied by commonsense of these ontological nuclei continues to operate on certain planes, while in others it has been replaced by a scientific notion remodelled according to the possibilities of measurement.

In the same way a scientist will make use at once, on differing planes of conceptualisation, of an ontological notion, furnished in a confused state by commonsense, and incarnated for him in a measurable or observable relation, of the 'cause' as an activity productive of being—and

[1]It should not be forgotten that apart from the value of the method of psychoanalytic investigation, the (empiriological) psychology of Freud is in itself contaminated by a fundamentally erroneous general philosophy.

of a popular empirico-ontological notion (which is in truth intrinsically ambiguous) of the 'cause' as a phenomenon producing another—and of a scientific (philosophical or mechanical) empirico-schematic one of the 'cause' as a phenomenon to which another is connected by a universal necessary concatenation which expresses a world 'law'—and, finally, of a purely empiriological notion of the 'cause' (from which all philosophical content has been withdrawn) as the spatio-temporal condition of a phenomenon or the constellation of observable and measurable determinations with which a phenomenon is bound up, a notion which finds its perfect expression in the formulation of physical connections by means of mathematical relations, such as those which furnish the differential or tensorial calculus. On this plane of conditionality the idea of transitive action, in incessant transmutation among the various masks of causality of which here I have only given a brief abridgement, is completely shredded away into that of phenomenal co-determination.

At the same time science has in this relation, as we see to-day, reached something of a critical point. In the course of its own line of progress it has seen some of its laws take on the form of statistical laws, which thrust causal determinations into the background, others transformed into what are called identical-laws or 'truisms', which explain the behaviour of things by that behaviour itself, where it has become, thanks to some mathematical transmogrifications, a property of the structure of a world built up for that end by the mind (which in particular is what has befallen in the geometrical reshaping of certain sections of physics, such as gravitation).

But, above all, in crossing the threshold of the atomic world, science has discovered that mechanics cannot account for the movements of a particle in a way which is on all occasions entirely defined.

We learn by wave-mechanics that it is impossible to assign a fixed trajectory to a particle associated in a group of waves, this only allows the knowledge of the probability of the presence of that particle in a more or less extended area; and the particle can never have at once a perfectly defined position and perfectly defined energy. The quantum mechanics of Heisenberg and Born, which are in agreement with the wave-mechanics of Louis de Broglie and Schroedinger, but in exhibiting that it is necessary to give to their principles a statistical significance,

and seeing only in the wave a pure mathematical symbol, abandon even the possibility of following the movement of each particle. Science has thus come to the 'principle of indetermination' or the 'relations of incertitude' of Heisenberg; it is only possible to determine the speed of a particle by leaving at that moment its position undetermined, or to determine its position by leaving its speed in indetermination. In order to precisely observe the position of an electron it is necessary to disturb its speed (in lighting it up with a short-length wave, whose quantum is of high energy), and in order to measure its speed exactly it is necessary (in only lighting it with a long-wave length of a low quantum) to render its position uncertain. Finally it is necessary to sacrifice 'the traditional idea which attributed to corpuscles a well-defined position, speed and trajectory': more, we can no longer attribute 'a well-defined energy to the corpuscle, but only speak of the probability by which it manifests itself with such energy'.[1] The series of waves is only, in Heisenberg's phrase, a '*bundle of probabilities.*'

So we see science so far obliged to renounce determinism, precisely in the form in which determinism is 'scientific' and as it means, not that the course of events excludes any contingence, but simply that the laws of nature can—in the given circumstances at a given moment—strictly determine the way in which in the following moment such material phenomena will offer themselves to observation and measurement.[2]

[1]L. de Broglie, *Introduction à l'étude de la méchanique ondulatoire*, Paris, 1930.

[2]It is important to point out here an ambiguity of which the public is too often the victim (and sometimes scientists themselves), and which, rightly speaking, is a gross sophism.

For the scientist the philosophical principle *natura determinatur ad unum* (see *supra*, chap. 1) is translated on the empiriological plane into the formula: 'The initial state of a (material) system, separated from all exterior action, entirely determines its ulterior states;' or again: 'If at a certain moment the state of a universe (hypothetically composed of purely material agents) is known, the state of this universe at any ulterior instant is entirely determined;' which is the very formula of *scientific* determinism.

But in the enunciation of this formula it is, implicitly or explicitly, presupposed that it is a case of purely material systems, of purely material agents and phenomena (in the philosophic sense of the word, *i.e.* whose bearing depends entirely on the natures in interaction) for which the law of causality takes exactly this form. Scientific determinism is thus a *conditional* determinism ('supposing that there are only purely material agents'), which is by no manner of means absolute determinism, which as a *philosophical* doc-

The principle of causality—in the very form of that phenomenal co-determination to which it has been reduced by science—is seen as open to exceptions, riddled with lacunae, robbed of its universal value. A result against which certainly those who abandoned a truly (philosophically) ontological standpoint have no right to protest. With science devoted to pure empiriology and empiriometrics, more and more under the spell of mathematical rational being (we owe thanks to the new physics for the degree to which this has been made evident), it was obvious there could be no other end. But the scientists do not seem prepared to take it so lightly; for it has been the general belief in the principle of causality which was the vital impulse behind research. Like Einstein they hope that 'strict causality' will one day recover its sovereignty in physics.[1] Einstein gave voice to this hope in 1927. Since then micro-physics appears rather to have accentuated its 'indeterminist' tendency.[2] Whatever form it may assume in the future and even if a

trine denies the possibility of free will. To draw an argument in favour of philosophical determinism from this formula, and to conclude from it that there cannot be spiritual or free agents, whose behaviour, by the very definition of their freedom, is outside the domain of material science, and whose action, without causing any change in the laws of matter, prevents, by the introduction of a new (non-material) factor the initial state of a system from exactly determining its ulterior ones, is a simple piece of trickery.

In the same way the formula of scientific determinism presupposes that all the conditions of the initial state (or at the moment of observation) are given, from which it follows that the ulterior state is determined. But it in no way says that certain of these conditions cannot be simple positions of fact (depending for example on the intersection of causal lines, or if it is a question of an absolutely initial state, of an arbitrary decision). This is why, as was shown in chapter 1, scientific determinism does not exclude contingence in the philosophical sense of the word.

[1]'It is only with regard to the quantum theory that the differential method of Newton becomes inadequate, and in effect strict causality has broken down. But the last word has not been said. It may be that the spirit of Newton's method may give us the power to re-establish the accord between physical reality and the most characteristic and profound feature of Newton's teaching, strict causality.' (*Nature*, 26th Mar., 1927; 'A Message for the Centenary of Newton.')

[2]In contradiction to Einstein, Dirac considers the possibility of a return to 'strict causality' definitely excluded. 'Since physics is only occupied with observable magnitudes, the classic determinist theory is indefensible. . . . In the quantum theory also, we start from certain numbers and deduce other numbers. Let us seek to penetrate to the physical essence of these two series of numbers. The perturbations which an observer inflicts on a system in order to observe it are directly subject to his control and are the

return should become possible to the methods or only the idea[1] of strict determination, what is important to the philosopher and singularly lights up the nature of empiriological apprehension (and what justifies this digression) is the fact that science has one day come to know a state of mind with regard to causality as characteristic as the one which we are actually observing.

acts of his free will. It is uniquely the numbers which are described by these acts of free will which can be taken as initial numbers for a calculus of the quantum theory. . . .' (Address to the Solvay Congress, 1927.) Thus, by rigorous application of the principle that 'physics is only occupied with observable magnitudes', the physicist is led to recognise the inalienable part which he himself and the 'acts of his free will' take in his calculus of phenomena; it is so because he can only observe by material means, not purely mentally (cp. *infra*, pp. 233-4).

[1]We know that M. Paul Langevin has tried, by re-casting the terms of physical representation, to realise Einstein's hope and surmount the crisis of indeterminism. (Cp. A. George, *L'Œuvre de L. de Broglie et la physique d'aujourd'hui*, Paris, 1931. He refers to an address delivered by Langevin at the Collège de France and to speeches at the Union Rationaliste in 1930, which have not been published at the time of writing.) Langevin points out that the question: is it possible to follow the movement of a particle while determining at each instant its speed and its position? is only possible if the notion of the individual existence of the particle is first of all admitted. But if there is no individual particle, the question of the application of the law of causality to its behaviour is not raised. He thus proposes the sacrifice of corpuscular individuality for the saving of determinism.

This effort of Langevin seems to proceed not only from purely scientific preoccupations, but also from philosophical opinions, which are, in my opinion, not exact: *e.g.* it is, according to him, by an anthropomorphic interpolation that the notion of individuality is applied to the atomic world, 'the portion of matter which we label and pursue is a projection from our individual consciousness,' which results in the denial of any ontological value to the notion of individuality. Again, seeking to save scientific determinism, it is also, it seems, an effort to save the philosophical determinist conception of causality, no distinction having been made between these two. But nothing prevents the supposition that, on the empiriological plane, science will find it in its power to effectively rid itself of the notion of corpuscular individuality as it has rid itself of the notion of absolute time: physical magnitudes being represented in the new dynamics by purely mathematical symbols (*operative factors*), it is quite conceivable that an *ens rationis* can be fashioned, from which individuality is excluded. Meanwhile it must be pointed out that Langevin's solution appears to run against serious difficulties: Louis de Broglie does not seem inclined to agree with it (cp. A. George, *op. cit.*): George remarks that the abandonment of corpuscular individuality is far from easily reconciled with the atomic conceptions which have become fundamental in modern physics, or with numerous experiments concerned with photons and electrons (C. T. R. Wilson's method, Crompton's effect, photo-electric effects, etc.).

The heterogeneity, to return to our theme, of the materials in one notional line brought into action by science is thus sharply apparent. A great field of critical analysis is so opened up which I have only wished to indicate in passing. The essential point is to comprehend the grave error into which we fall when we consider science statically as complete, as 'all of a piece', not only with regard to its extension and its objects of knowledge, where the error is only too clear, but also from the point of view of its internal noetic morphology, its *intension* and its typical forms. At the very point where it detaches itself from the prescientific basis of commonsense in order to build itself up more and more purely as a science its extensive growth is accompanied by a progressive internal formative movement, which brings it into connection with certain determined epistemological types which it has only as yet partially realised in very varying degrees. But if a total and homogeneous realisation of these ideal types must be regarded as an asymptotic limit, what is very remarkable is that, anticipating so to speak future possibilities and before all subject to the exigencies of its ideal form, science only makes a material use, and as if without recognising or qualifying for them, of notions which belong to the less developed strata of conceptualisation. The formulas of scientific intelligibility, above all, pass by the higher stages, the notions which are most typically pure. Thus, in the forms of knowledge with which we shall be occupied presently, in the phenomenological sciences, the formally activating value is attached to the elimination of the ontological and the philosophical for the benefit of a wholly empiriometric or empirico-schematic explanation.

It is comprehensible that, for a mind limited by its habitual preoccupations to intelligibility at this degree, philosophic notions may lose all significance. In a certain sense the experimental sciences have progressed by fighting against the intelligence: for the intellect has a natural tendency to introduce into the conceptual register proper to these sciences significances which belong to another, the philosophical, and which in consequence disturb and retard experimental knowledge as such, by preventing its approximation to its pure type.

Finally it is possible to say that the natural sciences are bound up with ontology in a way which is implicit, obscure, thankless and unavowed, and this for two reasons: first of all in so far as these sciences necessarily

presuppose a philosophy or pre-philosophy, a latent substructure which may be rudimentary, unformulated, or unconscious, but which is none the less real, and which assumes as indubitable postulates the existence of things as distinct from thought and the possibility of attaining them more or less completely by knowledge. Then in so far as science itself exists in *oblique* reference to things as the foundation of the explanatory representations which it elaborates, and by the simple fact that for it all rests on observation and then on the intuition of the senses (whose witness the scientific employment of measuring apparatus and defining instruments dissolves, so to speak, into a multiplicity of points of perception, of graduated readings, but which remains nevertheless always presupposed by these works), does it not implicitly declare, like the intuition of the senses themselves, the existence in the exterior world of hidden ontological structures, which, no more than the senses, can it scrutinise in their own individual being?

But except for this double relation, which is at once implicit and explicit, to the ontological, the natural sciences tend to separate, in their own particular structure, to the farthest degree the observable from the ontological.

THE NEW PHYSICS

I have spoken of physico-mathematical knowledge in general. A marvellous renaissance has to-day taken place in this form of knowledge whose importance cannot be exaggerated. With extraordinary rapidity its fundamental concepts have been revised and re-adjusted, the foundations of Newtonianism have been shaken, and the theoreticians of science attribute, it seems with good reason, to the work of Einstein and Planck a magnitude equal to that of the great initiators of the classical age. Few spectacles could be more beautiful or more moving to the mind than this of physics advancing on the path of its destiny like a great galleon in full sail. Here, for a moment or two, the course of these reflections must pause, not to indulge in any rash forecastings of the future of the theories of the new physics, but to inquire whether its scientific bearing confirms or invalidates the epistemological principles which up to now I have been endeavouring to establish.

From the epistemological standpoint it exhibits first of all an effort to

free our knowledge of nature from the dominion of a number of preconceived mathematical ideas, and, to speak briefly, a reaction of the physicist as such (the theoretical physicist) against the pre-arranged framework imposed on physics by rationalist mechanics, in itself held to be a purely mathematical science. (Mechanics, for all that, might itself become a department of physics, at which any Aristotelian would rejoice, for it is good peripatetic doctrine that motion is in itself a physical, not a mathematical, thing, and what the mathematician retains—the variation of the distances of a point from co-ordinated axes, which is evidently, as Descartes said, 'reciprocal', and which posits no more reality in the point than in the axes, and *vice versa*—is not movement itself, but its effect or its translation into the register of ideal quantity: in itself mathematics makes movement into an abstraction. This is why the mechanistic theory which has been taken as the metaphysical universalisation of mechanics in the classical sense, while claiming to explain all nature in terms of extension and motion, is in reality a jettisoning of the reality of motion, which has become wholly ideal.)

The new physics has renounced the attribution to any of the elements in the scientific picture of nature of an *absolute* character, *i.e.* the possession of certain unvarying quantitative determinations or properties, which appertain to elements of the same kind when they are considered in themselves or their essences by the mathematician, in independence of all physical means of observation and measurement (and which was attributed to them by classical physics because it set up its picture of nature in a framework, not only, as was normal, mathematical in type, but which has been thought out and established in a mode of conception and determination proper to the mathematician as such, not the physicist). It has renounced the absolute dimensions of bodies, an absolute setting out in space as in time, the absolute character of mass, any system of privileged axes, whether it is a question, as in limited relativity of the Galilean systems of reference, uniform in movement with regard to others, or, as in generalised relativity, of systems of reference having no matter what movement with regard to others. Again, it is permissible to regard the quantic theories, and the growing importance given to the discontinuous in these new scientific conceptions, as a revolt by physics against the privileged position accorded by mathematical analysis and

the recourse to differential equations in the exposition of the laws of nature to conditions of continuity.

The reassertions of a form of realism in the physicist as such—that is, of the resolution of the primordial concepts of science in complexes of elements exclusively determined by really or imaginably executable physical measurements—has thus risen up to break an image of the physical world which the classic age had drawn out in accord with the ideal supra-physical privileges of the mathematical universe. The physicist has recovered in the same stroke all the native force of the urge and desire immanent in his habitual occupation, which seek to disclose the secrets and ways of nature, the rightful mystery of the world of bodies (*rerum cognoscere causas*, things have not changed from this point of view since Lucretius and Virgil, and it is with good reason that the decisive progress which has renewed our science of matter is attributed to the intuitive faculty for the physically real amid the most abstract symbols of mathematics).[1] What indeed would be the *primum movens* of any physicist, even if he be the most devoted adherent of positivistic macerations, without such a desire to penetrate to what is? They thus claim to possess mathematics without being possessed, to treat it as a simple language, a mere instrument wherewith to scrutinise nature and matter.

But how do they set to work on this plan? And what are the results in fact? We see the new physics expressly leading to a complete geometrisation. It is in taking the fullest cognisance of this demand, which is inherent in the very nature of modern physics, that it has built itself up and achieved all its victories. But it can only advance along this road by an even more complete renunciation than that of classical physics of all ontological claims, and by multiplying more than ever, and with all the advantages of full advertence, physico-mathematical rational beings.

It has been frequently pointed out—and it is not out of order to fix in passing the meaning of this comment—that Einstein's theory of rela-

[1] 'For him (Einstein) the veil of symbols never conceals the reality. There are many for whom the signifying sign hides the thing signified: Einstein moves at his ease in a world of symbols, but these never disguise for him the physical aspect of things.' (P. Langevin, L'Œuvre d'Einstein et l'astronomie', *L'Astronomie*, July 1931.) There is thus in the new physics a Pascal-like tendency, and its greatest success is to finally reconcile this (but at the expense of mechanism and clearly cartesian ideas) with the cartesian tendency to universal mathematicisation.

tivity proceeds in fact from an absolute need and an effort of the widest span to raise science to a high degree of independence with regard to the particular standpoints of the various observers. In this the very spirit and ideal of physical theory has evolved and progressed. In the new synthesis the laws of nature are set out in the same fashion,[1] and magnitude *par excellence*, which is like the sovereign of the physical world—the velocity of light (velocity for which length becomes zero and the material mass infinite)—is measured by the same number for the observers of no matter what system of reference, whatever may be the motion of the systems in question in relation to one another; the image of things in themselves and the connections between happenings varying in consequence. I have already had occasion to mark the importance of the necessary distinction which should be drawn between the laws of nature and the concrete course of events: we can say that if the new physics stamps with relativity the course of events (not with regard to the events themselves produced *hic et nunc*, but in the setting out of their relations in space and time) it is in order to assure at their expense universally absolute form for the laws.

But it is outside things, if I may put it so, and in the formal texture of its deductive system, that physico-mathematical science attains to this most absolutely, to that expansion in the unconditioned to which all spiritual things tend: not in the discovery of the absolute in things themselves, rather, on the contrary, by escaping from the ontological, by renouncing the integration in the scientific picture of nature of the absolute elements recognised in the real by both philosophy and commonsense, and in the replacement of these elements by rational beings elaborated

[1]That is to say that the universe being a multiplicity of four dimensions, and its properties depending on 'co-efficients of a quadratic form of the differentials of four co-ordinates corresponding to an event', the laws of nature are expressed 'by the relations keeping with regard to this quadratic form an unvarying character in any transformation of the sum of the co-ordinates' (E. Picard, *op. cit.*).

On this question of the unvarying form of the laws of nature in the new physics, as on the notion of geometrical explication, the dissymmetry introduced by generalised relativity, from the standpoint of geometricisation itself, in the domain of gravitation and electro-magnetism, see numerous excellent passages in the work already cited by M. R. Poirier (*Essai sur quelques caractères des notions d'espace et de temps*, Paris, 1931). His examination of both the strength and the weakness of relativist theories, is particularly happy.

in accord with the exigencies of the deductive system under construction. The philosopher knows that bodies have absolute dimensions, that there are in the world absolute motions, an absolute time, simultaneities which are absolute for events divided as far as may be in space: *absolute* signifies here entirely determined in itself, independently of any observer: the knowledge of what these are, the discernments of these absolute dimensions, movements, simultaneities (at a distance), time, by the aid of our means of observation and measurement, the philosopher renounces, voluntarily conceding that it is not possible.[1] It is sufficient for him that they can be discerned by pure minds, which know without observing from a given point of space and time. The physicist makes a like renunciation, and with good reason. But for him, he is not a philosopher and is only occupied with what he can measure and in so far as it can be measured, the existence of these absolutes does not count, and in their place he knows only and manipulates relative entities reconstituted by means of measurable determinations: *entia rationis cum fundamento in re.*

Could the distinctive features of the 'realism' of the new physics have led in themselves to any other result? To make 'the whole object of exact science' consist in 'pointer readings and similar indications' and to turn out of physics every notion which is not resolvable into physically effectable measurements, is to free physics from that ideal armature which had descended into its stuff from the heaven of pure mathematics; but it is at the same time to free it, much more radically than ever

[1]On the *relational* character of physics, see the article by R. Dalbiez, *cit. supra.* He recalls the words of Jules Tannery, 'The idea of determination is independent of the possibility of formulating in what this determination consists,' and writes very justly, 'quantity is not identical with relation, and quantitative being is provided by a quantity which is right before any comparison with a scale. . . . We know that bodies have an absolute figure, but we do not know what this figure is. . . . Our physical knowledge only bears on relations. We are certain that objects have absolute dimensions, but we do not know if these absolute dimensions are retained.'

The ancients were well aware of the distinction drawn by J. Tannery, and which is connected with the distinction between the *quid est* and the *quia est.* If they did not make it with regard to the numbers of nature and the dimensions of bodies, they did apropos of the angels and their differentiations (at once specific and individual): 'Novimus, inquam, differentiam esse in illis, sed quae sint illae, latet ' (Cajetan, *In de Ente et Essentia*, c. 6, q. 14).

before, from all ontological notions, and every mode of ontological conceptualisation (whether it is a question of the naïve ontology of daily observation or of that of philosophy).

The process to which the vocabulary of physics has been subjected by the theory of relativity is very significant from this point of view. When we listen to a discourse by M. Einstein on simultaneity it is striking to hear him constantly returning to the question: what does the word 'simultaneous' signify for me as a physicist? And he always responds, in accord with that methodological theme whose fundamental importance I have stressed: Give me a definition which will tell me by what collection of concretely realisable measures I can in each case verify what two events do or do not deserve to be called simultaneous: then alone I shall have a definition of simultaneity usable by a physicist and valuable in his eyes.[1]

There can, therefore, be no question here of the essence of simultaneity, what it is in itself. Time, simultaneity, space, are concepts entirely re-modelled and stripped of any philosophical colour; they take on for the physicist a purely empiriometric significance to which it would imply a great deal of simple-headedness to apply any directly ontological value: and physics has thus achieved the completest possible enfranchisement from philosophy. In the same stroke it tends to achieve an equal deliverance from commonsense: not only from that common imagery which was in question at the beginning of the previous chapter, but from the philosophy implicit in common observation, the natural principles and data of the intelligence, except in what is concerned with the principles of mathematical interpretation, and the

[1]'The vocabulary of the physicist comprises a number of words such as length, angle, velocity, force, potential, current, etc , which we call 'physical quantities'. It is now recognised as essential that these should be *defined* according to the way in which we actually recognise them when confronted with them, and not according to the metaphysical significance which we may have anticipated for them. In the old textbooks mass was defined as 'quantity of matter'; but when it came to an actual determination of mass, an experimental method was prescribed which had no bearing on this definition. The belief that the quantity determined by the accepted method of measurement represented the quantity of matter in the object was merely a pious opinion. At the present day there is no sense in which the quantity of matter in a pound of lead can be said to be equal to the quantity in a pound of sugar. Einstein's theory makes a clean sweep of these pious opinions, and insists that each physical quantity should be defined as the result of certain operations of measurement and calculation.' (A. S. Eddington, *op. cit.*, p. 255.)

ontological postulates implied by its laws of observation: a legitimate deliverance from the moment it is accompanied by an equally wide renunciation of ontology.

It follows from these considerations that the idea of discovering the nature of matter and of corporeal things in itself must appear to the new physics, even more decidedly and to a higher degree than to all the physics of yesterday and before, a pure archaism. 'The scientist of to-day cannot indicate the *essence* of the real. It is this that primarily distinguishes his attitude from that of his materialist predecessor and, even more, from that of the mediaeval physicist: he does not even claim to attain to the being of the real, which, on the contrary, he sees as enveloped in profound mystery.'[1] It is remarkable that the quantum theories, in the very act of stressing the unfigurable character of the universe of science, render still more profound the rupture between that universe and knowledge of an ontological type. To-day the scientist reflecting on his work is only aware of a world of symbols. 'We have suffered, and we still suffer, from expectations that electrons and quanta must be in some fundamental respects like materials or forces familiar in the workshop—that all we have to do is to imagine the usual kind of thing on an infinitely smaller scale. It must be our aim to avoid such prejudgments which are surely illogical; and since we must cease to employ familiar concepts, symbols have become the only possible alternative.... If, then, only pointer readings or their equivalents are put into the machine of scientific calculation, how can we grind out anything but pointer readings....Whenever we state the properties of a body in terms of physical quantities we are imparting knowledge as to the response of various metrical indicators to its presence and *nothing more*. After all, knowledge of this kind is fairly comprehensive. A knowledge of the response of all kinds of objects—weighing-machines and other indicators—would determine completely its relation to its environment, leaving only its unget-atable nature undetermined.... The Victorian physicist felt that he knew just what he was talking about when he used such terms as *matter* and *atoms*. Atoms were tiny billiard balls, a crisp statement that was supposed to tell you all about their nature. . . . But now we realise that science has nothing to say as to the intrinsic nature of the atom. It is, like

[1] E. Meyerson, 'Le Physicien et le réel' (*Le Mois*, June 1931).

everything else in physics, a schedule of pointer readings. . . . Scientific investigation does not lead to knowledge of the intrinsic nature of things. . . . The external world of physics has thus become a world of shadows.'[1]

Prof. Eddington in this seems to forget that not only do the measurements collected by our instruments from nature give us something real (which may resemble a 'shadow' with regard to our familiar universe), nevertheless the philosopher knows that there are very many differing forms in which an aspect of things existing in themselves may appear to us, but also that the first degree or stage of conceptualisation, often very elaborated, when we disengage from these measurements a description of the observable behaviour of things, also sets us in the presence of realities—I say, observable and measurable and taken precisely in that sense,—introduces us into a world of facts, of observable causations,[2] of

[1]A. S. Eddington, *op. cit.*, pp. 249, 252, 257, 259, 303, and xvi. (The italics are his.) Let me also cite the following highly characteristic passage: '*Something unknown is doing we don't know what*—that is what our theory amounts to. There is the same indefiniteness as to the nature of the activity and of what it is that is acting. And yet from so unpromising a beginning we really do get somewhere. We bring into order a host of apparently unrelated phenomena; we make predictions and our predictions come off. The reason—the sole reason—for this progress is that our description is not limited to unknown agents executing unknown activities, but *numbers* are scattered freely in the descriptions. To contemplate electrons circulating in the atom carries us no further, but by contemplating eight circulating electrons in one atom and seven circulating electrons in another we begin to realise the difference between oxygen and nitrogen.

'Out of the numbers proceeds the harmony of natural law which it is the aim of science to disclose. We can grasp the tune but not the player.' (*Ibid* p. 291-2)

[2]A causation is not *observable* as such or even in the degree to which it relates to the intelligible, nevertheless I have used the word here to designate causations which result from observation, most of all those resulting from graduated readings, if not immediately, at least proximately; thus the experience of the Puys de Dome proves very nearly, if not immediately, that atmospheric pressure is the cause of the elevation of liquids in barometric tubes. Thus, again, the—hypothetic—fact of the disassociation of molecules in ions being the cause of electrolic phenomena results (in a much less proximate way) from observation. This example can serve as a transition to that other kind of causations which could be called *theoretic*, and which only *distantly* result from observation, by means of a whole physico-mathematical edifice which can only be verified by experiment at its points of incidence with the real. It is to these theoretic causations that the causal explications elaborated by physical theory in that second degree or stage of conceptualisation that is in question here have reference, *e.g.* the Einsteinian theory of gravitation where the presence of matter is the cause of an incurvation of space.

observable structures which the theoretical physicist tends to hold simply as matter offered to his constructive genius, but which the physicist of the laboratory is not disposed to allow to be misunderstood as already making an authentic part of physical science itself. These facts can be established more or less certainly, more or less hypothetically, they can imply in one degree or another an ideal achievement of the real by the reason,[1] they none the less result from the order of real being. Notions such as that of the constitution of gas by individual molecules in endless agitation, or of the reticular structure of crystals, and a crowd of other similar ones, must be held for something other than symbols, exactly in so far as they are translations of the measurable and the observable, and before theoretic effort, in the endeavour to penetrate their significance and discover, in a complete explication, what they tell us, gives us to understand that in the last analysis we can only know symbolically what they say. But it is precisely this second degree and second stage[2] of scientific conceptualisation that Prof. Eddington has in mind; and there it would indeed be foolhardy to reject his evidence.

The two characteristics which we have discovered in the new physics seem at the first glance contradictory: on the one hand a mental urge towards the physical in itself and the mysteries of its behaviour, a will to physical realism: on the other, the construction of a world of symbols and a more decided recourse than ever before to geometrical and mathematical rational being. This contradiction is purely apparent. The paradox is explained by what has been said above concerning physico-mathematical science in general, and gives us the best possible illustration of the theory of *scientiae mediae*. In its opposition to Newtonianism the new physics recalls to our minds the fact that physico-mathematical knowledge is primarily physical; and, at the same time, the degree to which it reaches beyond Newton manifests even more strikingly its formally mathematical character. The physicist regards mathematics as simply supplying an instrument and a language: but neither a *simple*

[1] See *supra*, p. 164.

[2] It goes without saying that in speaking of these two *stages* or periods there is no question of two successive phases: the two are constantly united in the course of the elaboration of physico-mathematical apprehension, and it is only by abstraction that they can be treated as separate.

language nor a *simple* instrument. This language supplies the laws of analysis, conceptualisation and explication, which give his science its proper scientific form. I said that he wished to know the nature of things and their physical causes: did I say that he wished to know either that nature or these causes *in themselves*? Rather I said that he renounced the knowledge *in themselves* of the nature of things and their physical causes (reduced to their essential meaning the formulas which I have quoted from Prof. Eddington can signify nothing else): but did I say that he renounced the knowledge of them absolutely and in every way? The urge which drives him towards the physically real can only attain to the real in its measurable aspects, in its measurable structure as such: by turning it into mathematical terms and finally by constructing something else in its place. The physicist wishes to penetrate the secrets of matter; but the very type of the science with which he is connected interdicts his attainment of the nature of matter in itself; he attains to it in its observable and measurable determinations, which are real by that very fact, which are for him the succedanea of its essence; and he scrutinises and penetrates it thereby in the very degree to which he transmutes it into mathematical symbols.

Let us say that his form of knowledge is not knowledge of the real (the given real) by the real (a more profound reality), but of the real by the mathematical preter-real. It is a knowledge of the physically real which becomes symbolic in as much as its mathematical regulation obliges it to attempt a complete explication, where will be formulated in wholly quantitative terms that of which the forms and the formation come from a world of qualities; or rather, if it is permissible to use here an old platonic word, which is perhaps more expressive than the modern 'symbol',[1] it is—at least with regard to that second

[1]By the scientists themselves the word, symbol, is reserved for a much more particular use: they will say, for example, that 'the associated wave' of wave mechanics is a pure mathematical symbol, 'a simple symbolic representation of probability'—since any imaginable spatio-temporal representation, any physical image, of this wave is in itself impossible, in other words, since it cannot be defined as the immediate object of a certain series of physically measuring operations, at least theoretically effectuable. It is useless to observe that the philosopher (or the scientist when he uses epistemological language) understands the word, symbol, in a much wider sense. It is in this wider sense that it must be taken here.

stage of conceptualisation of which I spoke a moment ago—a knowledge of the physically real by means of myths,[1] that is, verified myths, *i.e.* which accord with the measurable 'appearances' and which 'save' them: a science at once *experimental and mytho-poetic* of the physically real.

This is what gives to theoretical physics in its most inspired discoveries such a striking resemblance to artistic creation. But—and this is the marvel—this is a question of a speculative art, of an art *for the purpose of knowledge,* where the imagination is only fruitful in submitting to the constraints of a world of rigorous determinations, of laws established with the strictest exactitude. I have already pointed out, in a previous chapter,[2] that Plato saw very clearly the rightful method of mathematical knowledge. He also saw, and with an equal penetration, that the creation of scientific myths—the noblest form of rational beings founded *in re*—is a necessary consequence of that method. The myths of the *Timaeus* may have grown old, but it is in no avowal of impotence or any flight into poetry that *Timaeus* makes use of myths, it is by virtue of an admirable intuition of the proper conditions of physico-mathematical knowledge and of what we call the exact sciences, when, ceasing to be purely mathematical, they seek to explain the world of experience. Aristotle was occupied with something else, which Plato did not see: he was founding the philosophy of sensible nature, and for that he had to oppose platonic metaphysics and the theory of ideas. But though he certainly recognised the existence of *scientiae mediae*, and though he himself constructed, in the theory of the homo-centric spheres, a physico-mathematical myth of the first magnitude, he accorded, it seems, a full ontological value to these spheres, a reality not only fundamental (with regard to their foundation on the nature of things) but formal and entire (in their formality, their thinkable construction itself). Because of the prevalence in him of the standpoint of the natural philosopher he did not see as clearly as Plato did the necessary part played by ideality in the

[1] I do not mean to say that all the physicist's entities are 'myths'. I use this word to designate the *entia rationis* which he utilises, above all those of which he makes use at the end of his theoretic elaboration and reconstruction of the real, exactly at the point of his farthest penetration into the secrets of matter.

[2] Cp. chap. 1, p. 78 (note).

mathematical knowledge of natural phenomena in the very degree to which it is an exact science.

Suppose that a scientist, shut up in a ground-glass bell, in which he received by radio the scientific information on which he worked, learnt one day of the existence of a certain machine capable of projecting its own weight to a height three-hundred times greater than its own. He would have difficulty in even approximating to the idea of this machine, unknown in itself, as a sort of catapult constructed in accord with given data; whose image he would make more precise and correct in the degree to which he was supplied with new information. If he learnt that this machine presented the features of what men call memory, *i.e.* modified in the degree to which it functioned its way of functioning and of responding to stimuli, which was not the case with the instrument he had himself reconstructed, he would perhaps resolve the difficulty by endowing the space occupied by it with some new dimension, according to which the past of this machine was conserved and modified in some invisible way its structure. We others, who walk about in streets and lodge in inns, are able to know that this machine in question is called—a flea. The scientist could not know this, but the construction which he incessantly remodelled (from top to bottom in the stress of hours of 'crisis') would present at each instant the sum of all the measurable properties enclosed in the flea and actually known by it; and it is clear that in creating such an imaginary yet real model, exact and rigorous in all its determinations, he could continually learn, but by means of myths and symbols, more and deeper perceptions of the nature of the flea. It would be inexact to say that he did not know this nature. Only he does not know it ontologically or *in itself.*

Let the simplicity of this metaphor be excused. It only translates into terms of the senses the way in which symbolism and realism are indissolubly united in the more highly conceptual part of theoretic physics. It would be erroneous to sever and oppose them. In this particular region they compose the warp and the woof of one stuff. It is by the creation of its most daring myths that physical theory most profoundly scrutinises—in its own way, which is not that of philosophy—material reality. It is by connaturalising the intellect with material reality—not grasped in itself—that it constructs on the latter and in its place a

universe of symbols or verified myths. The closer it presses to physical reality the more it constructs these rational beings far removed from our common experience; as in the finite world of Einstein, where exactly by going away from a point it is finally rejoined, the further it transports us from the nature of the atom or the electron considered in itself the nearer it comes to this nature.

Let me hasten to add that physical theory is not symbolic as *such*; it is, as I pointed out above, *indifferent* in its use of real entities held in the measurable behaviour of things or of symbols and rational beings founded on this same measurable behaviour: and, in fact, we realise that to-day it is becoming more symbolic in the degree to which its conceptualisation rises higher, and the explanation which it elaborates becomes at once more universal and more pure (with regard to its epistemological type). The epistemological complexity of the *scientiae mediae* may disturb the taste for simplification and easy classification to which philosophers sometimes cede; but indeed they must take it as it is.

Indeed the interpretation proposed here of physical theory is more realist than that of some philosophical physicists, notably Prof. Eddington's, not only because I have insisted particularly on the epistemological importance of those real entities, either simple observable data or conceptualisations more or less approximate to these, which also make part of physics and which the new theory brings into operation, but also because, while recognising all the inevitable ideality imported by the geometrisation of physics, it also affirms even there its value as a knowledge of the real, knowing as I do as a philosopher that the existence of corporeal substances and their nature is not attained in itself, but that nevertheless it attains to them in the substitutes which it has elaborated to that end and which are founded on these natures, and which serve best when least claim is made for a progress through them to the ontological articulations of reality. Indeed if Prof. Eddington seems to lean towards a form of idealism or a pure symbolism in his reflections on physics (since he seems to hold sensory perception already itself symbolic, which implies a complete metaphysic), he is assuredly much more of a realist when he speaks as a working physicist.

Has he not said himself: 'The physicist, so long as he thinks as a physicist, has a definite belief in a real world outside him. For instance, he

believes that atoms and molecules really exist; they are not mere inventions that enable him to grasp certain laws of chemical combination. . . .'[1] In truth there is no mental attitude more contrary to idealism than that of the scientist who, face to face with nature, at once urgently seeks the inexhaustible ontological riches with which it is charged and abandons the idea of penetrating to them by any other means than those which he knows are necessarily inadequate. He has 'the sense of finding himself confronted by an enigma at once wonderful and perturbing. He contemplates it with an almost fearful respect, which is, perhaps, not without a certain resemblance to the feelings of a believer before the mysteries of his faith.'[2]

A DIGRESSION ON THE QUESTION OF 'REAL SPACE'

There is no clearer word than the word reality, which means *that which is.* But its use implies the drawing of many distinctions, and a critical consideration which is frequently difficult. Let me try, in order to apply in a particular instance these considerations of the new physics, to examine the question of 'real space'. What is meant when it is asked whether real space is euclidian or non-euclidian, or whether the space postulated by Einstein's theory of gravitation is or is not real, or when it is said that, thanks to the new physics, one of whose particular characteristics is to carry to a higher degree than any attained heretofore the identification of geometry and physics, that nevertheless 'we are approaching drawing the distinction between geometric and physical space'?[3] This distinction, I hold, is fundamental, but it is highly necessary to understand its veracious meaning.

The word *real* has not the same meaning for the philosopher, the mathematician and the physicist. If we do not keep this diversity in mind the question I have asked turns up nothing but a tangle of ambiguities.

For geometry a space is 'real' which is capable of mathematical existence, *i.e.* which does not imply internal contradictions, and which

[1] A. S. Eddington, *Space, Time and Gravitation*, 1920, p. 180.

[2] E. Meyerson, *art. cit.*, *Le Mois*, June 1931.

[3] W. Vernadsky, 'L'Etude de la vie et la nouvelle physique,' *Revue générale des sciences*, Dec. 1930.

rightly corresponds to the mathematical notion of space, *i.e.* which rightly constitutes a system of objects of thought verifying geometrical axioms; and it is obvious that from this point of view, in virtue of what might be called the circumincision of various geometrical systems—these being mutually 'translatable' and inclusive, so that non-euclidian geometries contain the euclidian as a particular instance, and nevertheless can themselves be constructed by means of euclidian materials[1]—all these geometries, and all the still more 'general' geometries which could be invented, are equally true, and their spaces are therefore equally 'real'. Euclidian space holds no particularly privileged position in any way, except that the constructibility of euclidian entities by imaginative intuition is the fundamental guarantee for the notional coherence (absence of internal contradiction) of both euclidian and non-euclidian geometric entities (since the latter can always be 'translated' into a euclidian multiplicity), in other words, of the compatibility of both euclidian and non-euclidian axioms.[2]

For the physicist a space is 'real' when the geometry to which it corresponds permits of the construction of a physico-mathematical universe which coherently and completely symbolises physical phenomena, and where all our graduated readings find themselves 'explained'. And it is obvious that from this point of view no space of any kind holds any sort of privileged position. For a long period euclidian space sufficed for

[1]F. Gonseth, *Les Fondements des mathématiques*, p. 15. In a general way it is possible to enclose a non-euclidian multiplicity of n dimensions in a euclidian space of $\frac{n(n+1)}{2}$ dimensions. 'On various occasions,' Gonseth adds, 'I have stressed the fact that non-euclidian geometries can be realised by euclidian means. The conclusion can therefore be drawn that these geometries have a province of inferior, one could say *interior*, validity to that of Euclid. On the other hand we have seen that the latter is a borderline case between hyperbolic and elliptic geometry: and now it seems to cover a limited field of validity. To make the paradox more apparent, euclidian geometry could easily be constructed out of materials taken from that of Lobatchevsky, for instance. . . . The paradox is perfectly symmetrical: any two of our geometries can each in turn appear to be contained in the other or to contain it.' Thus 'every affirmation of a non-euclidian geometry is also an affirmation of Euclid's'. He gives (p. 37) a euclidian instance with a non-archimedean proof.

[2]So persists, even for modern mathematics, and must be understood the methodological necessity formulated by St. Thomas: 'In mathematicis ad imaginationem, et non ad sensum, debemus deduci.' See *supra*, chap. i, p. 67.

the interpreters of physics: in order to construct a satisfying image of observable phenomena, they postulated, as common observation suggested, euclidian geometric properties, and attributed to factors of another (physical) order all properties not so foreseen. To-day physics has abandoned this division, and for the interpretations of a synthesis where geometry and physics may be as far as possible amalgamated in proportion to the degree to which they sever in nature, it has recourse to spherical or elliptic spaces. It is these that physics holds 'real' in the sense I have just explained, and to-morrow there may well be others.

But it is neither from the standpoint of the physicist nor of the mathematician that I see the problem. For me the question is to know what is real space in the philosophical meaning of the word, *i.e.* as a 'real' entity in opposition to a 'rational' one, and as designating an object of thought capable of an extramental existence, not certainly in the way it exists in thought, but rather as an assembly of features objective in themselves which integrate its notion or definition. Taking into account the peculiar conditions of mathematical beings and the rational condition (ideal purification) which always effects their very definition, we can say that a mathematical entity is real (in the philosophical sense of the word) when it can exist outside the mind—not doubtless under the conditions proper to mathematical abstraction (nature knows no point without extension or line without density, nor abstract number; the point, the line, the whole number are, for all that, real beings)—but in so far as its definition makes visible in a pure state or in its ideal perfection some characteristic (resulting from accidental quantity) which exists or can exist in the world of bodies. In order to be thus an *ens reale* such an entity does not cease to be mathematical, although it can only enter into actual and sensible existence by losing its mathematical purity. Taken as existing in the thing it is a feature of the latter which can only be scientifically known when detached by mathematical abstraction, which leaves on one side all properties relevant to the activity of bodies, their movement, qualitative diversity, sensible characteristics, to keep only what subsists after the emptying out of the physical.

Let it be added that the various geometrical entities (Euclidian, Riemannian, etc.), although they may be mutually 'translatable', so that all these systems are equally true, nevertheless cannot be all equally *real* in

the philosophical sense of the word. The right hand of the elliptic plane, for instance, and the figure which corresponds to it in the euclidian instance are not different expressions of one thing (in the order of the mathematical 'preter-real' there is no other 'thing' than the object of thought itself constructed according to such and such a system of axioms), they are intrinsically different entities,[1] belonging to intrinsically different worlds, which analogically correspond to one another. To affirm the reality of one kind of space is thus at the same time to affirm, not the reality, but the unreality of all the others—of which no entity can be thought of in the latter.

How then are we to know if a mathematical being—and in particular this system of geometric entities which is called a space—is or is not real in the philosophical sense? Mathematic intelligibility in itself can tell us nothing, for it is as much concerned with rational as with real beings. Neither can the verifications of our senses or our measuring instruments tell us more, since with them we quit the mathematical for the physical order, and they presuppose a mathematical model or armature which serves for a 'point of condensation',[2] a plan which was taken into account in the construction of our instruments, and in connection with which we correct and interpret the sum of the measurements affected,

[1]The expression euclidian or non-euclidian 'presupposes successively a recording and a metric organisation of multiplicity, which are independent. The epithet when given to space is only a way of exhibiting by abstraction the conventional properties of figures. There is thus not the least contradiction between the various geometries, for *they apply to different objects*' (R. Poirier, *op. cit.*). Although he holds the standpoint of a, to me, erroneous philosophy (he is a disciple of Bertrand Russell), Jean Nicod has some useful remarks on a similar point (*La Géométrie dans le monde sensible*, Paris, 1924, pp. 27–8).

[2]F. Gonseth, *op. cit.* Without doubt the space we perceive, with our crude perceptions, appears as euclidian; in other words, the physical measurements made by us, by the scale of our senses, in the region which we occupy, are most easily and satisfactorily interpreted on the euclidian plan. But the conclusions drawn from physical measurements can only have, as such, an approximate value, and physics could make use of as many non-euclidian types of space in its symbolic constructions as it wished, from the moment that it chose those at a tangent from the euclidian. 'One can always find a hyperbolic instance such that its metrics may be, in such of its parts as one would wish, as little different as should be required from the euclidian' (*ibid. op. cit.*). It follows that 'it is impossible to prove experimentally that space is euclidian', or non-euclidian, because in fact 'experimental science knows nothing of space, only the phenomena which it connects together' (*ibid.*).

by assigning the part played by accessory variations due to various physical circumstances.

Only two ways are open to this search for a criterion. We can analyse the genesis of our notions, in order to see if the entity in question, while not including any internal contradiction or incompatibility in its constituents (in which case it could not have mathematical existence) does not imply a condition incompatible with existence outside the mind (thus a logical entity, such as the Predicate or the Copula, is certainly not intrinsically contradictory, but it would be a contradiction to suppose its existence apart from the mind). Or we can consider a condition which a philosopher knows applies to the reality of mathematical entities (he knows, in effect, that for these entities to exist outside the mind implies sensible existence, which is repugnant to the state of being constructed in imaginative intuition freely and purely representing to itself what is quantitative without any *a fortiori* possibility of its positing in sensible existence): the condition of direct intuitive constructibility.

Now, among the systems of geometric entities which are called Euclidian, Riemannian, etc., space, the three-dimensional euclidian space alone is directly constructible in intuition, the others only satisfying the posited condition by the intermediation of this space.[1] The

[1] 'All the attempts which have been made to win an intuitive representation of the non-euclidian geometries—by Einstein, for instance, in his pamphlet on geometry and experience—go exactly to show that these geometries can only be rendered imaginable by reduction to euclidian geometry. I only wish that, as Prof. Eddington suggests, 'to perceive non-euclidian space' I only had 'to look at the reflection of this room in a polished door-knob and imagine myself one of the actors in what I see going on there'. (*Space, Time and Gravitation*, p. 14.) 'The image of my room in the door-knob is a due euclidian model traced on a certain determined surface of euclidian space.' (J. Maritain, *Réflexions sur l'intelligence*, p. 257.)

'Shall we say the explanation of gravitation by the curvature of space-time has an exceptional intuitive value? Evidently not; this space-time is doubly unrepresentable. First because of time, which is joined to space in a purely allegorical way; then because the curvature of a multiplicity has only an intuitive sense if we immerse it in a space of a higher order. All that we can do is to represent to ourselves a surface in euclidian space. If we wish to go farther, we are obliged to have recourse to the image of a metric established on a euclidian multiplicity, to return to a Caylian standpoint. This is what M. Einstein does at the end of his little book where he tries to make his ideas clear to the ungeometrical reader. Practically, we shall imagine foreshortened measurements, clocks which run slow for no perceptible physical cause. The geometrically rational will present itself as a physical irrationality.' (R. Poirier, *op. cit.*)

plan of the thermic universe invented by Poincaré, and in which we should have adopted from the beginning Lobatchevsky's geometry, the highly simplified successions of sensation imagined by Jean Nicod, which would endow a fictive subject with the idea of the most diverse geometries, confirm by a kind of counter-proof this privilege of euclidian space. In order to present as natural to a thinking subject another geometry than that of Euclid we have to imagine a universe which in itself is a rational being as chimerical as an *animal rationale alatum*. Finally, if we are assured by intuition, as has been already pointed out, that the euclidian entities (and in consequence the others) are free of internal contradiction, it is because intuition began with the assurance that in excluding the others the former are well able to exist outside the mind, in the nature of things.

On the other hand, it is possible to show that if it is possible to pass from the non-euclidian spaces to euclidian space, and inversely, by mathematical transformations, it is because in fact the non-euclidian geometries presuppose the notions of euclidian geometry, not certainly in their proper structure and logical development, but as a foundation for the logical coherence of the entities which they construct and as the psychological basis of conceptualisation. The process of generalisation which finds its fulcrum in euclidian geometry results indeed, not in more extended *generic* concepts of which the euclidian, non-euclidian, non-archimedian, etc., concepts would be the determinations, but in *analogical concepts* which include the one as the others, and of which the euclidian concepts represent the analogised principle. From this point of view we must needs say with Hamelin 'at bottom, non-euclidian geometry is not self-sufficient',[1] and that the non-euclidian, non-archimedian, etc., entities have the foundation of their logical existence in the euclidian. The non-euclidian spaces can then without the least intrinsic contradiction be the object of consideration by the mind, but there

[1] O. Hamelin, *Essai sur les éléments principaux de la représentation*, 2nd edit. Hamelin insists on this point on the condition of homogeneity required for the comparison of figures (an argument which is only viable if the irreducibility of geometry to arithmetic is presupposed and at the same time the impossibility of separating geometry from its intuitive origins). It is also in the name of the homogeneity of space that Whitehead, from an entirely different standpoint, seeks to maintain the euclidian character of the geometrical structure of our universe.

would be a contradiction in supposing their existence outside the mind, and thereby suppressing, for their benefit, the existence of the foundation on which the notion of them is based.

Either way we are thus led to admit, despite the use which astronomy makes of them, that these non-euclidian spaces are rational beings; and that the *geometric* properties of existing bodies, those properties which the mind recognises in the elimination of all the physical, are those which characterise euclidian space. For philosophy it is euclidian space which appears as an *ens geometricum reale*.[1]

But by the words, real space, a totally different thing can be understood, as describing space in so far as it is occupied by existences and physical actions, and which is made up of the physical, not geometrical, properties of bodies, their activities and their causality, like a network of tensions of heterogeneous qualitative intensities. This is space no longer considered mathematically or geometrically, but 'physically'; it is a qualified space, and the determinations which it admits are due to *what there is in* space, to what fills it.[2] The philosopher thus distinguishes—and for him it is a capital distinction—between physical and geometrical space; and he can forecast that, in this extended sense, as *physical* space, that real space is not euclidian (neither homogeneous nor

[1]For the natural philosophy elaborated by the scholastics (as also, though in a very different sense, for the new physics) this real geometrical space is finite; effectively existent space is co-extensive with the scale of the world. Infinite geometric space is a rational being ('imaginary space').

[2]It is apparently in this sense that Pierre Curie 'has at bottom envisaged symmetry as a *condition of space*, *i.e.* as the structure of physical space (W. Vernadsky, *op. cit.*), and one can also say with Vernadsky that 'vital space is a symmetry which is particular and unique in nature'.

The metric properties of bodies, in so far as they are physically measurable, result from physically real space. Thus it is perfectly true that 'only the union of the geometrical and the physical is susceptible of empiric verification' (H. Weyl, *Espace, temps et matière*), and without thereby abandoning the reality (which is not experimentally verifiable) of euclidian space, the philosopher can add, in another sense than that of the physicist, that the metric structure, in the degree to which it is physically measurable, is not given *a priori* in a rigid way, but 'constitutes a *condition field* of physical reality, which is found in causal dependence on the condition of the matter. . . . Like the snail, matter constructs and forms for itself this house which is its own'. (*Ibid. Mathematische Analyse de Raumproblemes*, Berlin, 1934; quoted from Meyerson, *La Déduction relativiste*, p. 93.)

isotropic), since euclidian space is precisely that (purely mathematical) one which the mind considers after the elimination of all physical content.

It is most important to realise that in speaking so the philosopher—by the very fact that he opposes the physical and geometrical as two irreducible orders—looks on things in a way wholly different from that of the new physics. Faithful to the essential spirit of modern science the latter tends, however far from this end it remains, to absorb itself in geometry. Thereby it has abandoned the absolute discrimination between the physical and the geometrical equally with the search for physical causes in themselves or in their qualitative reality. The mark of genius in Einstein is that he has bent, in order to advance freely along this road, geometry itself to the needs of physics,[1] and conceived of a space whose *geometric* properties are able to account for all the phenomena of gravitation.[2] The continuum of the thus extended universe so becomes non-euclidian and four-dimensional, where time and space are no longer independently measured, but form an indissoluble complex. The geometrical properties of so conceived space-time are themselves modified by the matter which occupies it (*i.e.* by what is able to disturb the measuring instruments of our exploration: clocks, graded rules, light rays, compasses, electroscopes, etc.); and the movement of the stars is produced in following the natural tracks which are the geodesic curves of this space-time, a curvature which the presence of a material mass further crinkles in, the planets so turning in a sort of funnel due to the incurvature of space in the neighbourhood of the sun.

Newtonian physicists have accused this synthesis raised on an immense assembly of measurements culled from nature, and confirmed by numerous verified previsions, of being 'a made-up affair'. They have lamented the abandonment of the search for the physical forces which should explain natural phenomena. As cartesian physicists saw an avowal of impotence in the substitution of attraction from a distance for rotatory movements, they in their turn see a similar avowal in the

[1] 'The metric field depends on the material realities which fill the universe.' (H. Weyl, *Espace, temps et matière.*)

[2] 'Gravitation will appear as an emanation of the metric field.' (*Ibid.*) It is thus that 'geometry, mechanics and physics form . . . an indissoluble theoretic unity which we must keep before our eyes *en bloc*'. (*Ibid.*)

substitution of geometrical curvature for mechanical force. They forget that modern physics entered on such a path from its birth: it is in avowing, not certainly explicitly (for in the beginning it believed itself to be a philosophy of nature), its impotence with regard to physical causes considered in themselves or in their essence, that it began the composition of a mathematical myth of the physical world which liberated for it the secrets of this world in the form of enigmas. The 'forces' of classical physics appear from this point of view like a precarious compromise between the 'causes' of philosophy and the purely empiriometric entities of a science of evolved phenomena, and it must be said that the new physics has accomplished a step of major importance in the progress towards the scientific conception of the universe in exhibiting at once radically and explicitly this renunciation by physico-mathematical knowledge of the search for physical causes taken in themselves, and its profound tendency to emancipate itself completely from philosophy.

But this liberation from philosophy must not itself be taken for a philosophy! There are two ways in which it is possible to interpret the conceptions of the new physics philosophically. The one is to transport them literally, just as they are, on to the philosophical plane, thus filling the mind with metaphysical confusion; the other is, in order to understand their bearing, for the mind to detach the noetic value in them. In the one case it will be said—not only, which would be wholly legitimate in the vocabulary and from the point of view of the physicist as it has been defined above,—but in a philosophical sense, that the space postulated by the new physics is *geometrically real*, and exhibits the *geometrically real* properties of the corporeal world, which would result (in the degree to which the new physics achieves or will achieve the explication of the universe by the geometric properties of the space invented for that end) in the justification in itself of a purely geometrical exegesis. To distinguish physical and geometric space from one another would then be to distinguish one geometric from another geometric space,[1] to distinguish the properties of *geometrically* real space when occupied by

[1]In this sense it is not so much a distinction as a fusion which is in question. As E. Meyerson has pointed out, 'the confusion between physical and mathematical space—it is almost useless to endeavour to explain that the term confusion is used in no condemnatory sense—constitutes a marked peculiarity of recent conceptions and clearly distinguishes them from their forerunners.' (*La Déduction relativiste*, p. 93.)

matter from the same *geometrically* real space when void of matter (mass or energy, quantity of motion, pressures. . . .),[1] and only occupied by something of the kind of that 'immaterial' ether beyond which we have not got.[2] At the same time, geometry itself, its proper object being misunderstood, like its epistemological independence and its higher rank of abstraction, would be regarded, in so far as it is not an empty 'pure' form, as an 'experimental science',[3] which would only hold, as an objective content which makes it 'true', the physical entities and mensurations thanks to which the mind chooses as 'real space', among the various formal spaces which it is pleased to imagine, the one which agrees best with the widest and most perfect geometrisation of physics.

[1]It would also be to distinguish *geometrically real space* (empty of matter or other encumbrances) and the diverse spaces abstractly conceivable by pure geometry.

[2]See *infra*, p. 224, note 2.

[3]A. S. Eddington, *The Nature of the Physical World*, pp. 161-2. Cp. A. Einstein, *La Géométrie et l'expérience*, Paris, 1921; and my *Réflexions sur l'intelligence*, p. 255. M. Hermann Weyl equally thinks that 'the existence of geometry as distinct from physics is definitely compromised' (*Espace, temps et matière*, p. 292). As Roland Dalbiez has written (*art. cit.* pp. 152-3), 'The metaphysician can only see in this a sign of the old empiricist and nominalist mood which only recognises the truth of existential propositions. That is the gist of the matter. Whether or no, in the hypothesis that no bodies existed, it would be still possible to speak of geometric truth? In all philosophies which go beyond pure empiricism, mathematical propositions do not require, in order to be true, the existence of material objects, which does not for all that imply that the knowledge of them is acquirable independently of sensible experience. Mathematical truths are of a purely essential order; when we formulate mathematically a physical law one must pass over from the existential to the essential order.'

Is it necessary to point out that the etymology of words is a mediocre means for teaching us concerning the things which they signify, and though geometry is etymologically a surveying measurement, geometry is only built up as a science when it is known as something essentially different from any survey? The new scholastic methods of the 'concrete' teaching of geometry have without doubt pedagogical advantages as methods of *initiation*, because they take hold of the child just where he is, not yet on the threshold of geometry, in order to raise him stage by stage to the science itself and its proper degree of abstraction; but if they are taken as methods of geometrical *knowledge* in itself they represent a retrogression to a pre-pythagorean childhood. It must be admitted, moreover, that this question as to the nature of geometry does not seem very clearly answered by the theoreticians of the new physics, who slip over it more rapidly in the degree to which it is thorny. They have not yet elucidated how, if geometry is 'rightly speaking an experimental science', it can nevertheless and with advantage 'have an unfettered development as a pure mathematical subject' (Eddington, *op. cit.*, p. 162).

Under the pretext that space is a network of distances (but which geometry ideally and deductively 'measures') the assumption would be made of having given geometry an object (geometry as a 'natural science') in this network of distances materially and empirically measured by physical apparatus.

In the other case it is recognised that the space of the new physics ('void' or encumbered with matter) is a physico-mathematical rational being expressly constructed to save known appearances, and which will only be modified in the degree to which errors may be found as existing between the construction already built up by the reason and the new data of experiment.[1] This rational being is seen to be in the nature of a *geometric symbol* of *physically real space* (taking 'physical' space in the sense given to it by the philosopher spoken of above), the geometric or metageometric symbol that best translates the reality of those physical interactivities whose ontological scrutiny has been abandoned for their better mathematical analysis. The double irreducibility (a form of value which is sacred for the intelligence) of the physical (considered ontologically in its essence) to the mathematical and of the geometrical to the mathematical is thus safeguarded, and it is understood that the geometrisation of physics can only be accomplished by introducing a mathematically transmuted physics into the heart of geometry itself, which has a so much richer crop of rational beings, departs so much more decidedly from real *geometric* being, that it is asked in addition to absorb it in its symbols and to mathematicise *physically* real being.

The same considerations, *mutatis mutandis*, apply to the mathematicisation of the physically real in the quantum theory, though worked in another way than that of the theory of relativity; in particular, to the structure which the new physics attributes to the atom, or rather to the way in which for several years it has changed the said structure from day to day. It seems as though science tended to endow this structure—which has so become unrepresentable and at the same time detached from any ontological meaning—with a purely abstract mathematical

[1] '... This question of the deviation of light leaves the way open for an evolution of the theory (of generalised relativity); explanations of gravitation by non-Riemannian geometry can be developed, and it is possible that in consequence these new geometries will enable us to achieve the synthesis of electro-magnetism, and in consequence, of physics and gravitation.' (P. Langevin, *L'Œuvre d'Einstein et l'astronomie*, *art. cit.*, p. 294.)

equivalent, a more and more fictive, a more and more perfect symbol of the real nature, which is unknown in itself, of some existent thing to which the determining name of *atom* corresponds, so that it may know this nature more and more profoundly, but more and more enigmatically, or indeed meta-phorically, in the degree to which it builds up the myth—the rational being founded *in re*—which takes its place.

II. THE PHILOSOPHY OF NATURE

According to a phrase of Prof. Eddington's, the physicist of to-day, who knows that 'our knowledge of the objects treated in physics consists solely of readings of pointers and other indicators', and who also knows that 'this schedule of pointer readings' is 'attached to some unknown background', is much less tempted to believe than 'the Victorian physicist' that nothing is true except what can be reconstructed by an engineer[1] or that physics is all-sufficient. Rather he is led to believe 'that a just appreciation of the physical world as it is understood to-day carried with it a feeling of open-mindedness towards a wider significance transcending scientific measurement',[2] although he feels all too ill-equipped to discover for himself whither this feeling should lead.

This is true not only for physics but of empiriological knowledge in general. It is clear that in its essence such knowledge remains insufficiently explanatory, and with it the mind cannot be content. The philosophical or pre-philosophical substrata which the scientist himself cannot transcend are a clear indication of this. Some knowledge of being itself is needed, of corporeal, sensible and mobile being, of the being immanent in these natural realities in which the phenomenological sciences find their end and their verification, the basis of all their conceptual constructions, over which they give us practical power. Such

[1] A. S. Eddington, *op. cit.*, pp. 258-9. 'The physicist now regards his own external world in a way which I can only describe as more mystical, though not less exact and practical, than that which prevailed some years ago, when it was taken for granted that nothing could be true unless an engineer could make a model of it. There was a time when the whole combination of self and environment which makes up experience seemed likely to pass under the dominion of a physics much more iron-bound than it is now. That overweening phase, when it was almost necessary to ask the permission of physics to call one's soul one's own, is past.' (*Ibid.* p. 344.)

[2] *Ibid.* p. xviii.

knowledge must evidently have another object and other characteristics, build itself up on another noetic plan than what in our modern phraseology is called science; its office should be neither the continuation of science on the same plane (in that direction, as M. Bergson once said, 'Beyond science there is only ignorance'), nor the decoration of the results of science with noble and vague meditations. Though its rules of explanation are not those of science in the modern sense of the word they should certainly merit the name of science in the qualitatively deeper and more authentic sense which was known to the ancients, and which creates its possibility. For the natural sciences do not only lead the mind to desire this—in themselves, in their witness that nature is knowable and that nevertheless they themselves can only know in an essentially unsatisfying way, they testify that a form of knowledge is possible, where the intelligence, actualising the mysterious intelligibility of things at a deeper level, discovers in these sciences the being towards which they aspire as their natural object: always on condition that the mind can resign itself to the necessary curtailment and ascesis, and understand that in order to grasp a little of the being of things it must renounce the will to utilise this more noble knowledge, which is yet quantitatively poorer, for any speculative or practical exploitation of the riches of phenomena.

This is a form of knowledge which, even in one connection only, and in a given order (in the order of sensible nature) is a wisdom, a thing of 'fruition', not of 'usage'. And all wisdom must, in one way or another, 'pass through the eye of a needle'.

It was in the quest for such philosophical comprehension that the knowledge of the natural world began. But it has taken long for it to learn the spirit of poverty. The misfortune of the philosophy of nature among the ancients was that it believed it was a science of phenomena. Let us also call by its proper name, the philosophy of nature, the form of philosophical apprehension I am here seeking to define: but let us understand that it must needs lay aside all pretensions to cross the frontiers of its essence and conquer the world. It we are going to refer ourselves to the philosophy of nature which in my opinion is most securely based, and which has the privilege of being in continuity with the most pure metaphysic, the philosophy of nature as conceived according to the prin-

ciples of Aristotle and St. Thomas, let us be equally well aware that it is indispensable (and not half so difficult as is ordinarily imagined) to separate those principles from the applications and illustrations for long connected with the scientific conceptions of the ancient world; and clearly see that this knowledge of wisdom, this philosophy of being essentially subject to change, is completely free in itself from any connection with an astronomy and a physics forever gone to ruins.

But what concerns us here are the epistemological characteristics and conditions of the philosophy of nature. It is in intelligible being itself, however obfuscated it may be by sensible matter, that such a form of knowledge resolves its concepts; it results from a type of ontological explication open to the natural motions of the speculative intellect. It is not with empiric conditions, but with reasons of being and causes in the true sense of the word that it is connected; it is the essence of things that it seeks to discover. Proceeding, like all philosophy, according to an analytico-synthetic method, it depends on experience much more closely than does metaphysics and must be able to submit its judgments to the verification of the senses; but it is a deductive apprehension, assigning reasons and intelligible necessities in the degree to which it is assured of the intrinsic constituents or the 'quiddity' of its objects. It is by this, for example, that it is able to instruct us concerning the nature of continuity and number, of quantity, space, motion and time, of corporeal substance, transitive action, vegetative and sensitive life, concerning the soul and its operative powers, etc., and also to consider the ontological disposition of this universe, *i.e.* as Aristotle does at the end of the *Physics*, its relation to the First Cause, and the adjustment between the necessary, the contingent and the fortuitous in the course of its events.

If we wish to define the philosophy of nature, we must say that it is a form of knowledge which has as its object, in all the things of corporeal nature, mobile being as such, and the ontological principles which give the reason for its mutability. It was Aristotle who founded this science, Aristotle who showed that an ontology of the sensible world is possible, not so far as it is sensible, but in so far as it is the world of *changing being*, and that it implies in its structure intelligible invariants dependent on specifying forms.

While metaphysics embraces the whole domain of intelligibility not

as such immersed in the sensible, physics in Aristotle's meaning of the word embraces the whole domain of the intelligible which is so immersed. In the conception of the ancients all the sciences of the material world make part of this form of knowledge, a mark of a singular optimism and a most candid philosophic imperialism. With their minds first of all fixed on philosophy, they had a tendency to absorb all the other natural sciences into it. In certain spheres, nevertheless, these sciences had already come to the knowledge of their own proper methods and autonomy, but they regarded these as a special case of *scientiae mediae*, envisaged as the mathematical treatment of questions of natural philosophy. And in the degree to which otherwise the philosophy of nature filled the place of a scientific systematisation of the detail of phenomena this too often gave rise to explications of an extreme analytical insufficiency, which was often only verbal.

As I have had occasion to point out in a previous chapter, it is very important not to forget that, as St. Thomas often says,[1] the essence of sensible things remains in general hidden from us, by reason of the

[1]Cp. *In Sent. II*, dist. 35, q. 1, a. 2, ad. 3: 'Sicut aliquando utimur non veris differentiis loco verarum, propter earum occultationem, ut in *I Post.*, text. 35, dicitur, ita etiam loco veri generis potest poni aliquid per quod genus magis innotescat.' *De Veritate*, 4, 1 and 8 (quoted *infra*, p. 252, n.). *Contra Gent.*, i, 3: 'Rerum sensibilium plurimas proprietates ignoramus, earumque proprietatum, quas sensu apprehendimus, rationem perfecte in pluribus invenire non possumus.' *In Metaph.*, book vii, lect. 12: 'Quandoque aliquis dividens . . . dividat per ea quae sunt secundum accidens, propter hoc quod non potest invenire proprias et per se differentias. Aliquando enim necessitas cogit ut utamur, loco per se differentiarum, differentiis per accidens, in quantum sunt signa quaedam differentiarum essentialium nobis ignotarum.' See *infra*, p. 255 (note 1).

'Here on earth,' writes R. Garrigou-Lagrange, 'man is the sole being whose specific difference belongs to the purely intelligible and not the sensible world: which is what allows us to deduce his different properties. Lower beings only become truly intelligible in their transcendental (or common to all beings) and generic features.

'We know, for example, that mercury is a corporeal substance, a liquid metal, but we do not know by that its specific differentiation. We only have, when it becomes necessary to make precise these generic notions, an empiric, descriptive definition, which does not stretch to making *intelligible* the properties of this body. We content ourselves with saying that mercury is a liquid metal at an ordinary temperature, silver white, soluble at 40 degrees, which boils at 360 degrees, very dense; its salts are very potent antiseptics, but also very toxic. We can state the facts but we cannot state their *why*. It is the same for the plant or the animal: who can assign the specific differences of a species so that one could deduce the properties? If it is a question of man on the

matter in which it is included. It is only in the mathematical order that we can consider a world of essences as discoverable, which is why it is the most dictatorial and sumptuous form of human science. In the physical order it is indeed possible to reach certain essential and specific determinations concerning man and the things of man (his powers, habits, etc.), but below man, at most times, the element of resistance to intelligibility which belongs to matter, which renders corporeal natures opaque to us, and knowledgeable by signs rather than by properties in the ontological sense of the word, causes the essences to remain hidden from us *in their specific nature*. It follows from this that the philosophy of nature cannot reach to the ultimate specific diversities of bodily nature. And this implies a grave restriction of the philosophic optimism of the ancients.

When it is a question of the distinction between certain very widely extended spheres—living and not living bodies, animals and vegetables, men and irrational animals—the philosophy of nature is well able to grasp the essential differences. There we are in a region accessible by the philosopher, we achieve truly philosophical certitudes, in the very order of typological discrimination. In other words, we know that there is an essential difference between vegetable irritability and animal sensibility; we know that the immanent activity by which the living organism builds itself up, sensation, intellection, reveal quidditative principles which enable us to enter into the inward structure of the beings under consideration. We know that the body as such is built up by two complimentary ontological principles, the one purely potential and determinable, the other specific and determining, which we call the 'prime matter' and the 'substantial form'.

But the philosophy of nature must remain content with certitudes of such a high degree of universality. It must leave all questions of the diversities and specific particularities of the world of bodies, all the detail of the workings of sensible nature, in the hands of that knowledge which Leibnitz called 'symbolic' or 'blind', and which here I have suggested calling empiriological. That knowledge can enter into the fullest

contrary, among all the features common to all men—rationality, liberty, morality, sociability, speech, religion, etc.—one, rationality, appears like the *raison d'être* of all the others. . . . All these features can be rendered intelligible, *i.e.* knitted up with being, by the intermediation of rationality.' (*Le Sens commun, la philosophie de l'être et les formules dogmatiques*, 3rd edit.)

detail: it is the essence that escapes it. If it is a question of deciphering the multiplicities of becoming, the interactions which make up the splendidly multiform and close-knit play of nature, the philosophy of nature can doubtless have, indirectly, a heuristic value, in the stimulations which it is able to exercise in the minds of scientists (above all in the case of those sciences which I have called empirico-schematic). But in itself and in its own proper field it makes no such claims. There is no other science of the phenomena of nature than the empiriological, and that science is not a philosophy.

It must here be stressed that apprehension is only perfect when we can know things, not only in a more or less indistinct fashion, leaving off at generic determinations, but in descending to the most ultimate specific determinations. If metaphysics is a perfect apprehension (I shall return to this point later), it is because its specific object (being as such drawn from things by *abstractio formalis*) is not a genus but a transcendental, which taken as such, is at the ultimate degree of logical determination.

What then is the case with the philosophy of nature? Its object is not the *ens in quantum ens*, the object of the metaphysician.

Neither are the specific natures of the world of bodies, as we have just seen, its object. These natures *would be* the specifying object of the natural sciences, if these sciences could, as they cannot, attain to it; they stop at an empiriological knowledge. For all that the philosophy of nature, no more than metaphysics, does not only bear on simple generic determinations. In reality it considers corporeal and mobile things from the standpoint of the transcendental being with which they are saturated. In this way it shares in some degree in the light of metaphysics, as our souls also share in a way in the nature of pure spirits. The specific object of the philosophy of nature is, in corporeal natures taken as such, the ontological mutability and the formalities by which the mind can discern a difference of being (corporality, quantity, movement, life, animality, etc.): which is sufficient to assure to it its distinction from and autonomy with regard to the experimental sciences.

But, on the other hand, sensible or mobile being is not complete in itself; only has the integrity of its determination in specific natures. The experimental science of nature and the philosophy of nature are two distinct forms of knowledge, but each incomplete, ruled by different laws

of procedure, the one above all of the intelligible, the other above all of the sensible, and which result, well or ill, in self-completion. It is by this that they both belong to the same degree of abstraction, although, from another point of view, as we have seen, the philosophy of nature may be essentially different from the natural sciences.[1]

I could gladly compare the relation of the philosophy of nature with the sciences of nature with that of the rational soul with its body. In itself the former is independent of the state of development of both the latter and their hypotheses. It rests on 'philosophic facts' which are much more simple and fundamental than 'scientific facts'.

Nevertheless, to insist too exclusively on this independence, as the philosopher is often inclined to do, is to risk losing sight of the intimate and substantial union which should rule over these two sections of the knowledge of the sensible world. For three centuries, during which the natural sciences have been subject to the fascination of a mechanistic metaphysics, the authentic philosophy of nature has been in the

[1]This difference must be regarded as essential and specific, if it is true that it is the degree of immaterialisation of the object constituting the *terminus ad quem* of the abstractive operation and shown by the *mode of definition* which brings in the specific differentiations among the sciences belonging to the same generic degree of abstraction (cp. *supra*, chap. i, p. 45, n.). It is clear that empiriological definition, by its resolution in the observable as such, is essentially different from that of the ontological type, with its resolution in intelligible being. The difference between the philosophy of nature and the phenomenological sciences, whether empiriometric or empirico-schematic, is thus much more marked than that between arithmetic and geometry, which are, for the scholastic, two specifically distinct sciences.

John of St. Thomas thus distinguishes between natural philosophy and medicine ('quae licet utraque abstrahat a materia singulari, tamen magis concernit materiam corpus ut sanandum quam corpus mobile ut sic', log. ii, P. q. 27, a. 1: cp. *Phil. Nat.*, i, P. q. 1, a. 2). And if St. Thomas seems to put the philosophy and the sciences of nature in one specific class, where the diverse differences of concretion in the object only differentiate in so far as they are more or less (cp. *Com. in de Sensu et Sensata*, lect. 1), it is precisely because in his epoch the natural sciences, except in certain fields already subject to mathematicisation like astronomy and optics, had not yet conquered their methodological autonomy, and still constructed their definitions on the model of natural philosophy.

The soul and the body constitute a complete substantial whole *ratione speciei*, and thereby the comparison of the relation of the philosophy of nature to the natural sciences to that between the soul and the body is defective: it is from the point of view of the integrity of the reality which is to be made known by both the philosophy of nature and the sciences that this comparison has its value.

condition of a disembodied soul. It has so undergone a purification from many defects; to-day it has come once more in contact with experimental science. This contact is both natural and necessary.

If the philosophical facts on which natural philosophy is based (*e.g.* there is a real specific diversity in the world of bodies; there are substantial mutations; living organisms are endowed with an activity which returns upon itself, etc.), if these philosophical facts can be established as starting from common observation (subject to a philosophical criticism), nevertheless it is proper that in relation to the self-development of the positive sciences they should be illuminated also from the standpoint of scientific facts, in so far as the latter can be disengaged from theories. In themselves, scientific facts are incapable of producing any philosophical decision, but the rightful penetration of these objects and their philosophical principles, like the light of the active intellect striking on phantasmata, can release in them the philosophical content with which they are pregnant.[1] Permanent as are its essential determinations, natural philosophy must thus also bow to the law by which things grow old and are renewed, of fading and transformation, imposed on the fleshly garment which it receives from the experimental sciences, and thanks to which its material supply of facts accumulates so marvellously; while it also must free itself from certain (not philosophical, but general or 'vulgar') representations, which have been taken for pre-scientific interpretations, implied by the familiar world of the senses.[2]

[1]Cp. the views so wisely stressed by the regretted P. Geny in his article, 'Metafisica ed esperienza nella cosmologia,' *Gregorianum*, 1920, vol. i.

[2]Thus many of the ideas held by the natural philosophy of the ancients with regard to the continuity of matter since the invention of the microscope have needed and will still require to be submitted to a serious revision, where it is a question of bodies exhibiting only the appearance or the real character of substantial individuality. The question presents itself of knowing whether the substantial unity of the individual body (*e.g.* such and such a molecule of gas, or some living organism) necessarily requires, as the ancients believed, continuity by extension—in other words, whether the substantial form cannot inform a whole made up of discontinuous parts, which may be contiguous (like, for example, plasms of the blood and the arterial surround) or may be, in the atomic scale, separated by intra-atomic or intra-molecular interspaces (in cases where, in contradiction to Gredt's hypothesis, these interspaces are not in themselves informed by the substantial form of the individual whole). For my part, I regard such a structural discontinuity as compatible with the substantial unity of the individual whole, and am of opinion that the thomist theory of individualisation by the *materia*

The doctrine of hylomorphism, for example, is as true to-day as it was in the time of Aristotle; it is its vocabulary and its exemplifications which have worn out, not its substance; only the four elements of the old world have been replaced by the ninety-two elements of Mendeljeff's table, which correspond to very different scientific notions. We have a much closer knowledge of this tribe of elements than the chemists of a hundred years ago; and it seems more than possible that they all derive from the hydrogenic atom by a series of changes which a philosopher must needs regard as substantial mutations. Radio-active phenomena furnish us with proofs of such changes *de natura* in the world of bodies; not doubtless in itself a pure and simple scientific verification (it is for philosophy, not science, to establish a fact whose formulation implies the notions of substance, nature, species, etc., metaphysically understood), but an indication or 'sign' empiriologically remarkable which the philosopher acting with prudence can disengage as such. The existence of the micro-structure of matter is a definitely established fact (which leaves open the rightly ontological question of the essence of matter).[1] If science incessantly revises and renews its conceptions of spatio-temporal organisation and the properties of the atom, it is by affirming in so far the existence of the so-named primitive complex. And indeed this assembly of empiriological forms of knowledge agrees rather with the ontology of Aristotle than with that of Democritus or of

signata quantitate is thus verified without any special difficulty: the transcendental relation between matter and quantity needing to be understood, in this case, as a transcendental relation to a constellation of positions.

On the other hand, it is apparent that 'organisation' must not be regarded as the privilege of living matter. The atom also is 'organised'—but without the *progressive* equilibrium and *self-perfecting* activity (*actio immanens*) characteristic of life.

[1]Although indeed the present state of micro-physical theories and the epistemological structure of physico-mathematical knowledge are in high contradiction to any such hope, I do not imagine it is impossible that some day the configuration of matter, the disposition and distribution of its parts in space—not only the demicells, molecules, ions or atoms, into which the mind discomposes a material mass of large dimensions, but the constituting parts of the atom itself—may become the object of a knowledge from which all symbolism will have been eliminated. Even supposing that such a knowledge of the *configuration* of matter were perfect, it would always leave open the question of its *essence*. The configuration of a body may be a compound of electrons and atoms, but the essence is a substantial compound of potency and act.

Descartes (and I might add, doubtless much better than the experimental conceptions in favour with the alchemists of the Middle Ages).

SOME COMPLEMENTARY ELUCIDATIONS

But how is this possible? Prof. Eddington, with his vivid descriptive imagery, declares that a body is 'a world-tube of four dimensions, separated from the rest of space-time by a more or less sharp limit'. This is far enough away from the world of Aristotle!

From Aristotle's scientific ideas, yes: but what we are considering is his philosophy. Whether an elephant be an isolated world-tube with four dimensions or a block of flesh and blood composed of four elements and the four primary qualities, in one case as in the other there is no resemblance between the idea, which is expressible in an image or in a spatio-temporal scheme, and at least *reductively*[1] figurable, which science or common sense has of this animal and the *essentially* unfigurable and purely ontological conception which belongs to the philosopher in his first statement of the principles which constitute the substance of the same elephant.

Primary matter and substantial form belong to another noematic universe than this block or this tube; the theory of hylomorphism is favoured by neither the one nor the other, for it is based on another foundation than these images. Whether it be a three-dimensional block or a four-dimensional tube, the elephant must needs perform that operation, which the man in the street and the scientist call by the same name though seeing it under very diverse terms, which is known as 'eating': and it must needs end by that phenomenon which both call 'dying'. And the philosopher, who knows that the elephant in question is an individual 'substance', 'a thing in itself', specifically different from the vegetable substances which it assimilates by nutrition and the

[1]Such an idea can be (cp. chap. i, p. 59) *unfigurable by default* as a result of the conditions of the observability of the object, it can also, in consequence of the mathematicisation of the physical, be only representable to the physical imagination metaphorically, or even be only representable (yet more indirectly and analogically) to the mathematical imagination, as is the case with the waves of wave-mechanics. It does not cease thereby to belong to the order of the imaginable or the figurable, in the same way that the point is without extension while yet *reductively* belonging to the order of extension.

inorganic materials into which its body can be decomposed, is constrained to seek for the subject of these substantial mutations in a radical potentiality which, following Aristotle (he could look to a higher name), he will call prime matter, of which naturally, he will be incapable of either describing the features either in a space of three dimensions or of four (for it has no features), or of explaining how, at once unformed and transcendentally determined by the specifying 'form' which joins with it to compose a single substantial being, it can clothe itself with 'accidentals' and become accessible to the calculations and observation of the ordinary man under the appearance of a compact mass, at once tangible and visible, or a prodigious swarm—which is, for all that, unrepresentable!—of protons and electrons, *i.e.* of 'undefined particles' and waves in motion in a given space, which are all only statistical symbols.

An insoluble hiatus perpetually attests the difference of order which distinguishes philosophical from scientific explication; both being legitimate and necessary. I might point out in parenthesis that if they had been sufficiently observant of this fact some eminent scientists would not have been led to confound 'substance' in the philosophical sense of the word with 'substance' in the common interpretation, as it is imagined in terms of that first outline of scientific knowledge which is commonsense observation and thanks to which we know that the table is not penetrated by the sheet of paper that we lay on it.

According to the principles of the argument which we have been pursuing, the Einsteinian universe of four dimensions and its curvature, like the electron or photon of to-day, must needs be regarded as pure physico-mathematical rational beings founded on the real. The question then arises of what form of relation can be sustained by philosophy, no longer with the facts or *entia realia* more or less completed by the reason, but with pure *entia rationis* and the well-founded myths of science. Here a point previously outlined must be completed.[1] In my opinion natural philosophy must take over the *entire* deposit of the experimental sciences: but if it can be based on the facts established by these sciences, as on a strange substance which it appropriates for its own use, it is obvious that it cannot look to ask from physico-mathematical rational beings a means of elucidating the ontological nature of things in

[1] See *supra*, chap. i, pp. 76–81.

themselves. It is in another way that it should make use of them, in the degree to which each is an element of the image of the universe elaborated by science. For the philosophy of nature cannot dispense with scientific imagery; it needs the image (can the word still be used when it has become *unimaginable*?)[1] or the symbol which the science of its day fashions of the world. Moreover natural philosophy is aware that certain of the more serious entities which it itself constructs are myths, masks of the real which it proffers to the mind. And it is its duty to remember to make these—most of all because of the mathematical rational beings which serve in their construction—more and more unrepresentable by the imagination. By this heroic remedy it will escape from the temptation to represent, like a Descartes or a Democritus, the secret fibres of nature according to the gross plan of the models which our eyes and our hands can see and grasp. Science, which is absorbed in the world of the sensible and the figurable—and which is nevertheless led by its very progress, not to transcend, but rather to dissolve it in what then only *reductively* belongs to the world of figurable,—holds in this a great lesson for the philosopher. Should he not have recognised for himself that the primary spatio-temporal elements of the world of bodies, by the very fact that they make up the complexes which fall naturally within the sphere of our senses, cannot resemble these complexes? The world which is constituted by them cannot resemble anything known by our senses; to penetrate into it is to pass a shadowy threshold disturbing to the imagination: and in the lack of fuller knowledge, the unrepresentable myths of science have at least the merit of reminding us of this fact.

What, nevertheless, can the philosopher make of a myth? Doubtless nothing but another myth, this time a philosophical one. There is no other way in which natural philosophy can assimilate the myths securely based on physico-mathematical apprehension into its own order than by itself turning to the making of myths. Do not we know that in a way the philosopher is a 'lover of myths'? *Philosophicus est aliqualiter philomythes*?[2]

[1]See *supra*, p. 221, note 1.

[2]St. Thomas, *In Metaph.*, book i, lect. 2. In fact Aristotle did not say that the philosopher is in a way a mythophil, but that the mythophil is in some measure a philosopher: '*ὁ φιλόμυθος φιλοσοφος πώς ἐστιν.*' (*Met.*, A. 2, 982, b. 18.)

An immense field is thus open to the creative imagination of the philosopher, *e.g.* when he wishes to interpret in the light of an otherwise well-established philosophical doctrine, such as that of hylomorphism, the provisionary image which science fashions of the micro-structure of the atom. Hardly will he have invented a sufficiently likely hypothesis, assuming, for example, that substantial form informs, like a central nucleus, the intra-atomic ether and the electrons which circle it,[1] when the theories of Rutherford and Bohr, on which this interpretation is grounded, will begin to fall into dissolution. He must needs re-adapt it or invent another. The philosopher can exercise his wits on a four-dimensional universe, or the ether, of which to-day physicists are 'careful not to speak',[2] although it still seems that they will find some difficulty in getting beyond it. But if in the course of such work he is convinced that he is occupied with philosophy in the rightful sense of the word, we can only regretfully compliment him on his courage.

Although there is no continuity of rational explication and the understanding of things between physico-mathematical theories and natural philosophy, we can so see that a secondary connection can be established in regard to their imagery, in so far as it is true that it is of the nature of natural philosophy to add to the field of directly philosophical

[1] J. Gredt, *die Lehre von Materie u. Form u. die Elektronentheorie*, cp. M. de Munnynck's communication to the Thomist Congress at Rome, 1925; articles in the *Revue thomiste* (1900) and *Divus Thomas* (Fribourg, 1928); Leslie J. Walker, S.J., article in *Philosophia Perennis*, vol. ii, pp. 831-42; and the highly contestable, in my opinion, *Essai* by P. Descoqs.

[2] 'I remember a conversation I had some twenty years ago with P. N. Lebedeff, the eminent Russian physicist, who told me it was only possible to speak securely of the ether. That was the time when the notion of the electron was beginning to enter into physics. To-day physicists are careful not to speak of the ether and some of them doubt its very existence.' (W. Vernadsky, *L'Etude de la vie et la nouvelle physique, art. cit.*, p. 700.) 'The ether, Lord Kelvin declared, is no imaginary creation of speculative philosophy; it is as essential to us as the air we breathe.' (E. Picard, *Un Coup d'œil sur l'histoire des sciences.*) 'Nowadays it is agreed that ether is not a kind of matter. . . . This does not mean that the ether is abolished. We need an ether. The physical world is not to be analysed into isolated particles of matter or electricity with featureless interspace. . . .' (A. S. Eddington, *op. cit.*, p. 31.) 'Einstein likewise holds that we cannot eliminate the notion of "a medium lacking all mechanic and cinematic properties, but which determines mechanic and electro-magnetic phenomena. . . ." ' (E. Picard, *op. cit.*)

knowledge, and that it requires by its own essence a region of philosophical myths destined to accord with the well-founded myths used in physico-mathematical theories, as the completion of its union with the experimental body composed by the sciences.

It is a point very worthy of attention that the world of sensible nature is the only one in which we find our apprehension shared at once by a philosophy and an experimental science, the one being the soul of the other's body. Such a duality is found in no other universe of intelligibility. Mathematics has no ontological soul; it has only an abstract and ideal body. Metaphysics has no empiriological body, it has only a spirit.

III. THE MECHANISTIC THEORY

If the preceding analyses are correct, we can see that the central fault of modern philosophy in the sphere of natural knowledge has been to give an ontologically explicative value to that form of mechanistic attraction immanent in physico-mathematical knowledge, and in taking this for a philosophy of nature. This it is not; it is an empiriological analysis of nature mathematical in form and direction (an 'empiriometric' analysis). Though it is true that such an analysis must inevitably build up for itself a world of explicative entities destined to sustain mathematical deduction, it is clear that, on the one hand, this world will be, as we have seen, pseudo-ontological, abounding in rational being, and, on the other, that it will be orientated towards the mechanistic as its ideal limit (although never wholly attaining thereto, since all the 'irrationals' which science is bound to admit are opposed to an effective mechanistic reduction). Mechanistic representations are in effect the sole residuum of ontological explication able to enter into the substance of mathematical physics itself; it is therefore with them that the physicist endeavours to construct the system of principles and reasons of being of a physical or geometrical order of which he has need. But in that case it is a question of provisional representations, whose whole value exists, not in relation to the real envisaged in itself, but with regard to the mathematical relations which they sustain; a question not of philosophical, but of a methodological mechanism, at once problematic and

auxiliary. It would be possible for philosophy to retain this approximative spatio-temporal image, this well-founded myth which has contributed to build up the structure of that universe and its elements: it cannot endow it with an ontologically explanatory value.

In what degree then does the present 'crisis' of physics imply new points of view?

First of all, the new physics seems to have turned its back on mechanism. This is true in the degree to which we may take the word 'mechanicism' in a strict sense, as it is understood by classical geometry in Descartes' aphorism: 'the whole of my physics is only geometry.' But the deepest centre of mechanistic theory is not geometricism, it is mathematicism: and on the other hand, geometry itself, in the degree to which it becomes abstract, tends to become co-extensive with mathematics. We can say that the new scientific conceptions only make more daringly manifest the scheme of transmuting physics into a universalised mathematics. That the geometrisation of physics may reach this aim through a re-fashioning of geometry under the influence of physics (which reduces it all the more easily for the care that has been taken to penetrate it), I have already pointed out. But that in effect implies little. Also these crises and transformations of the mechanistic ideal must not be taken for its decease. The physicist will always remain attracted by the ideal of a 'unification of all knowledge concerned with the physical world in a single science which will be expounded . . . in geometric or quasi-geometric terms'. And as this tendency is not towards a philosophical geometricism, he will accept without difficulty, in order to achieve more nearly this ideal, all the reconstructions which the apprehension and symbolisation of the physically real impose on mechanics and geometry in themselves.

It is here that the epistemological superiority of the new physics becomes patent in the eyes of the philosopher: it exhibits more clearly than classical physics, makes obvious to all, the purely methodological and supplementary character of the mechanicism or pythagorism of the scientist. On the one hand it rehabilitates the reality of motion which strict mechanicism has destroyed—a recognition of that irreducible reality which is, it seems (at least to the eyes of a philosopher), at the origin of the theory of relativity. But then, in order to safeguard the

geometrisation of physics, it finds the need to *mobilise* measured dimensions, the pointer-readings made by the observers of various systems of reference, to abandon the spatially unique and absolutely immobile frame which the mechanistic philosopher took over from mathematics to hold his cosmos, and within which he saw all the movements of the universe as variations of a pure ideal spectacle, for, attaching an ontological value to geometricism, he has no means of philosophically considering movement as real. The new physics has no more thought for the philosophic reality of movement (that is not its affair), it is perforce that it finds a place (with the assistance of numerous rational beings) for this reality in its physico-mathematical synthesis; and by this very fact it attests that the mathematicism towards which it tends has not the slightest ontological claim.

On the other hand, it has been compelled to recognise a certain disparity between the notions and principles applicable to phenomena in our large scale dimensions and those applicable to the atomic scale. This is so because, as was recalled above, in the atomic scale the individually taken material particles cannot be subjected to both a continuous observation and determination. And if it is true that the resolution of concepts in empiriological knowledge takes place exclusively in the sphere of the observable and the measurable, and that in consequence in such a form of knowledge a concept only has meaning with regard to the experimental circumstances and method which serve to define it,[1] it follows that, in the atomic scale, the very notion of the empiriological object is modified. It designates something observable and measurable, a possibility of observation and mensuration, but this very observability and measurability are fundamentally different.

Thus is it not astonishing that the entire organism of scientific explanation should differ in the two cases, and that it should, for example, here and there admit of exigencies mutually incompatible with the law of causality. This capitally interesting result makes evident the fact that the mathematicism (above all statistical and, in the case of microphysics, indeterminist in form) and the geometrisation of physics have

[1] 'Our knowledge of the external world cannot be divorced from the nature of the appliances with which we have obtained the knowledge.' (A. S. Eddington, *op. cit.*, p. 154.)

lost all philosophical claim, any pretension of telling us the nature of material things in themselves: unless physics should itself interdict its proposition to us under two different scales, I do not say of two different images, that goes without saying, but of two conceptions of the same world which are rationally heterogeneous, whose sole continuity is supplied by mathematical formalism.[1]

'LES LIAISONS DANGEREUSES'

This is not the place in which to try to reckon up the opportunities which the new physics offers to philosophy, either in the order of facts or of the apologetic conveniences, so to speak, which it presents. I would only proffer certain brief suggestions.

Is Carnot's principle, which Prof. Eddington writes of with such singular charm (and which is not an acquisition of the new physics, but which inextricably subsists in it, at least in the macroscopic scale), able to cast any light for us on the problems of the origin of the world? The deceptions which have resulted from some philosophical attempts, the diversity of the opinions entertained by scientists as to the degree of estimation in which the principle itself should be held, call on this point for the most careful reserve.[2]

[1]Supposing the physics of the future renounces, like P. Langevin, the notion of corpuscular individuality in order to save scientific determinism, these two pictures of which I spoke will remain none the less heterogeneous, witness, in this precise case, the abandonment of the notion of the individual in the atomic scale.

[2]In any case the principle is unable to provide in itself a 'scientific' elucidation of the problem of the creation, even if it is admitted that it obliges us to presuppose, at the first stage of the history of the cosmos, a maximum degree of organisation of energy—an organisation which 'is, by hypothesis, the antithesis of the probable, something which cannot happen fortuitously'. To draw from this the conclusion of divine intervention at the origin of the world would be for science a coming out of the sphere of its own possibilities, *μεταβαίνειν εἰς ἄλλο γένος*. To establish such a philosophical conclusion philosophical procedure is necessary, which would bring into play philosophically elucidated notions (of which the physicist knows nothing) such as ontological causality, the analogy of being, potency and act, order, finality, etc., and would imply that the notion of entropy itself had taken on not only a physico-mathematical, but a philosophical meaning.

This elevation to a plane of superior intelligibility is maybe, it is true, possible in the light of philosophical principles: if it is admitted that the second principle of thermo-

But the second law of thermo-dynamics offers other possibilities to the philosophy of nature, in particular with regard to the living organism. Is it not one of the marks of the irreducible specificness of the latter that, without violating this principle, rather, on the contrary, applying it to its own use, it utilises the universal process of the diminution of energy to variously recompose both its order and organisation, to raise for a time the degree of being (I do not say with regard to the quality of the energy, for life does not belong to one special form of energy, but with regard to the perfections of a higher, properly biological or psychic order)? (Material) life is a constructive fire which feeds upon decay.

On the other hand, certain conformities seem to create between the philosophy of nature and the image of the universe elaborated by the new physics zones as it were of affinity. The hope of deducing the diverse physical constituents of the world of experience starting from the minimum of primary notions (selected with a freedom possessed by no metaphysician), the idea of a finite universe, which is nevertheless, as a result of the curvature of space, without limits, and which, according to the most recent hypotheses, is expanding, still more that of the discontinuity of energy and the variability of mass, find, abstraction being made of their particular and scientific value, an *a priori* complicity, so to speak, in natural philosophy (and I do not only speak of a necessarily

dynamics is applicable to the universe considered as a whole, and if one is in accord with Prof. Eddington (*op. cit.* pp. 74-5) in what he writes of entropy, it seems that such a supposition is possible, by reason of the very singularity of this notion. In this way, granted that the more time advances the more (of which the 'increase of entropy' is the empiriometric sign) a certain internal order immanent in the activity of the material world irreparably diminishes, natural philosophy could already, before giving place to metaphysics, rise to the consideration of the first cause, from which the order in question proceeds.

Such a way to the first cause nevertheless remains less perfect than that of metaphysics, because in any case it only shows the necessity of divine action *at the commencement in time* of the evolution of the cosmos (or in the evolutions, for we do not know if another state did not precede that one). Is it necessary to add that the philosopher, precisely because he proceeds philosophically, and knows that the divine causality is in action *all the time*, could not think that 'some billions of years ago God wound up the material universe and has left it to chance ever since' (*op. cit.* p. 84)? Through all the extension of time the course of the events of the universe, very chance itself, are subject to the causality, the overarching government of God.

cartesian philosophy).[1] Indeed it seems sometimes possible to discern in certain conceptions of the new physics, not certainly the smallest substantial likeness, but a sort of stylistic kinship with the antique accessories of the peripatetic workshop, such as the *natural state*, *condensation* and *rarefication*, or the difference of nature between the matter of the heavenly bodies and that of corruptible bodies, of which the distinction, which is even more sharply drawn, between the 'matter' of the physicist and his 'non-material' ether (in so far as he admits its existence) seems like the modern reproduction.

It is notable on another side, that one of the effects of the present-day revolution in physics has resulted in its enlargement, as M. Vernadsky pointed out in a remarkable address to the Scientific Societies of Moscow and Leningrad,[2] with regard to the phenomena of life, to such a degree that the planetary importance of these phenomena will thereby be more easily recognised, and the typical traits of their physico-chemical behaviour (*e.g.* irreversibility or again, dissymmetry) passing over into the

[1]The physicist, if he has any interest in metaphysical problems, will be even more aware than the philosopher of these accidental philosophical connections of the new physics. He will find, for instance, that the theory of relativity helps towards his comprehension of the relation between creaturely time and the eternity of God. (Cp. K. F. Merzfeld, 'The Frontiers of Modern Physics and Philosophy,' *Proc. of the Amer. Cath. Phil. Assoc.*, Loyola Univ., Chicago, 29th Dec., 1930; 'Scientific Research and Religion,' *The Commonweal*, 20th Mar., 1929; 'Einstein as a Physicist,' *ibid.*, Feb. 1931.) This is certainly legitimate as long as it is remembered that it is a case of comparisons and metaphors which may help the mind to grasp a truth (in this case a philosophical truth), but which are not therefore in themselves necessarily true (*i.e.* with regard to the theory of relativity, ontologically or philosophically true).

[2]*Art. cit.*, *Revue générale des sciences*, 31st Dec., 1930., The author, who stresses the importance of the present-day crisis of science, to which he gives the value of one of the 'historic crises' of thought, points out that, as without doubt leading towards the re-integration of life into 'the scientific picture of the universe', it will at the same time tend to cause the disappearance of the striking contradiction, so continually accentuated in the course of the classic period, between the objective picture of the scientific universe (where mechanics and the physico-chemical had alone right of possession and which made everything human and living seem 'fragile' and 'null') and the work of science itself, in so far as this is a 'social world-formation', 'made up of living personalities', of which more than nine-tenths study 'regions without any connection with the picture of the cosmos falsely considered as the result of the total labours of science'. The article contains comments of the greatest interest, on science considered *sociologically*.

world of the inorganic where they have been neglected, will perhaps supply science with new ways of thinking of the physical.

How, finally, can the imagination of the philosopher (or of the poet) resist the fascination of these light atoms which condense or transform themselves into heavy atoms in order to radiate as light or as heat, of this way in which mass is measured by its internal energy, these stars which by ceaselessly reducing their mass, which is to begin with so enormous, and which will completely exhaust themselves after billions of billions of years, pour forth in the present energy into the universe;[1] how fail to find here great symbols of the mystery of the very life of the spirit?

But let him not forget how erroneous it would be to try to erect a philosophy of nature, and *a fortiori* a metaphysic, on the theoretic conclusions of modern physics and its explanations of the world, as if these conclusions and explications could be taken as ontological foundations, could be used as such by the philosopher without their previous subjection to a rigorous critique. That was the error of Spinoza with regard to the physics of his time. It seems to me that, from very different standpoints, M. Bergson, and, if I have rightly understood him, Prof. Alexander, are neither of them safe from this danger; the one seeking to free a so-called '*durée créatrice*' immanent in the world of the physicist, which the physicist would misunderstand; the other making of that world the matrix as it were from which the worlds of more and more qualified, more and more solid, realities emerge. There is no less

[1] '... We are therefore obliged to admit that, in the course of its complete evolution, a star diminishes at least in a proportion of 1000 to 1.

'It must be admitted that this diminution is bound up with radiation, since there is no loss of matter; these enormous stars do not let loose the atoms which they contain. In consequence we are led to admit that the loss of weight corresponds to a complete destruction of matter, to a profound neutralisation of the electron by the proton, with, like a swan-song, a great production of light, two photons resulting from the reciprocal neutralisation of a photon and an electron.

'The complete destruction of matter in order to produce light probably requires, for its production in a potent degree, conditions of temperature and pressure in the depths of the stars which are profoundly different from any which we know how to realise. Prof. Eddington calculated it at forty million degrees of central temperature in the major part of the stars, and the pressure would be figured by the atmospheric milliards....' (P. Langevin, *op. cit.*)

self-deception in the assumption that it is possible, misled by the various advantages of which I have spoken, to draw from the new physical theories a philosophy of nature; or, for instance, in the desire to find in the indeterminist conceptions of contemporary physics any argument against philosophical determinism. The refutation of the latter must be philosophical. However important or significant the ideas of Heissenberg, for example, may be to the theoretician of the sciences, they have absolutely nothing to do with the problem of liberty. Doubtless they may assist in destroying some scientific fictions, but it would be a misappropriation to wish to utilise them directly in an apology for free-will; they have no more value in that region than the *clinamen* of Epicurus and Lucretius.

I do not fail to appreciate the important bearing of the reversal of values produced by the conceptions of the new physics, in what is concerned not only with science itself and its own interests; in its general human and intellectual aspects, in the social and economic worlds. From this standpoint, which I might call the epistemo-sociological, science is no longer considered in itself, as being true or false, in the determinations which follow in themselves from its exigencies in the knowledge of things, it interests us as a collective formation produced here and now in the minds of men and producing in the latter, like a ferment or a centre of organisation, varied reactions, associative rather than rational, which are accidental with regard to the sciences themselves.

Thus classical physics—*per accidens*—gave force to the illusion of an integrally mechanistic explanation of the universe; so-called scientific picture of the cosmos—where consciousness and life must needs be subject to physico-chemical processes and these again to mechanics, and where, thanks to that unique formula of which Laplace dreamed, the calculation of the movements of material points according to Newton's laws of attraction should have allowed in theory, if not in fact, the prediction of all events and all the history of the worlds of brute matter, of organic life and of humanity, of the development of thought or the trembling of a reed even as of the motions of the stars[1]—set up, like a

[1] "An intelligence which, at a given instant, should know all the forces by which nature is animated, and the respective beings of which it is made up, if also it were sufficiently great to subject these data to analysis, could embrace in the same formula the

mirage in the skies, over the minds of investigators, who held that they could not even begin to set to work without paying some tribute to it.

In abandoning classical mechanics, still more, in enunciating the principle of indetermination for phenomena of the atomic scale, and by affirming that it is contradictory to suppose that science can follow and determine at each instant the bearing of an individual corpuscle, in other words, that it is not possible to know its complete past and thereby to foresee its future, the new physics has done away with the very reasons for the existence of all this pseudo-philosophy, which looked on the mind and free will as a scientific scandal. This is no small achievement from the standpoint of the sociology of the intelligence. 'Physics no longer offers any moral objection to free will.' But this result in itself has no formal and intrinsic philosophical value. For it would be false to hold that mechanics and classical physics as such implied the negation of free will[1] and the mechanistic postulate of the possibility of explaining everything by the laws of movement, in other words, by reducing everything to the displacement of corpuscles, any more than any other metaphysical conception. The quarrel between 'determinist' and 'indeterminist' mechanics is outside the field of philosophical problems.

It is equally impossible to find in the indeterminism of the new corpuscular mechanics a philosophical significance otherwise than by tying it up with a metaphysical error; then it is imagined as mediating against the axiomatic value of the principle of causality (philosophically understood). I have indicated above that the principle of indeterminism introduces a lacuna into the field of scientific causality,[2] or more exactly,

movements of the greatest bodies and the lightest atom; nothing would be uncertain; the past and the future would alike be before its eyes.' (Laplace, *Essai philosophique sur les probabilités*, 1814). Taine speaks in the same way of that 'supreme law' which moves 'in the eternal torrent of events and the infinite sea of things'.

These famous statements are doubly erroneous. They admit that the *contingent unfree* events dependent on universal interaction can be both calculated in advance and foreseen with certitude, which is not exact: for to calculate such events in advance an infinite intelligence is necessary (and such an intelligence does not foresee, it sees). And they deny the possibility of *contingent free* events, dependent on the will of intelligent agents outside, in so far as they are spiritual, the domain of the material sciences. (Cp. *supra*, p. 184, note 2.)

[1] See *supra*, p. 184, note 2. [2] See *supra*, pp. 183-7.

among those succedanea of causality reached by physico-mathematical apprehension in its re-shaping of the concept of cause. But, if it is so, it is precisely in the degree to which science has left behind an ontological standpoint and abandoned thinking of phenomena *sub ratione entis*. 'We have abandoned strict causality in the external world,' writes one of the most distinguished theoreticians of the new physics.[1] In place of this 'we' it would be better to read 'empiriometric science', that apprehension which resolves all concepts not in being but exclusively in the measurable, and which has now perceived that the entire physical world cannot be exactly measured. To endow this renunciation, which only has a meaning in the empiriological field, with philosophical value would be a strange misunderstanding. It is impossible for human science which observes and measures things by material instruments and by physical experiment, and which can only see an electron by encircling it with light, to know determiningly the way in which a corpuscle will behave at each instant. But suppose the existence of a pure mind which would know *without material means* (and so also without empiriological concepts) the behaviour of this corpuscle[2] at each instant—such a mind would see the strictest application of the principle of causality, in the full ontological sense. This hypothesis has no significance for the physicist; but if it has no significance for the metaphysician it is because he has not yet learnt metaphysics.

Neither let us indulge in the hope that the social bearing of scientific and philosophic discovery will show itself as any more sensible in the future than in the past to the distinctions, which are nevertheless indubitable, which are here in question. The new physics will act on the general mind in the same irrational way as classical physics, by associative influences or sub-intellectual induction; it will raise up in its turn, to all appearances, the larva of a philosophy, a new 'scientific picture of the cosmos', which will only save us from the errors of the first at the price

[1] A. S. Eddington, *op. cit.*, p. 309.

[2] I have mentioned already (p. 186, note 1) P. Langevin's hypothesis, where he abandons corpuscular individuality. Whatever may be the scientific fate of this hypothesis, the philosopher, though he may ignore *what* are the individual ultimates of the atomic world, knows at least *that* the concept of the individual is valid (*i.e.* in the ontological sense which the philosophy of nature recognises) in that world as in the world of large dimensions.

of the inordinate prestige of the new, and which doubtless will only prejudice public opinion in favour of contingence and liberty in stamping the substantiality of matter and the principle of causality with discredit.

As for myself, I know that physico-mathematical explication cannot be in continuity with philosophical. From this point of view we must allow the reason of those who think that it would be prudent to interdict the entry of philosophers into the workshop in which the new quantum theory is built up. In fact this physico-mathematical universe is a closed world, where geometricism (understanding this word in the widest sense, in so far as it conforms to the ideal of the new physics as to that of the old), where mathematicism produces a pseudo-ontology, substitute both natural philosophy and metaphysics. This pseudo-ontology plays only a methodological and subsidiary part, but it is there, and thanks to its rational beings founded on the real it builds up a system of total explication which makes this intelligible universe a whole shut in on itself. The philosopher will explain how this universe of the physicist comes to be built up. He will borrow its materials. It is also, as I have said, from it that he will ask for his image of the physical world, in accord with which he will in his turn fashion his myths, in the platonic meaning of the word. But he will have superimposed on this universe a different one.

ONTOLOGY AND EMPIRIOLOGY IN THE STUDY OF THE LIVING ORGANISM

The case is otherwise for the other experimental sciences—above all for biology and experimental psychology—whose essence does not consist in a mathematicisation of the sensible, and where the mode of resolution of concepts and of explanation primarily belongs to the epistemological type which I have christened 'empirico-schematic'. In saying this I certainly do not mean to say that these sciences reject any mathematical treatment of the observed subject: far from it! If such treatment finds its prime field in physics, since corporality as such is ontologically soaked in the quantitative, it nevertheless penetrates wherever the shadow of quantity extends or finally that of matter; and this shadow reaches to the things of the soul itself. But in the degree to which we rise above the particular world of physics, and the object gains in richness and

ontological perfection, in proportion the quantitative aspect of the subject under consideration becomes, I do not say less real, but less significant and more subordinate, and the science in question less easily reducible to a form of interpretation which is in principle purely mathematic.

It would be assuredly vain to pretend to diminish the part which physico-chemical analysis (and in consequence, the calculus) already plays in biology, a part which every day only increases.[1] In a region as irreducibly biological, as governed by concepts of form and of organic totality as experimental embryology, Brachet is able to write: 'The physico-chemical epoch is only in its infancy, but there is no doubt that the future belongs to it.'[2] The fact remains that it represents the material-conditions and means of study. And as all the facts of the living organism are physico-chemically built up, this analysis can and should advance indefinitely.

Does this imply that it can ever exhaust biological reality? Assuredly not. For if everything in the living organism is done by physico-chemical

[1]I shall never subscribe to M. Bergson's judgment: '... In the field of life the calculus can be drawn, at most, of certain phenomena of organic *destruction*. With regard to organic *creation*, on the contrary, and the evolving phenomena which rightly constitute life, I do not even see how it can be thought possible that these can be subject to mathematical treatment' (*L'Evolution créatrice*, p. 21). Neither do I subscribe to the claims of mechanicism. In my opinion the application of mathematical treatment to the phenomena of life is capable of almost infinite progress, but as it remains normally subordinate to another treatment, which is rightly biological, of these same phenomena, whereby (in Buytendijk's terminology) the scientist endeavours to truly 'comprehend', not only mathematically explain. (On this question of physico-mathematical analysis in biology, cp. W. R. Thompson, 'A Contribution to the Study of Morphogeny in the Muscoïd Diptera', chap. iii. (*Trans. of the Entomological Society of London*, 31st Dec., 1929.)

[2]A. Brachet, *La Vie créatrice des formes*, Paris, 1917. It is the same in physiology. If, for example, the muscle is considered, according to the studies of Hill and Meyerhof, as a motor of an absolutely special (chemico-colloidal) kind unknown to mechanics, this does not prevent 'the mechanism appearing, certain secondary lacunae being included, as a physico-chemical whole, producing no reaction, no force not recognised in inanimate matter, and rigorously subject to the law of the conservation of energy' (L. Lapicque, in the collection, *L'Orientation actuelle des sciences*, 1930). This 'physico-chemical whole' is the assembly of the energetic and material means of the phenomenon. *Materially* physico-chemical, the phenomenon itself is *formally* vital, it is an *auto-actuation of the subject*, and it implies that the physico-chemical energies brought into play are precisely the means, the instruments of the radical principle of immanent activity.

means, everything is also done by the soul (and its vegetative potencies) as the first principle. Rooted in a substance endowed with immanent activity, physico-chemical energies there produce, in the degree to which they are *instruments* for the soul and its vegetative faculties, and without violating the laws of inanimate matter, effects which surpass what they could do by themselves alone, in the sense that they actuate and raise ontologically the subject itself. And without doubt it is possible to conceive of a form of experimental biology which, consenting so to speak to a kind of amputation, would turn exclusively to the energetic and physico-chemical analysis of living phenomena and thus be orientated towards an entirely mathematic and mechanistic ideal, leaving all the rest to natural philosophy. Whatever orientation may in fact direct modern biology (where to-day a sufficiently sharp anti-mechanist reaction is visible), I hold it nevertheless for certain that in the experimental field an empiriological analysis is both possible and requisite, which sets itself to penetrate vital phenomena *as such*, and which, while remaining clearly distinct from natural philosophy, makes use of experimental concepts which are strictly and irreducibly biological (like those of the *prospektive Bedeutung* and the *prospektive Potenz*[1] of centres of organisation, of the specificness of plasma,[2] etc.), and *subordinate* to energetic, physical and chemical concepts. While, for example, the philosophy of nature makes a place among its explanatory concepts for the concept of finality, the facts of biological finality only present for physico-chemical analysis an irrational requiring to be reduced as far as possible; while for the rightly biological analysis of which I have been speaking, they result in an empiriological concept which could be

[1]These notions introduced by Hans Driesch are to-day admitted into the current language of science, under the somewhat less happily chosen names of 'real potentiality' and 'total potentiality'. Brachet has pointed out their fruitfulness.

[2]'What we see re-emerging is the highly biological notion which Emil Rohde expressed in the striking formulas: there are as many species of plasma as there are of plants and animals; more, every living individual possesses his own 'specific' plasma, so that there are as many individual plasma as there are individual specimens on the globe.' (Remy Collin, 'La Théorie cellulaire et la vie', *La Biologie médicale*, 1929.) Generally speaking the strictly biological experiment concepts which are referred to here relate to what Hans André calls the 'typological laws' or 'laws of specification' of life.

described by the same name of finality,[1] but which would have to be entirely recast, and emptied of all its philosophical significance, and which leaving on one side the whole use of finality as a causal explication, would simply express that general pre-explicatory *condition*[2] that the functions of the living organism, and the use which it makes of its structures, supply for the continuation of life. As to the concepts of the soul and the vegetative potencies, they play an indispensable part in natural philosophy, but they remain outside the field of properly biological experimental analysis, as they are outside that of the physico-chemical analysis of living phenomena.

Thus it is obvious in what sense I meant that biology did not consist in a mathematicisation of the sensible. However largely biology may, and has the right to, make use in the material analysis of life of mathematical means, these remain a simple instrument. It knows no obligation whereby it must needs substitute reconstructed quantitative entities for the sensible and qualitatively determined objects furnished by observation; it remains an autonomous science with regard to the laws of mathematical explication: borrowing at will from mathematical methods, it nevertheless does not constitute a mathematicisation of living phenomena. Sciences such as experimental biology and psychology set out to attain a knowledge of affective or cognitive or vegetative life, whose ontological indications are doubtless very weak (since being is only considered as a simple basis of the observable and the typical law of apprehension

[1]Cp. Eugenio Rignano, *Qu'est-ce que la vie?* (Paris, 1926).

[2]I mean by this a condition of simple authentification, pre-supposed by the explanation and which in itself plays no explanatory part. Such a 'pre-explicatory' condition is very different from the condition as a substitute for causality which was in question above (pp. 182-3), which plays an essentially explanatory part. This latter is regulative and determining with regard to phenomena (it could be called the conditioning condition), the former is a simple state of acts recognised in the object as bound up with its existence, which could be called the conditioned condition. This notion joins up with that of Meyerson's 'irrational', with this difference, that the very word irrational evokes the idea of a resistance which the reason endeavours to reduce, while this is a simple case of a datum, which is not explanatory, but which is accepted once for all by empiriological analysis, leaving it to philosophy to establish its ontological value.

On the question of finality in biology, see my discussion with Elie Gagnebin, 'La finalité en biologie' (printed in *Questions disputées*). Similar studies on hylomorphism and animism are in preparation, in which I hope to be able to go more deeply into the philosophy of the living organism.

remains that of *saving sensible appearances*[1]), but which nevertheless does not re-compose its object in the field of mathematical ideality by withdrawing it as far as possible from its reality in the world and nature of the sensible; and which as a result can enter into a certain theoretic continuity with philosophical explanations. If these sciences may happen to compose explicative rational beings, for all that it is not in order to construct a universe of deduction which is substituted for that of real beings: they remain imperfectly deductive: instead of making a closed universe on which the universe of natural philosophy is superimposed, they rather make up with natural philosophy two stages or conditions of the same universe.

In so far as they approach nearer to the purity of their type, they tend as we have seen, to create for themselves an autonomous empiriological vocabularly. But in so far as this system of notions, without admitting ontological or philosophic concepts into its formal texture, and still more without any 'subordination' to philosophy or borrowing of its principles, asks of the latter to furnish it, as its climate and conditions of existence, with those pre-conceptions of a general order and that sense of its own significance in the universe of thought of which every science has need, and also those stimulations of a heuristic order thanks to which it progresses *in via inventionis*, this system of notions, far from raising a sort of mechanistic pseudo-ontology, is, in a way, in dynamic continuity with the specifically different system of ontological notions of natural philosophy. Indeed it can only build up its autonomy in a truly scientific way, escape the disorder, the arbitrariness, the conceptual wastage

[1]This makes it clear how much too narrow Duhem's theory is, which identifies the σώζειν τα φαινόμενα with a pure translation of physical data into a system of mathematical equations, abstraction having been made of all search for 'causal explication'. In the sciences under discussion the mathematical translation of phenomena, however important it may be, plays a wholly instrumental, not formal, part, and the search for empiriological 'causal' explications (taking the word 'causal' in the terms of that recasting of causality which was in question above, p. 182) is preponderant. Yet nevertheless they also have their typical law in the σώζειν τα φαινόμενα. This law rules over the whole empiriological kingdom, whether it be empirio-metric or schematic; in the former, as we have seen, it is applied to a rational process which is at once a mathematical translation of physical data and the search for 'causal explications' (which give rise to a prolific crop of physico-mathematical rational beings), cp. note, p. 79.

which dog the sciences of living nature, and experimental psychology in particular, on the supposition in the minds of those at work in it of a powerful philosophical discipline, at once logical and critical. It is for this reason that biologists to-day are beginning to realise that while giving an ever larger space to the physico-chemical and energetic analysis of living phenomena, biology can only rightly progress by expressly breaking with the mechanistic theory.

THE ANTI-MECHANISTIC REACTION IN BIOLOGY

Driesch's studies in *Entwicklungsphysiologie* have from this point of view considerable historical importance.[1] Following Driesch, under the influence it may be of Bergson, or of Scheler, or of the phenomenological school, or of aristotelico-thomist philosophy, biologists famous for their experimental researches have undertaken the enterprise of rehabilitating concepts such as those of 'the organic', 'life', 'immanent activity', even 'the soul', words which the science of last century felt a very virtue in avoiding and removing. They no longer fear philosophical conceptions, or August Krogh and Rémy Collin's insistence on the necessity of 'the work of the spirit'[2] in science, or to point out the accord between their conceptions and the thought of some philosopher, or even that of a poet of genius like Claudel.[3] If Claudel, apropos of the auto-determination of living forms, speaks of 'notes, which will play themselves in extending the fingers in all directions', Uexküll writes similarly: 'every organism is a melody which sings to itself.' Buytendijk opposes *erklären* and *verstehen*, the analytic and mechanistic reduction and the synthetic intellection of living things, material explanation and comprehension: and he vivifies his experimental researches by

[1] I have already pointed out the importance of these studies in an essay published in 1910, 'Néovitalisme en Allemagne et le Darwinisme' (*Revue de phil.*, Oct. 1910), and in the preface to the French translation of Driesch's book (Paris, 1921).

[2] August Krogh, 'The Progress of Physiology', an address delivered at the opening of the Thirteenth International Physiological Congress, Boston, Aug. 1929 (see *The Amer. Journal of Physiology*, Oct. 1929).

[3] See in particular the study by F. J. J. Buytendijk and Hans André, 'La valeur biologique de l'*Art Poétique* de Paul Claudel', in the 4th *Cahier de Philosophie de la nature*, Paris, 1930.

contact with certain ideas which rightly belong to natural philosophy, for example the phenomenological intuition of 'the organic' and conceptions (to which Claudel on the one hand and Wasmann, Erick Becher and Vialleton on the other have come independently) of biological finality as going beyond strictly useful dispositions in virtue of an entitative superabundance and, as it were, ostentation.

This reaction against the scientific conceptions admired by the nineteenth century is highly significant. It is perhaps the beginning of a veritable renewal. But it can only be efficacious and enduring if it maintains the essential distinction between objective fields which cannot be confused without injury to the mind, and if a sort of prolific irrationalism, which only wishes to escape and to reduce every intellectual discipline, does not one day make us regret the inhuman stoicism of a soulless psychology and a lifeless biology, the 'purifications and macerations' in whose name such sciences demanded of their initiates 'half of their intellectual and moral goods.'[1] The grand error of such science has been the desire to protect itself against the intelligence; in the endeavour to keep it out it has risked dying of asphyxia. But the re-entry of the intelligence into science is an event which will not lack its dangers.

It is obvious that this is a danger which the intelligence alone can avert. Only good philosophy can take the place of bad. (But good philosophy, for all that, is a much more difficult task than its simulacra.)

At this point we can observe the insufficiency of the phenomenological method, as of bergsonian irrationalism. Phenomenological intuition, unlike the bergsonian, is of an intellectual order; but in basing itself from the outset on a form of reflective thought which rejects the thing (the trans-objective subject), and as a result applying itself to the pure description of the essence-phenomenon, which (contrary to its nature) it isolates from extramental being, and so shutting itself up in a noetic atomism comparable to the cartesian pluralism of 'simple natures' (fragments of evidence), and refusing to recognise the primary value of transcendental being in which all our notions are resolved and founded on truths known as such, phenomenological intuition sticks

[1]Rémy Collin, Preface to the 4th *Cahier de Philosophie de la nature.*

halfway, neither able to overcome an empiricism of the intelligible which in being *a priori* remains none the less radical, nor to build up a veritable metaphysical ontology,[1] or philosophy of nature. In the lack of such apprehension and a rational resolution in the principles of a philosophical knowledge of being, this intuition can only find a use for the real in the phenomenological sciences (it is from the point of view of its effect on the practice of the scientist that it interests us here); and there while recovering, in fact, an interest in the extra-mental thing, a realistic value, an efficacy which this does not have for the philosopher as such, it remains without any adequate control, and exposed to all the dangers of the arbitrary, as does the (metaphorical) analogical process which immediately rises from it and endlessly increases.

Rich in invention, able to free and feed the intellect, a precious instrument of renewal and discovery, it is *in via judicii* that this method is deficient. And no clear-cut distinction between the ontological and the empiriological, natural philosophy and experimental science, being possible where there is a lack of an 'autonomous' ontology, of a natural philosophy existing for itself, the phenomenological method, in the act of delivering biology from the mechanistic tyranny risks the introduction into it of concepts which are valid as such for natural philosophy but valueless for science, and often also without value for the philosophy of nature. Finally, the very deliverance of which I have spoken runs the risk of being illusory, if, all empiriological knowledge having been given over into the hands of physico-chemical analysis, all rightly biological perception is found in fact turned over to natural philosophy invading the field of science; while this philosophy in its turn runs the risk of giving place to an intemperate vitalism, the counterfeit of an authentic ontology of the living, and that irrational metaphysic which once gave *Naturphilosophie* a fallacious renown.

[1]Husserl's use of the word 'ontology' in his recent publications (notably in his *Formale und Transcendentale Logik* and in the *Méditations cartésiennes*) is entirely equivocal. This *a priori* 'discovery' of the scientific universe starting from 'solipsist egology' is not a science of being which is able to take itself apart by empiriological analysis as another and deeper scrutiny of the same reality. Despite all his efforts, despite the realist tendency which has given rise to phenomenology, it remains radically incapable of furnishing anything but an illusory idealist succedaneum of real. (Cp. *supra*, chap. ii, pp. 120-22.)

It is natural that the initiators who have won back the value of its objects for biology, like Driesch or Buytendijk, should be preoccupied with natural philosophy as well as their own science; we know that these pre-occupations have finally led Driesch to devote himself to philosophy alone. But this union of two 'formalities' in one thinking 'subject' should not cause us to forget their distinction; a distinction which is fundamentally important, as much in the interests of philosophy as of those of science. This is why I have insisted on the existence (at least as theoretically requisite) of an 'autonomous' experimental biology as distinct from the philosophy of the living organism; in other words, on the existence of an empiriological analysis, not only physico-chemical, but also rightly and irreducibly biological, of the world of living bodies, which should not be confounded with the ontological investigation proper to natural philosophy: this double empiriological analysis, at once physico-chemical and strictly biological (the former being subordinate to the latter) constituting 'experimental biology' as opposed to the 'philosophy of nature' (in this case, of living nature), with which it remains in continuity. The work of scientists like Heidenhamn, Brachet, Cuenot, Rémy Collin, Hans André[1] and Emil Rohde, alike attest that an analysis which is at once rigorously empiriological and strictly biological has not only a possible existence.

Specifically distinct from such an analysis, the ontological and philosophical knowledge of living things gives it its rational justification. In effect it belongs to this latter to destroy the roots of the two illusions of mechanicism and vitalism, understanding this latter word in the abusive sense which the history of medical and biological science obliges us to attach to it. In fact classical medical vitalism is bound up with a conception of life, the counterpart of mechanicism, which, on the one hand, from the philosophic point of view, has all the defects of dualism (the organism is there taken to be an already constituted corporeal substance existing as such, which is in addition inhabited by a strange principle,

[1] I would like to mention here the important book by Hans André, *Urbild und Ursache in der Biologie* (Munich and Berlin, 1931). He treats in a most penetrating manner, particularly in the second and third chapters (*Der Kampf der Mathematisierenden und der Biolog. Naturanschauungen*; *Der Ausgang dieses Kampfes in der Gegenwart*), some of the problems touched on here. The fourth chapter draws from the present state of vegetable biology confirmations of the greatest interest.

vital spirit or vital energy), and which, on the other, is repugnant to the rightful claims of scientific analysis, in the sense that it posits beside the physico-chemical means of life other principles of a specifically vital order which contradict physico-chemical laws and quarrel with them for possession. In such a conception the vital has nothing in itself except what is abstracted from the physico-chemical, and it will thus be more and more reduced in the degree to which the physico-chemical study of phenomena progresses.

The authentic conception of the organism is no less opposed to vitalism so understood than to mechanicism—the 'animist' or 'hylomorphist' conception, for which the principle of life is the formal principle itself, in the aristotelian sense of the word, the substantial 'act' or entelechy of the living body, so that the energetic and the psychic, matter and soul, make up one sole and same being, which exists, with all its constituting determinations and structures, physico-chemical and vegetative, or sensitive or intellective, only by the soul. Thus the vital is not *juxtaposed*, but rather *superimposed* on the physico-chemical, and a rightly biological experimental analysis is by so much more requisitive in the degree to which the physico-chemical analysis of the phenomena of life advances.

CONCERNING THE TRUE AND THE FALSE PHILOSOPHY OF THE PROGRESS OF THE SCIENCES IN MODERN TIMES

It follows from these considerations that if natural philosophy receives the experimental sciences, as I pointed out above, like an empiriological body, it is in a different way in the case of sciences of the physical type and in that of sciences of a biological one. In the first case, where the resolution of concepts is of an empiriometric order, it needs to separate, in so far as is possible, in the results of such science, what is deductive explication from the mathematical forms by which these facts are established: in the latter, it can enter into continuity with the direct line of apprehension; whereas with the rational beings constructed by physico-mathematical theory it can only know a secondary continuity in the line of images or myths. In the second case, where the resolution of concepts is of an empirico-schematic order, it can find a basis, in-

terpreting them in its own proper light, in the results of experimental science in their integrity.

In another way I hold that a particularly important truth results from that critical analysis of the empiriology and ontology of the sensible to which this chapter has been devoted. It is that the more and more clear differentiation between knowledge of an ontological and of a physico-mathematical type is not simply a contingent fact, due to particular historical circumstances, but one that corresponds to a necessary law of the growth of speculative thought; and in effect constitutes one of the most authentic marks of the progress, in the morphology of knowledge, which thought has accomplished in the course of modern times, and one of which both reflective and critical philosophy must take cognisance.

It has been pointed out that the ancients, although they were clearly aware, in certain privileged fields, of the methods of *scientiae mediae*, had nevertheless a tendency in fact to subject all knowledge of nature to the laws of ontology and philosophy. A similar and inverse error—all the more grave in that it does not arise from a flaw in the apprehension of fact, but from conscious theory—consists in only allowing as legitimate apprehension, at least in the knowledge of nature, empiriological knowledge dressed up in some other name. This was the error of the positivists, who gave over to it, if the phrase may be allowed, the whole extension of the universe of thought. It has been committed again, though in a new fashion, and this time in the very name of metaphysics, by those philosophers who in the knowledge of nature keep only empiriometric explanations, and, holding the sciences of life as worth nothing, wish to find in mathematical and physico-mathematical knowledge the unique type of all rational activity (when not purely reflective) worthy of the name.

It is impossible to avoid applying the title retrograde, and indeed pre-copernican, to the attitude of these philosophers. The arbitrary command of a metaphysic which constitutes itself by a 'sweet and total renunciation' of being and the object obliges them to return to the positions of the most naïve epistemological monism, proclaimed this time for the benefit of that form of knowledge which is at the farthest remove from the grasp of the real in itself. This false philosophy of scientific progress thus interdicts itself from discerning the profound meaning of the copernican

revolution; it misunderstands the admirable organic diversity in the play of the intellect manifested either in the heart of science itself or in the distinction drawn between science and philosophy by four centuries of scientific development.

All that remains of the reason in such philosophy is reduced to the employment of mathematics and what I have called here the empiriometric use of the intelligence.[1] This is, if I may put it so, a rationalism which has retired from active business, and which is endeavouring to carry on life as a *rentier*, which can in fact only draw its subsistence from the reflective supplies of the works of the ancient reason. . . . But what I have wished to point out is that the principles of a realist noetic, as they have been exhibited in this book, give space in their system of knowledge for the rightful methods and just appreciations of the 'reason' of this nominalist rationalism, and recognise their value within certain defined limits, while at the same time marking their insufficiency as making up the being of all thought.

Perhaps there is an indication of the truth of a doctrine of integral power in the positive elements which are found in systems invoking other principles. In any case it seems that a true philosophy of the progress of the physical and mathematical sciences during the modern period, precisely because it appertains to it to disengage by critical reflection the spiritual values with which they are pregnant, must needs recognise in this progress a sign not of its reduction and diminution, but of its completion and a growth in the organic structure and differentiation of thought. It must also show on the one hand the incompatibility between this mathematic and empiriometric progress and knowledge of the ontological type which is proper to philosophy, and on the other, a respect for the nature of those experimental sciences

[1]It would be possible to show that this must be the logical end for an intellectualist nominalism, which endeavours to mask with extreme idealism that residue of sensualism which the refusal to recognise an original power in the intelligence of perceiving intelligible essences or natures, and even more generally, the objects whatever they may be which correspond to its rightful conditions of spirituality, inevitably leaves at the basis of thought. This residue of sensualism will be there, whatever one does; which is why they can only recognise apart from mathematical apprehension, that form of knowledge which I have called empiriometric—a less noble title certainly, but more exact than one which produces a dissatisfaction with the name of 'reason'.

which escape by their substance a complete mathematicisation; and do justice to their methods of work, which, in the degree to which they further affirm their autonomy, cover a widening range of the scientific field. In effect it would be completely arbitrary to refuse the rank of authentic forms of apprehension meriting the attention of the philosopher to biology and the other sciences of the same epistemological type, which contribute more and more importantly, and perhaps one day preponderantly, to the progress of speculative thought.

CHAPTER IV

METAPHYSICAL KNOWLEDGE

I. DIANOETIC AND PERINOETIC INTELLECTION

I HAVE DEALT at such length with the question of natural philosophy in relation to the sciences, because the restoration of the philosophy of nature appears to me to answer a profound intention implicit in the modern mind, and because the critical realism of St. Thomas seems to me alone capable of fulfilling this intent without causing any injury either to the experimental sciences or their methods of procedure, rather, on the contrary, to their benefit.

The theory of intellectual knowledge sketched in chapter ii, allows us to understand how, according to the principles of Thomas Aquinas, we can have two complementary forms of knowledge of one and the same reality, that is, the world of motion and sensible nature: the sciences and natural philosophy.

It also allows us to understand how, above natural philosophy, can and should rise the world of metaphysical knowledge.

According to the terminology which I have thought it convenient to adopt, the cis-objective subject attains, in order to intentionally become them, things in themselves, or transobjective subjects posited in extra-mental existence, in constituting them as objects, or positing them—by means of the concept or proffered presentative form—in existence as 'known', *in esse objectivo seu cognito*. This cis-objective subject is at once spiritual and corporeal, it has senses and an intellect.

I have called the transobjective intelligible that infinite (transfinite) assembly of subjects which are subject to its intelligible grasp or which can give themselves to it as objects: I mean by that very precisely subjects whose essence or primary intelligible constituent can in itself (though maybe only in its most universal characteristics) become an object for it

in a concept—let us say by way of definition, subjects which are in some degree knowable 'in themselves' or by *dianoetic intellection*.[1] These are corporeal things, which falling within the orbit of the senses can also come under the light of the agent-intellect, and so allow their essence to be grasped by abstraction, at least in so far as some determination of being is apparent in its intelligibility.

To an intelligence that makes use of the senses it is appropriate that there should correspond as its naturally proportionate object essences plunged in the sensible. This is why the scholastics say that the essences of corporeal things are the connatural object of our powers of intellection. Sunk in the ocean of the transobjective intelligible, our intelligence illuminates material things in order to disclose the hidden structure, and actualise in so far as it can the intelligibility which they hold *in potentia*. And by discourse it is unceasingly carried on to new actuations of intelligibility.

By the very fact that it takes its rise from sensory knowledge dianoetic intellection cannot in any way know immediately and 'in themselves' the essences of corporeal things. It is not a vision of essences, a knowledge which at one stroke plunges to the heart, the core of being, like the non-discursive knowledge of the Angels, or the perfect and unclouded knowledge of God (or like the knowledge which Descartes believed received clear and distinct ideas from thought and understanding). We may say that is not a 'central' but a 'radial' knowledge, which goes inward from without, only reaching the centre by starting from the circumference; it attains the essence, but by the signs, as St. Thomas said, which manifest it, and which are its properties.[2] The hunt for definitions runs through the tangle of experience. It is after we have experienced in ourselves what the reason is, and after we have recognised

[1] I understand by this (in opposition to 'ananoetic' knowledge or knowledge by analogy on the one hand, and on the other to 'perinoetic' knowledge or by substitute-signs) that mode of intellection in which the intelligible constituent of a thing is objectivied in itself (or if not in itself at least by a sign which manifests it, by a property in the strict sense of the word). It is not at all in the desire to evoke the διάνοια (reasoning faculty) that I have chosen the term 'dianoetic', but in order to designate an intellection which attains to the nature or essence itself through the sensible.

[2] St. Thomas calls the properties the *signs* of the essential form. Cp. *In II Analyt.*, book ii, chap. xii, lect. 13, n. 7, and Zigliara's commentary.

in the possession of this faculty the *principalissime* property of human being, that we may discern and can expound in a definition the nature of its being; by no other means could we ever achieve discovering or separating the virtualities included in this definition.

It is moreover proper to distinguish two modes of dianoetic intellection, according as this bears on substantial natures and the realities which are the object of philosophy, or on mathematic entities (which, ontologically considered, and in as much as they are *entia realia*, are accidentals). In the first case, the essence is, as I have just recalled, known by its accidents; in the second, it is known, so to speak, on the level, by its intelligible constitution itself, in so far at least as this is manifested by means of signs constructible in imaginative intuition. Here arises, bristling with all its difficulties, the problem of mathematical intellection. Mathematical essences are not grasped intuitively from within, which would be the case with an angelic, not human, mathematics: no more are they perceived from without, which would be the case with accidents arising from them, as operation emanates from the active potency and the substance; nor are they created by the human mind, in which case they would only be the translation of its nature and laws. We can say that they are recognised and as it were deciphered by way of a construction starting from elements which have been abstractively detached from experience: this construction of intelligible constituents, which requires or presupposes in itself some form of construction in imaginative intuition, being a *re-construction* with regard to those mathematical entities which are essences properly so called (possibly real beings), and a *construction* with regard to those which are rational beings founded on these essences. Thus the mind finds itself faced by an objective world which has its own proper consistency in independence of the mind, based ultimately on the divine intellection and essence themselves, and which nevertheless it deciphers deductively and as though *a priori*. Such a form of intellection is still 'dianoetic' (not comprehensive or exhaustive) in the sense that the essence is not there grasped *intuitively* by itself (*i.e.* not by means of a non-abstractive intuition which would completely penetrate in one stroke), but rather *constructively* (thanks to a construction of notions otherwise able to be manifest, at least indirectly, to the imagination, which is like an 'outside' by which it is attained).

However full of mystery and surprise the mathematic world thereby remains for the mind, nevertheless, thanks to those reserves which I have pointed out, entities are there conceived (constructively) by themselves or by their intelligible constituents. It is obvious from this that to take the mathematical intelligence as the intellectual type and rule leads inevitably to Spinozianism, notably to the spinozist conception of substance, which is then regarded as known or manifested by its essence (not by its accidents), or 'known by itself'.

In this matter of substantial essences, J. de Tonquédec is certainly in the right when he points out, in opposition to Rousselot, that 'when it is a question of thinking of the substance, even in the most rudimentary fashion, we never "clearly stop at the accidents": this would be contradictory. We always look towards something which is beyond them. But, on the other hand, there is never a moment when the mind, leaving the accidents behind, "passes over" and "discovers" the naked substance. It is in remaining attached to the accidental that it finds the means to see beyond. . . . The mind always transcends the accidents, but it is while basing itself upon them.[1]'

But it would be to fall into the contrary excess to conclude from this that we 'do not attain' substantial natures. On the contrary, and in virtue of this very doctrine, it is necessary to say that we attain by dianoetic intellection—where it is possible and in the degree to which it is possible—to substantial natures 'by and through those very manifestations of them which are their accidents'. How could they not be 'attained' since they are 'made manifest'? How could they not be 'seen' since in 'remaining attached to the accident' the mind 'finds the means to see beyond'? *By* their properties these natures are thus attained *in* themselves, *i.e.* in their formal, intelligible constitution itself; the accidental forms being, in such cases, also known in themselves, by their effects.

Toilsome as it is, this knowledge of things, not *by* but *in* their essence, this dianoetic intellection is not always accorded to us and normally stops, except in the world of humanity, at those traits which are more universal than specific. In the universe of the sensibly real, as we have seen, we must content ourselves, below the range of the philosophy of nature, with a knowledge by signs—no longer signs which make manifest

[1] J. de Tonquédec, *La Critique de la connaissance*, p. 355.

essential differences, but signs which substitute themselves for these and are known in their place.[1] This knowledge doubtless bears on the essence, and embraces it from without, but as though blindly, without the power of discerning either the essence in itself or its properties in the ontological sense of the word: a peripheral or 'circumferential' knowledge, which can be called *perinoetic*, of which what I have called the empiriometric and empirico-schematic analysis of observable realities is an example. Whether it be in the mineral, the vegetable or animal worlds, the immense variety of corporeal natures inferior to man refuse to surrender to our discovery their ultimate specific determinations.

A SCHOLASTIC DIGRESSION

Thus a capital distinction imposes itself on the mind between the knowledge of (substantial) essences by 'signs' or the accidents (properties) which manifest them, at least in their most universal features (*dianoetic intellection*), and the knowledge of them by the 'signs' which will

[1]There is a curious instance of such substitutes for essential differences, these purely descriptive signs of empiriological 'properties' in the following passage, which at a first reading can very easily be misunderstood: 'Secundum quod natura alicujus rei ex ejus proprietatibus et effectibus cognoscere possumus, sic eam nomine possumus significare. Unde, quia substantiam lapidis ex ejus proprietate cognoscere possumus secundum seipsam, sciendo quid est lapis, hoc nomen, lapis, ipsam lapidis naturam, secundum quod in se est, significat: significat enim definitionem lapidis, per quam scimus quid est lapidis.' (*Sum. theol.*, i, 13, 8, ad. 2.) St. Thomas does not here claim that we can be in possession of the quidditative definition of the stone; as is proved by the fact that the 'property' of which he is speaking (cp. the body of the article) is of *laedere pedem*. Supposing that this etymology is valid, it is still only a case of a whole descriptive property, a wholly empiric sign, which has only the worth of a nominal definition. Cp. *De Veritate*, 4, 1, ad. 8: 'Quia differentiae essentiales sunt nobis ignotae, quandoque utimur accidentibus vel effectibus loco earum, ut *VIII Metaph.* (vii, lect. 12) dicitur; et secundum hoc nominamus rem; et sic illud quod loco differentiae essentialis sumitur, est a quo imponitur ab effectu, qui est laedere pedem; et hoc non oportet esse principaliter significatum per nomen, sed illud loco cujus hoc ponitur.' This passage of the *De Veritate* very exactly defines what I have here called perinoetic knowledge. If moreover, even after scientific investigation, the *quod quid est* of the stone is not discovered by us, it is not because it transcends our powers of knowledge, rather because it does not reach to their level; we can then circumscribe it thanks to signs of the same kind as the 'property' here in question, only better chosen. The name, stone, indeed, signifies the nature of the stone as it is in itself, but without that nature being discovered to us; it signifies it as a thing *to be known*, not as thing *known*.

be considered below (and every time when for conciseness the phrase 'knowledge by signs' is used) and which are known *in place of* the natures themselves, in such a case inaccessible in their formal constituents (perinoetic intellection).[1]

This is indeed an important problem, to which it is much to be desired that modern students would devote their attention, gathering together what the ancients have said of the hierarchy of accidental forms, and metaphysically elucidating the distinction (which in that case should not remain metaphorical) between the 'accidents' which are more or less 'profound' or 'intimate' and 'exterior' or 'superficial'.

It is clear that in the one case we should find ourselves in the presence of characteristics rich in explication (from *rationale, docibile, risibile*, etc., are deducible); in the other before sterile ones, void of import: but that is only a sign of the differentiation which is in question. It is the theory of the proper accident and the general accident which is, for me, the core of the difficulty. When the mind lays hold on a property in the strict and philosophical (ontological) sense of the word, it attains to a difference of being, an accidental form is grasped in its intelligibility, and, by it, the essence (as human nature by rationality, or animal nature by sensitivity): this is what happens in dianoetic intellection. But on other occasions the properties in the strict sense of the word remain inaccessible; it is sheaves of sensible accidents (general accidents), which are grasped exclusively in so far as they are observable or measurable, which *take their place* (such as the signalising 'properties', density, atomic weight, temperature of fusion, of evaporation, spectrum of high

[1]The definition of man as *animal rationale* and of a horse as *animal hinnibile* (or an ungulate mammiferous perissodactyl with undivided hoofs), or a dog as *animal latrans* (or as a toothed carnivorous, etc., mammal), of a lion as *animal habens abundantiam audaciae* (or as a carnivorous five-toed mammal with curved claw, etc.) have the same logical structure. They reveal, from a critical or noetic standpoint, an essential diversity, which is far from being elucidated by the fact that *hinnibile, latrans*, etc., belong to the specific degree, *rationale* and *irrationale* to the generic degree, of the scale of differences: for 1. *irrationale* is indeed a generic difference, but *rationale* is a specific one, which joined with *animal* constitutes a *species atoma*; 2. it is possible to give a definition of man himself (*e.g. animal gressibile bipes*) which differs as much from another quidditative definition as *animal hinnibile*, etc.; 3. differences belonging to the generic degree (*e.g. gressibile* or 'ungulate', etc.) can reveal the formal constituents of the quiddity as little as *hinnibile*, etc. (Cp. *infra*, p. 256, note 1).

frequency, etc., which serve to distinguish a body in chemistry). These signalising characteristics receive the name of 'properties' but its bearing is as wholly different and as little philosophic (ontological) as that of the chemical use of the word 'substance'. They are at once exterior signs and masks of the veritable (ontological) properties; they are empiriological ones, substitutes for the properties rightly so called. The mind cannot decode the intelligible in the sensible; it uses the sensible to circumscribe an intelligible nucleus which evades it. Then we say that the form is too sunk in matter to fall within the grasp of our intellect. It is impossible to attain by such properties in any degree whatsoever to the substantial nature in itself or in its formal constituents: it is known by signs which do not manifest it, but hide it. This is what happens in perinoetic intellection.

Finally we can say that every (instrumental) sign reveals in concealing and conceals in revealing. In the case of dianoetic intellection it is a case of signs which reveal more than they hide: in that of perinoetic intellection, of signs which hide more than they reveal.

In a further definition of our terminology, I would say that in dianoetic intellection substantial natures are in some degree known *in themselves, by signs* which are their own accidents, properties in the philosophical sense of the word (as to these properties, they are known by other accidents which are their workings). In perinoetic intellection, substances and their properties are known *by signs and in signs.*

By a latitude which is authorised by the indigence of human language, and every danger of a false cartesian or spinozist interpretation being ruled out, I hold that it is licit[1] to say that in dianoetic intellection substantial essences are in some degree 'discovered' to the mind, not certainly 'purely', nor from within (that was the error of Descartes' absolute intellectualism), but discovered *by their outsides* (the accidents themselves not being known from within, which would be to know them in their derivation from the substance, but by their operations). In saying that in dianoetic intellection they are attained 'openly', I mean in no sense to say that they are attained 'purely' or by the attributes which are the very constituents of the substance, but that they are manifested by their proper accidents. I am conscious of the imperfection of this termi-

[1] Cp. *supra*, chap. i, pp. 41-3.

nology (and of all terminologies). But I am convinced that the distinctions which it expresses are founded on reason, and made entirely necessary by the modern developments of the experimental sciences, whose mode of conception differs essentially from that of philosophy.[1]

HUMAN INTELLIGENCE AND CORPOREAL NATURES

Is there not an element of bitter reproach in the fact that, while having the essences of corporeal things as its connatural object, our mind suffers, faced with them, from such serious defects that it is reduced to contenting itself, in one vast section of its knowledge of nature, with that imperfect

[1]The passages from St. Thomas which can be cited with regard to this question are confined generally to the affirmation of the general principle that substantial essences of things and their proper differences are hidden from us, and that we need, in order to attain to the essence, to make use of differences grasped from the accidents ('In rebus enim sensibilibus etiam ipsae differentiae essentiales nobis ignotae sunt, unde significantur per differentias accidentales, quae ex essentialibus oriuntur, sicut causa significatur per suum effectum' (*De Ente et Essentia*, c. 6.). 'Formae substantiales per seipsa sunt ignotae; sed innotescunt nobis per accidentia propria. Frequenter enim differentiae substantiales ab accidentibus sumuntur, loco formarum substantialium quae per hujusmodi accidentia innotescunt; sicut bipes et gressibile et hujusmodi; et sic etiam sensibile et rationale ponuntur differentiae substantiales. (*De Spirit. Creaturis*, a. 11, ad. 3.) Cp. *Sum. theol.*, i, 29, 1, ad. 3, etc. Writing at a time when there was as yet little differentiation between the experimental sciences and natural philosophy, it is understandable how St. Thomas was content to stop at these very general statements.

Nevertheless other texts can be classified in two different categories, according to whether they relate rather to accidental differences which leave concealed essential ones (*vide* the passages quoted *supra*, p. 215, note 1, and p. 252, note 1, in particular the one from the commentary, *In Metaph.*, book vii, lect. 12, where St. Thomas opposes these differences *per accidens* to those *per se*) or as they rather relate to differences which, while wholly belonging to the (predicamental) accident, are an intelligible manifestation of essential differences, and led the mind to the knowledge of the latter: 'Quia principia essentialia rerum sunt nobis ignota, ideo oportet quod utamur differentiis accidentalibus in designatione essentialium: bipes enim non est essentiale, sed ponitur in designatione essentialis. *Et per eas, scilicet per differentias accidentales, devenimus in cognitionem essentialium.*' (*In De Anima*, book i, lect. 1). 'Quia substantiales rerum differentiae sunt nobis ignotae, loco earum interdum definientes accidentalibus utuntur, secundum quod ipsa *designant vel notificant essentiam, ut proprii effectus notificant causam*; unde sensibile, secundum quod est differentia constitutiva animalis, non sumitur a sensu prout nominat potentiam, sed prout nominat ipsam animae essentiam, a qua talis potentia fluit; et similiter est de ratione, vel de eo quod est habens mentem.' (*De Veritate*, 10, 1, ad. 6.) Cp. 3. *De Pot.*, 9, 2, ad. 5; *In Sent.*, dist. 3, q. 1, ad. 6; *Sum. theol.*, I, 77, 1, ad. 7; *I-II*, 49, 2, ad. 3.

intellection which I have called 'perinoetic'? If we reflect on this paradox, we are led to understand first of all that for a human intellect in the state of nature, or rather of primitive culture, the natural ordination referred to above is verified on an entirely other plane than that of didactic thought, to which the philosopher, by a sort of professional habitude, is always tempted to attach himself. The behaviour of savages with regard to the river, the forest, the animals which they hunt or fly from, their extraordinarily developed consciousness of differential characteristics in the concrete implies an intellectual discernment which, entirely practical and absorbed in the senses as it is, is yet very precise and exact of 'what are' these natural beings with which they have to deal. It is in this humble and totally pre-scientific way, which, however enfeebled it may be by civilised life, nevertheless remains primal and fundamental, that the human intellect first reaches the nature of corporeal things. We find its significant equivalent in the knowledge of a peasant of the ways of the land, or of the skilled worker of his craft and his tools.

To make use of a capital distinction of Cajetan, we can say that it is a different thing to know things 'quidditatively' and to know 'a quiddity'. Thomists teach that the human intelligence has for its connatural object the essence or quiddity of corporeal things, they have never said that it should always know this object 'quidditatively'. That is a perfection of apprehension which can only be realised, and is only realised, within certain narrow limits. The humblest form of human knowledge, that general and inherited knowledge which is implied by language and nominal definitions[1] deals with quiddities, but in the most imperfect fashion and the least quidditative, like a needle in a bottle of hay.

If it is a question of the human intelligence as cultivated and formed by the intellectual virtues, it is borne towards corporeal essences which

[1]It is with regard to this general human intelligence, not that of scientists, that St. Thomas, in exemplifying his logic, candidly takes the quiddity of a stone as designated by the property of *laedere pedem*, or that of a dog by the property of barking. To take him to task for this would show an entire misunderstanding and also the sin of pedantry. These are questions of an entirely external signalisation of the quiddity which is not attained in itself. These nominal definitions precede all science, and are prerequisites of any motion of intellectual search; but it is at once more humble and more certain to choose them as illuminations for a logical exposition rather than quidditative definitions, which are more perfect, but can also suffer the inconvenience of not existing.

can be scientifically known, progressively deploying the possibilities of dianoetic intellection by the very radical impetus of its nature, and the habitudes which perfect it. But though for the specific detail of the infra-human world it must needs fall back on those empiriological substitutes of which I have spoken, in truth its most exactly proportionate object in the order of the sensibly real is man himself and world of his properties which he presents. Mind turns towards mind; the purely spiritual to

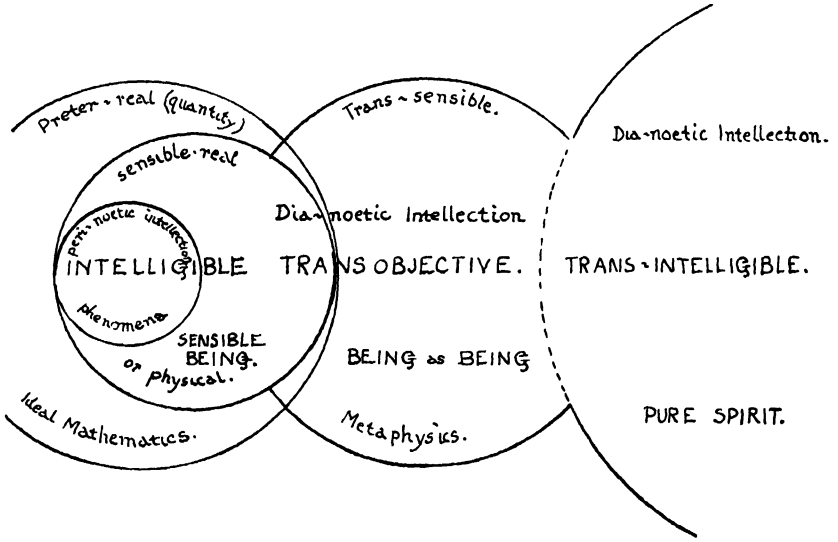


FIG. 7.

the purely spiritual; the spirit involved in the senses to the spirit which informs a body. Our intelligence, which is naturally, by the fact of its union with the body, directed outwards and towards the natures of this world, needs to accomplish that grand, that precious, admirable, vigorous encircling movement which is the knowledge of the world—which is ultimately deceptive, whether philosophically or experimentally—in order to arrive at man and the soul; then, by a double movement, it penetrates within, so as to become conscious of spiritual things and understand the works of man, by reflective and practical philosophy, ethics, the science of culture, aesthetics; and it soars upward to perceive the things which are of God, passing on into metaphysics. Such is its natural trajectory, by reason of which the figure of Socrates stands forever in honour at our cross-roads.

But let us return to the nature of corporeal things. The universe of the sensibly real is, we know, with its double value at once ontological and empiriological, only the first stage, or the area of least abstraction, of the knowledge which we have of these natures. A second area of intelligibility is that of the mathematical preter-real, where the mind escapes into a world of entities grasped first of all in natural bodies, but which are at once purified and reconstructed, and on which other entities, indifferently real or 'rational' are endlessly constructed; a world which gives us the sensibly real, but for which we have to sacrifice the order of existence. This is the reason why those philosophies which are committed to geometry from the outset are vowed to idealism.

But there is a third area of intelligibility, which enables us to pass beyond the sensible without renouncing existence, and which thus introduces us into what is *more real* than sensible reality, or into that on which that very reality is founded. It is the area, immediately successive to that of the sensibly real, of the trans-sensible or metaphysics.

II. METAPHYSICAL INTELLIGIBILITY

Actually things, when they become the objects of our knowledge, do not only surrender to us, either in itself or in some empiriological succedaneum, their determined, specific or generic nature. Before knowing that Peter is a man I have already arrived at the idea that he is something, is a being. And this intelligible object, 'being', is not the particular privilege of any one of those classes of things which the logician calls species, genus, or category. It is universally communicable, it is found everywhere: everywhere itself and everywhere varying, we are unable to think without positing it in our minds; it saturates all things. It is what the scholastics called a *transcendental* object of thought. St. Thomas has briefly described in the first article of the *De Veritate* the double movement of resorption and transgression proper to being as a conceptual object, which is as much opposed to a pure monism like that of Hegel as a pure pluralism like that of Descartes: for being is a primordial and general conceptual object (contrary to the cartesian simple natures) which (contrary to the hypostasized idea of Hegel) is at once and from the beginning essentially diverse in the diverse subjects in

which the mind discovers it. What is primarily known, and in which every object of thought is resolved for the intellect, is being. But nothing can be added to it extrinsically to differentiate it, for all its differentiations issue from its own depths, as some one or other of its modes, proffered to the mind by another concept: now that special mode of being which is opposed to another mode of being, which one subject has and another has not, and by which the infinite multiplicity of essences which share in being is exhibited (thus, in the movement of our thought, the conceptual object 'being' absorbs into itself both genus and species): now a mode co-extensive with being, which every subject has which has being, and which as a result constitutes like it a transcendental object of thought[1]: these are then the functions of being as such, *passiones entis* (thus being is crossed with itself in the transcendentals).

[1]Cp. *De Veritate*, i, 1: 'Sicut in demonstrabilibus oportet fieri reductionem in aliqua principia per se intellectui nota, ita investigando quid est unumquodque; alias utrobique in infinitum iretur, et sic periret omnino scientia et cognitio rerum.

Illud autem quod primo intellectus concipit quasi notissimum, et in quo omnes conceptiones resolvit, est ens, ut Avicenna dicit in principio Metaphysicae suae (lib. i, c. ix). Unde oportet quod omnes aliae conceptiones intellectus accipiantur ex additione ad ens.

Sed enti non potest addi aliquid quasi extranea natura per modum quo differentia additur generi, vel accidens subjecto, quia quaelibet natura essentialiter est ens; unde etiam probat Philosophus in iii. Metaphys. (com. 1), quod ens non potest esse genus, sed secundum hoc aliqua dicuntur addere supra ens, in quantum exprimunt ipsius modum, qui nomine ipsius entis non exprimitur.

Quod dupliciter contigit: uno modo ut modus expressus sit aliquis *specialis* modus entis, sunt enim diversi modi essendi, et juxta hos modos accipiuntur diversa rerum *genera*; substantia enim non addit supra ens aliquam differentiam, quae significet aliquam naturam superadditam enti, sed nomine substantiae exprimitur quidam specialis modus essendi, scilicet per se ens; et ita est in aliis generibus.

Alio modo ita quod modus expressus sit modus *generaliter consequens omne ens*; et hic modus dupliciter accipi potest: uno modo secundum quod consequitur omne ens in se; alio modo secundum quod consequitur unumquodque ens in ordine aliud.

Si primo modo, hoc dicitur, quia exprimit in ente aliquid affirmative dictum absolute quod possit accipi in omni ente, nisi essentia ejus, secundum quam esse dicitur; et sic imponitur hoc nomen *res*, quod in hoc differt ab *ente*, secundum Avicennam in principio Metaphys., quod *ens* sumitur ab actu essendi, sed nomen *rei* exprimit quidditatem sive essentiam entis. Negatio autem, quae est consequens omne ens absolute, est indivisio; et hanc exprimit hoc nomen *unum:* nihil est alium *unum* quam ens indivisum.

Si autem modus entis accipiatur secundo modo, scilicet secundum ordinem unius ad alterum, hoc potest esse dupliciter. Uno modo secundum divisionem unius ab altero; et hoc exprimit hoc nomen *aliquid*, dicitur enim aliquid quasi aliud quid; unde sicut ens

Among these transcendentals a trinity detaches itself: Being itself, then, in relation to the mind, which is alone able to face being with an equal amplitude the (ontological) True, *i.e.* being as the expression of a thought from whence it emanates, and as intelligible in itself in so far exactly as it is: and the (metaphysical) Good, *i.e.* being as the end in which love can delight itself, and as apt in stirring desire in exactly so far as it is. Thus we see at once the value and the imperfection of our knowledge and, above all, of our idea of being itself with regard to what is: the first intelligible 'formality' by which what is becomes an object for us, which is attained in the concept of being, imbues all reality, is capable of all that is. And nevertheless it is attained in the concept of being as already distinct (by a rational distinction) from the transcendental formalities (attained by the ideas of the one, the true, the good, etc.) which in what is are identical with it.

Aristotle compared specific essences to the whole numbers; as an added unity constitutes a new number, so every specific difference constitutes a new essence. One could compare the transcendentals to transfinite unities of equal potency. The transfinite unity of equal numbers has the same potency as that of the whole numbers; being, or the true, or the good, has an equal scale in itself to that of the three united.

Already by perception of the specific or generic nature, the intellect attains in an individual thing more than this in itself, a conceptual object which is universal and communicable to all individual things of the same species or the same kind, and which is called *univocal*, because, though surrendered to the mind by a plurality of transobjective subjects and restored to these in its judgments, it is purely and simply one and the same in the mind. *Unum in multis*, it is an invariant without multiplicity actually realised in many, and positing thereby among them a community of essence. But in the perception of the transcendentals we touch on a nature greater than itself, a conceptual object which is not only trans-in-

dicitur unum, in quantum est indivisum in se, ita dicitur aliquid, in quantum est ab aliis divisum. Alio modo secundum convenientiam unius entis ad aliud; et hoc quidem non potest esse nisi accipiatur aliquid quod natum est convenire cum omni ente. Hoc autem est anima, quae quodammodo est omnia, sicut dicitur in iii. De Anima (text. 37). In anima autem est vis cognitiva et appetitiva. Convenientiam vero entis ad appetitum exprimit hoc nomen *bonum*, ut in principio Ethic., dicitur: *Bonum est quod omnia appetunt*. Convenientiam vero entis ad intellectum exprimit hoc nomen *verum*.'

dividual, but trans-specific, trans-generic, trans-categorical—as though in opening a little shoot one let loose a bird greater than the world. Let us call such a conceptual object a *sur-universal.* The scholastics called it *analogic, i.e.* realised in diverse manners but according to similar proportions in the diverse subjects where it is found. It differs, even as a conceptual object, essentially from the universals, not only because it has a vaster amplitude, but also and first of all, and this is the most important point of all, because it is not like them purely and simply one and the same in the mind (*i.e.* monovalent); it is polyvalent, it includes an actual multiplicity; the bird of my image of a moment ago is also a flock.

Let us try to comprehend the proper mystery of these transcendental objects. When looking at a man I think,' he is a being' or 'he exists', I grasp a certain determined being, finite, perishable, fleshly, spiritual, subject to time, and, M. Heidegger would say, to anguish, and an existence similarly determined: but the *analogic* object 'being', 'existence' so thought by me overruns this analogue so that it will also be found—intrinsically and rightly—in analogues which *differ from man in their very being and manner of existence.* All that differentiates a man from a shell, and *vice versa,* is a matter of being; if there are electrons, an electron is a finite being, corporeal and perishable, subject to time, but not to anguish; if there are angels, an angel is a finite being, incorporeal and above time; what divides all these beings one from another is that same being which I find in each of them—variously. It suffices for me to direct my attention on being for me to see that it is once one and multiple: it *would be* purely and simply one if its differentiations were not at the same time itself, in other words, if the analogic presented to the spirit made a complete abstraction of its analogues; if I could think of being without having immediately present in my mind (whether my attention is aware of the fact or not is completely accidental) the essentially different ways in which this conceptual object is realised outside the mind. It *would be* purely and simply multiple if it did not transcend its differentiations, in other words, if the analogic presented to the mind made no sort of abstraction of its analogues: in which case the word 'being' would be entirely ambiguous, and my thought would fall in pieces: I would not be able to think: Peter is a man, or this colour is green, but only to gasp incoherently.

The concept of being (and it is the same for all the transcendental concepts, essentially sur-universal or analogic, of that analogy which the scholastics call 'analogy of rightful proportionality', and which alone occupies us here) is then *intrinsically and actually multiple*—in so far as it only incompletely makes abstraction of its analogues, and that, in differentiation from the universal concepts, it includes a diversity which can be essential and allows of an infinite hiatus, abysmal distinctions in the way in which it is realised in things; and it is *one in a certain relation*, in so far as it makes incomplete abstraction of its analogues, and that it is detached from them without becoming conceivable apart from them, as though drawn, without attaining to it, towards a pure and simple unity which could alone present to the mind, if the latter could see it in itself—and without concepts,—a reality which would be at once itself and all things. (We can say that the concept of being demands[1] that its place should be taken by God clearly seen, that it should vanish in the beatific vision.) We say that it is one in a unity of proportionality, the being, man, having his existence as a man as the being, shell, has its existence as a shell, and as the being, angel, its existence as an angel. It thus signifies not precisely an object, but a plurality of objects of which one cannot be posited before the mind without bringing with it, implicitly, all the others, because all are bound together in a certain community by the similitude of the relations which they sustain with diverse ends.

'Sur-universal' or 'polyvalent', a transcendental conceptual object is only *unum in multis* as a variable including an actual multiplicity, and which is realised in many without positing the fact of any community of essence between them. It is not analogous in the way in which a metaphor, but extrinsically and improperly, instantly makes an originally

[1]It goes without saying that I am only speaking here of a claim which is ineffective. John of St. Thomas explains (*Curs. theol.*, i, P. q. 12, disp. 12, a. 2) that the adequate object of the created intellect includes in its fullness God himself seen by his essence, *Deus clare visus continetur intra latitudinem objecti adaequati intellectus creati*. But God clearly seen —a wholly supernatural object with regard to which the created intelligence has only an obediential potency—is above everything that the created intelligence can attain to by its natural powers alone and the concept of being; he is seen without concepts. The amplitude of the 'adequate object' of the created intelligence, *i.e.* being itself, thus surpasses all the resources that the use of the concept of being, the instrument of our natural knowledge, offers to the intelligence; in the beatific vision the latter will have 'passed away'.

univocal conceptual object agree with transobjective subjects other than those in which it was originally grasped. It agrees intrinsically and rightly (*i.e.* not metaphorically) with all the subjects to which it is attributable, because it is primarily and by its essence analogous: from the first instance in which it is laid hold of by the mind in a subject it carries in it the possibility of its realisation according to its proper significance (*formaliter*, is the scholastic phrase) in subjects which differ totally and absolutely in their essence from that particular one.

Such objects are trans-sensible, since, though realised in the sensible where we first of all grasp them, they proffer themselves to the mind as transcending every genus and category, and as capable of realisation in subjects of a wholly other essence than those in which they were apprehended. It is extremely remarkable that the first object which our mind attains to in things, being—which cannot deceive us because being the first it cannot be enclosed in any construction built up in the mind, which brings in the possibility of its defective composition—bears on itself the sign that beings of another order than that of the sensible are conceivable and possible.

I grant that this is a case of an entirely undetermined possibility. But what determined incorporal subject is positively possible? We can only know such if we know that it exists, thus concluding *ab actu ad posse*. Do such incorporeal subjects exist—human souls, pure created spirits, uncreated Being by itself? It is by a reasoning process starting from the data which are given us by the facts of sensible existence that we are able to know them.

Since being is the first object grasped by the intelligence it is clear that it is not first of all in the mirror of any other object that it is known. It is attained in sensible things by dianoetic intellection: as a generic or specific nature is known in itself by the properties which disclose its essential difference, in the same way the analogic (*analogum analogans*) is known in itself by that of its analogues (*analoga analogata*) which first fall within the grasp of the senses: and our power of abstractive perception overpasses this analogue itself which serves it as a means, to grasp in its transcendence the analogic, of which it is only one of the possible realisations. There is thus an intellectual perception of being which, included in all our intellectual acts, commands in fact all our thought from the beginning, and which, disengaged as itself by abstraction from the

trans-sensible, constitutes our primordial philosophical intuition, without which it would no more be possible for us to acquire the science of metaphysical realities than for a man born blind to acquire that of colours. In this metaphysical intuition the principles of identity: being is not not-being, all being is what is—is not only known *in actu exercito* and as an ineluctable necessity for thought, its ontological necessity itself is seen—the first law of being is not a logical, but an ontological (meta-logical) principle; and this is why, when transferred into the logical order, where it becomes the principle of non-contradiction: *non est affirmare et negare simul*—it is also the first law of the mind. And it is from similar intuitions bearing on the primary aspects of being (and provoked in the mind by some sensible example) that the other metaphysical axioms proceed, truths known as such by all, or at least by the wise. Many, it is true, who lay claim to deal in philosophy flatter themselves by putting these axioms in doubt, without even perceiving that they are cutting off the branch on which they are sitting; they only prove that such intuitions are irreplaceable; you either have them or not; reasoning presupposes them; it can lead thither by illuminating the meaning of terms, it cannot supply their place.

First principles are intellectually seen, in an entirely other way than that of empiric authentification. I do not see a subject in which a predicate is shut up as in a box; I see that the intelligible constitution of one of these objects of thought cannot exist if the other is not posited as implying or implied by it; this is not a simple affirmation as of that of a fact known by the senses; it is the intellection of a necessity. Thus the first principles impose themselves absolutely, by force of the notion of being itself. Their authority is so independent, and so rooted in the pure intelligible, they so little belong to a simple inductive generalisation or to *a priori* forms destined to subsume the sensible, that sensible appearances are in a way disconcerted by them and only fit themselves with an ill grace to illustrate the fashion in which they rule over things; I affirm the principle of identity and then look at my face in a mirror: already it has aged, it is no longer the same.

Finally, the first principles are analogic like being itself. Every contingent being has a cause, but the object of thought, 'cause', is polyvalent like the object of thought, 'being'. As there are essentially and absol-

utely different ways of being there are essentially and absolutely different ways of causing; to understand the word cause only of mechanical causes for example, either in order to subject all things to a universal determinism or in a contrary recoil against the value of the principle of causality, is to misunderstand this analogy, and to strip off the possibility of metaphysical thought. By virtue of the essential character and analogic immediacy of the supra-universal object on which it bears, the axiom of identity is at the same time the axiom of the irreducible diversities of being; if each being is what it is, it is not what the others are. This is what is not seen by those philosophers who, following Parmenides, demand of this principle that it draw all things into the absolute one. Far from making all things identical it dwells in our minds because it maintains the identity of each, is the guardian and protector of universal multiplicity. And if it obliges our intelligence to affirm the transcendent One, it is because that multiplicity itself demands it to save its own existence.

In a sense there is no greater poverty than that of being as being: to perceive it we must cast away every sensible and particular covering. In another sense it is the most consistent and most steadfast of notions; in all that we may know there is nothing which does not depend on it. This steadfastness is lost sight of by those who take being for univocal, and who make of it a genus, at once the vastest and the most pure.[1] It would then be, as Hegel saw, on the rim of nothingness, and even hardly discernible from nothingness. On the contrary, because it is analogic it is a consistent and differentiated object of thought on which science can take its stand, without thereby hypertrophying itself in a panlogism which destroys all essences.

The fact remains that being as being is a manna with little savour for those obsessed by the garlic of experience. Descartes had already decided that it was sufficient to have for once in his life considered the first truths on which physics is founded, and to consecrate a few hours in the year to metaphysics, which was thus already reduced to providing a justification for science. Since Hume and Kant, numerous philosophers have

[1]Being as being, the object of the metaphysician who grasps it by virtue of an *abstractio formalis*, with the essentially various intelligible consistency of its analogical comprehension, must also be clearly distinguished from being as grasped by a simple *abstractio totalis* as the most universal of the logical categories.

refused all rightful intelligibility to existence, seeing in it only an empty concept, or a pure case of sensible position, or a pragmatic sentiment. It is difficult to think of a more radical error, or one more offensive to the intelligence. Not only has the notion of existence (and that of being, since being is what can or does exist) an intelligible content which is absolutely primordial: if existence in act does not offer to the apprehension of the mind any other content than existence as signified or represented (so that from the notion of an All-Perfect having necessarily existence to the number of his perfections I cannot conclude that this All-Perfect must needs effectively exist), on the other hand, existence as represented is a wholly other thing for the mind than non-existence: there is much more in a hundred existing thalers than in a hundred possible ones. But still more, existence is the super-excellent perfection, and is like the seal and stamp of every other perfection, if it is true that one existing demi-thaler is worth more than a hundred thalers which are simply possible, and a live dog than a dead lion: doubtless it does not say more for itself than a *positio extra nihil*, but it is the position *extra nihil* of *this or of that*, and to set outside nothingness a glance or a rose, a man or an angel, is something essentially diverse, since it is the actuation of all the perfections of each of these essentially diverse subjects. Varying in itself and admitting all the degrees of ontological intensity, in accord with the essences which receive it, existence, if anywhere it is found in a pure state, without an essence distinct from that which receives it, *i.e.* if a being exists whose essence is to exist, must there be identical with a bottomless and infinite abyss of absolute reality and perfection.

Being disengaged as such by *abstractio formalis*, being with its transcendental properties and the cleavage which it presents through the whole extent of things,[1] constitutes the rightful object of metaphysics. It is not a case of those supreme forms, like the categories, where the mind only attains to the first outlines of the objects of knowledge (the natures of things) which are only completed in the specific degree, and so belong to a wholly incomplete form of knowledge in so far as it is a knowledge of the real. The object of metaphysics is not in the least the

[1] "Illa scientia est maxime intellectualis, quae circa principia maxime universalia versatur. Quae quidem sunt ens, et ea quae consequuntur ens, ut unum et multa, potentia et actus." St. Thomas, *in Metaph.*, procemium.

world of the universal as known in the most general and so least determined way, *i.e.* of the generic categories of natural things; it is a wholly other world, the world of the supra-universal, the world of transcendental objects which are so disengaged, not as categories which require for their completion progressive differentiations which come as it were from without, but as offering a sphere of intelligibility having its ultimate determinations in itself and able to realise itself outside the mind in individual subjects which do not fall within the grasp of the senses nor are subject to all the orders and differentiations of the world of experience. This is why metaphysics is a perfect knowledge, a true science.

Not without reason Aristotle studied the categories in logic, in as much as the knowledge of these furnishes the first instruments of apprehension, *introduces* us into the science of things. If metaphysics studies substance, quality, relation, etc., if natural philosophy studies corporeal substance, quantity, action and passion, etc., it is from another point of view, in as much as these are the determinations of being as being or of mobile and sensible being (in the last case, as we have seen, apprehension is only complete in its own order if the knowledge of the experimental sciences is added to that of philosophy). The human soul, in the degree to which it is a spirit, and is capable of activities in themselves entirely immaterial, as of an entirely immaterial subsistence, is a metaphysical object. Anthropology[1] is thus on the frontiers of natural philosophy and metaphysics, and by it natural philosophy achieves its metaphysical crown. The sphere of metaphysical wisdom contains in itself reflective knowledge on the relations between thought and being (the critique), knowledge of being as being (ontology in the strict sense of the word), the knowledge of pure spirits and of God in so far as either of these is accessible by reason alone (pneumatology or natural theology).

Like mathematics, metaphysics rises above time; in rousing from things another universe of intelligibility than that of the experiment-sciences (and of natural philosophy), it grasps a world of eternal truths valid not for some one moment of contingent realisation, but for all possible existence. Unlike natural philosophy it has no need, in order to establish

[1] I do not mean by this that it is a hybrid between natural philosophy and metaphysics, but that it is the highest section of natural philosophy and so in communion with metaphysics.

these truths which are superior to time, to find its end in the verifications of the senses. But, unlike mathematics, in the establishing of these truths it always sees before it existing or possibly existing subjects. In brief, it does not make abstraction of the order of existence. The mathematical preter-real does not imply matter in its notions or definitions, but when taking on a form it can only exist (if it can exist) in matter. The metaphysical trans-sensible, being transcendental and polyvalent (analogic) is not only free of matter in its notions or definitions, but can also exist without it. This is why the order of existence is enracinated in the objects of metaphysics. To allow objects which had only rational being would be unworthy of the science of being as such. If, moreover, as I pointed out before,[1] metaphysics descends to the existence in act of the things of time and ascends to the existence in act of things outside time, it is not only that existence in act is the super-excellent sign of the intrinsic possibility of existing, it is also and above all because existence itself is, as I said, the seal and stamp of all perfection, and cannot remain outside the sphere of the highest knowledge of being.

THE METAPHYSICAL TRANS-INTELLIGIBLE AND ANANOETIC INTELLECTION

If an *analogic* intelligible is the object of dianoetic intellection, it is not the same for those of its analogues which do not at first come within our grasp, and which are known by the intermediation of the primordially apprehended analogue. They are known in the latter as in a mirror, by virtue of the similitude which it has of them; a knowledge by mirrors or *by analogy*, which we can call ananoetic intellection. Strictly speaking the transobjective subjects in which these are realised are not subject to our intelligible grasp, do not *surrender themselves* to us as objects; it is not essence or intelligible constitution which is objectified for us by means of our presentative forms and our concepts; nevertheless they are known intrinsically and rightly designated, constituted as objects of intellection but at a distance and not 'in themselves': the ray of intellectual light which reaches them has been refracted or reflected, and they always remain above the knowledge which we have of them, superior to our

[1] See *supra*, chap. i, p. 70.

grasp which reaches up to them, separated from our mind in the very act which unites it with them. A paradox which is due to the fact that they are attained in an object which another subject has rendered present to our intelligence, and which, being in itself one of the analogues, one of the values of an analogic, makes us pass through it[1] to those other analogues which we do not attain to in themselves. Thus the divine perfections are attained by us in the perfections of created being, which by the analogy of being makes us pass on uncreated being, whom no mind spirit whatsoever can attain to himself.

I call this universe in which metaphysics issues,[2] the knowledge of which implies a ceaseless recourse to an art of deciphering the invisible in the visible, the *trans-intelligible*: not certainly because it is *unintelligible* in itself (on the contrary it is the sphere of absolute intelligibility), nor that it is unintelligible to us; but because, being out of proportion with our human intellect, it is not intelligible by dianoetic or experimental means, in other words, is not connatural to our powers of knowledge: it is only intelligible to us by analogy. Our eyes, like those of nocturnal birds by daylight, can only discern this purest light by the interposition of the obscuring things of this world. To penetrate into this transintel-

[1]It is by means of the transcendental *analogic* that the transintelligible analogue is known in the analogue which is proportionate to our intelligence. See on this point the admirable comments of M. T.-L. Penido, *Le Rôle de l'analogie en théologie dogmatique*, Paris, 1931.

[2]The *subject* of metaphysics is the analogic being considered in the inferior analogues where we in fact apprehend it, created and material being subject to the ten predications (it is there that being appears to us with its features of unity and multiplicity, potency and act, etc., and it is by such analogues that we attain to it dianoetically); this is what in this present study I have called the trans-sensible intelligible. But the same science which has such things for *subject* bears also on their *causes*. This is why metaphysics issues in what is here called the transintelligible (*i.e.* for us), *i.e.* the higher analogues of being. 'Unde oportet quod ad eamdem scientiam pertineat considerare substantias separatas et ens commune. . . . Iste scientia . . . considerat ut subjectum . . . ipsum solum ens commune. Hoc enim est subjectum in scientia, cujus causas et passiones quaerimus, non autem ipsae causae alicujus generis quaesiti. Nam cognitio causarum alicujus generis, est finis ad quem consideratio scientiae pertingit. Quamvis autem subjectum hujus scientiae sit ens commune, dicitur tamen tota de his quae sunt separata a materia secundum esse et rationem. Quia secundum esse et rationem separari dicuntur, non solum illa quae nunquam in materia esse possunt, sicut Deus et intellectuales substantiae, sed etiam illa quae possunt sine materia esse, sicut ens commune. Hoc tamen non contingeret, si a materia secundum esse dependerent.' (St. Thomas, *In Metaph.*, prœmium.)

ligible is the deepest desire of our intelligence; from the beginning it knows by instinct that only there can it come to rest. And according to Aristotle, it has a greater, more precious joy in guessing obscurely in the poorest fashion some fragment of that world than in clearly possessing in the most perfect fashion what is on our own level.[1] The intellect thirsts for the things that are divine. What is unpardonable in Descartes is his having preferred to this effort and this stripping, a comfortable installation in the world of clear ideas: that he so preferred the ease of the understanding to the dignity of its object (and the spiritual perfection of that very understanding).

What I have called dianoetic intellection is thus seen as held between an intellection which is imperfect by reason of the ontological imperfection and sub-intelligibility of the realities to which it is applied (perinoetic intellection) and one which is imperfect by reason of the too great ontological perfection and the super-intelligibility of the realities which it knows (ananoetic intellection). On either side of dianoetic registration these two imperfections in a way correspond to one another, but their rightful conditions, their forms are entirely different. Perinoetic intellection stops at the surface, at substitutes for the essence, nevertheless the means which it employs are full of riches, and give the understanding the maximum of self-content (not without a certain final bitterness) and, thanks to their incessantly increasing technical perfection, lay open to it an unceasing advance in the more and more detailed knowledge of the bearing of those essences which it does not grasp in themselves, but as though 'blindly', and which remain for it a connatural object. Ananoetic intellection uses weakly means, which give the understanding very little self-content (it is from its object that its joy comes), and which renders it only the more conscious the more it knows of the disproportion between it and what it would know; nevertheless, thanks to the analogy of being and the transcendentals which serve it as instruments, this intellection, however imperfect and precarious it may be, yet bears on the essence of its object, enigmatically attained in other natures which reflect it and without anything that

[1] *De part. animal.*, i, 5. 'De rebus nobilissimis', says St. Thomas in his turn, 'quantumcumque imperfecta cognitio maximam perfectionem animae confert'. (*Contra Gent.*, i, 5.)

belongs to it being known in itself. It is, moreover, highly remarkable that what the moderns call by the privileged title of science can only (dianoetically in mathematics, perinoetically in physico-mathematical apprehension) constitute itself in the highest degree of rationality by making use, as we saw above, of a prolific crop of ideal constructions and rational beings, while philosophy is wholly absorbed with real being, and is only constrained to have recourse to the artifices of ideality (primarily in the form of rational distinctions founded *in re*) in the ananoetic section of metaphysics (the plane of the transintelligible).

It is possible to distinguish three degrees or stages in the ananoetic intellection of things superior to man. The two first belong to metaphysics; the third is supernatural.

It is impossible to say that the idea that pure spirits can exist implies a contradiction: for the notions of the spirit, of knowledge, of love, far from implying existence in matter, rather imply as such immateriality. Of the fact that pure spirits exist we have indeed (leaving aside the certitudes furnished by revelation) well-founded indications in the natural order: we ourselves are spirits, substantially united with matter, experiencing in ourselves the life of the spirit, and aware that in us this life is at an inferior and sickly degree. What is more reasonable than the thought that such life, which cannot issue from the energies of the visible world, can be known in the invisible world in higher degrees, which are more conformable to the consistency and vigour expressed in the idea of the spirit? If the course of earthly events is subject to a providential government which at each instant is capable of the most delicate modification (I am referring to the natural order in itself, leaving on one side the question of miracles) so that at the prayer of a free creature the constellation of causes which prepare for the death of some sick man can be little by little diverted, is it not reasonable to think that the world of sensible causalities is not closed upon itself, but rather open to the action of invisible assistants, by which become perceptible, in the course and progress of time, the free decrees of motionless eternity? This philosophical correspondence gives, with regard to the natural reason alone, a high theoretic probability to the existence of these 'separated forms'. Again, certain sensible facts, which it is permissible to examine, despite their relative rarity, in the biographies of the saints, in treatises of demonology,

in the annals of spiritualism and of clairvoyance, etc., seem to exhibit in the empiric world the traces, as irrefutable as they are disconcerting, of such existence.

Even when, moreover, such things are held as simply possible, metaphysics is not thereby dispensed from a consideration of the laws which they may exhibit. He who has never meditated on the angels will never be a perfect metaphysician. The *Treatise on the Angels* is a theological one, where St. Thomas bases himself on revealed truths. But it virtually contains a purely metaphysical treatment of the ontological structure of immaterial subsistents, and the natural life of the spirit when detached from the diminutions of our empirical world.

The knowledge which we can so acquire of pure created spirits belongs to the first degree of ananoetic intellection or by analogy. The transobjective subject dominates the knowledge which we have of it, and only becomes an object for us in the objectification of other subjects which lie within our grasp transcendentally considered;[1] but nevertheless the higher analogue thus attained does not overrun the analogic concept which apprehends it, the transcendental scale of the concept of spirit is sufficient to include that of the pure created spirit. Not only are notions such as those of substance, essence, existence, knowledge, appetition, etc., realised in the angel formally or in their proper significance (although eminently or in a way which transcends our mode of signification), but the reality which they signify being finite, is contained,[2]

[1]In scholastic terms, its quiddity escapes us, *de forma separata non scitur quid est.* See *infra*, pp. 282-3.

[2]It is not contained by these notions as a thing is which they make known *in itself*, nor, *a fortiori*, as a thing which could be 'comprehended' by us, in the sense in which 'to comprehend' implies to exhaust, or full adequation (cp. *Sum. theol.*, i, 12, 7) between the knowledge and the known. It is contained by these notions as a thing which they make known *analogically*—and, *a fortiori*, without our being able to 'comprehend' it in the exhaustive sense of the word—but which does not surpass the analogical concept which we make of it for ourselves. In the absolute sense there is nothing which we can veritably 'comprehend' here on earth: we comprehend that 2 and 2 make 4, but we do not exhaust the intelligibility of this property in numbers. I should add that this is due to the weakness of our discursive intelligence—even with regard to things at the lowest level of intelligibility; on the other hand, the incomprehensibility of God comes from the infinite height of the object with regard to all created intelligence, even under the conditions of the beatific vision (cp. *Sum. theol., ibid.*).

limited or circumscribed by them in an angel as in man (we know equally for example that essence and existence, substance and potencies, the intellect and the will are really distinct in both). We can say that the analogy here employed is an inclusive or *circumscriptive* analogy.[1]

It goes without saying that this is not the case in our knowledge of God.

In what way—by an instinctive uprush in the knowledge of common sense, by an explicit demonstration in the case of metaphysical knowledge—does the rational movement proceed by which the existence of God imposes itself with an exact certitude on our intelligence? To know *that God is*—already and in that very knowledge our mind is subject to the absolute transcendence of a reality to which ananoetic intellection only attains in knowing that it is surpassed on every side.

Let us try to retrace, in the course of one of its typical trajectories, this movement of the reason. The philosopher thinks, he grasps reflectively his act of thought; it is a reality of a certain quality or ontological value, whose existence *hic et nunc* is to him indubitable. Even if he has never read Pascal, he will know that myriads of solar systems are *less* than the least thought which knows a blade of grass and knows that it knows; I say less, not in setting this as a common measure between two comparative terms, rather is it a question on the contrary of two incommeasurable orders, but as two orders without a (univocal) common measure which can be compared in their (analogical) participation in being.

This philosopher knows also that his thought, a mystery of vitality with regard to the world of bodies, is at the same time in itself a mystery of debility. Not only is it subject to error, subject to time, to forgetfulness, to sleep, to distractions and languors, but in its very structure it suffers conditions of servitude which are almost unworthy of thought; it is not transparent to itself, it breaks against objects which remain dark to it, it must needs divide, recompose, reconstruct, elaborate logically data which is not logical, but real (his eyes have no need of logic, they have only need to open).

[1]These precisions with regard to our analogical knowledge of the pure created spirits is, I am convinced, in line with, though put in very different language, the doctrine expounded by Cajetan, *In De Ente et Essentia*, c. vi, q. 15 (*Num intelligentiae sint a nobis quidditative cognoscibiles in hac vita*).

Finally, by the consciousness that he has of this servitude, the philosopher knows that thought taken in itself and in its pure and formal line holds exigencies of a transcendental order, whose ultimate end he can determine. He has kept in mind the true lesson of modern idealism, understanding how this latter, born from the reproachful sense that human thought may not be pure thought, is in itself a marvellous witness to the privileges of pure thought.[1] This absolutely pure thought is his object, absolutely spontaneous, absolutely self-sufficient: for it to exist is to think, and to think not of a thing, but of the very act of thought: if it has things, it is not because it receives anything, but because it makes them.

It is thus clear to our philosopher that he is not thought himself. He is not thought, he has thought. But if he has it without being it he must receive it from something other than himself: a cause? The principle of causality does not rise from a cutting-up of the sensible but from necessities intuitively grasped in being; from the moment that there is a diversity of things, each does not suffice in itself for its existence, otherwise it would be all, therefore it is necessary (even when we have never seen one ball in collision with another, or been conscious of muscular effort, etc.), that it depend on another without which it could not be and in which it finds its rightful sufficiency.[2] In this case it can be said that our

[1]It is a highly remarkable thing that the result of modern idealism has been exactly the symmetrical reverse of anthropomorphism: a 'theomorphism' of thought. Philosophers, recognising the existence of God, attributed to him in a mode of imaginative thought the perfections of the created carried to their maximum in the line of *created perfections*; they anthropomorphised God, since they had not risen to the degree of abstraction requisite for veritable analogy. In revenge the idealists rose (frequently without realising what they were doing) to that degree of abstraction, and it is the *analogic perfection* (analogically common to the uncreated and the created) of thought which they carry to a pure state, but in working in terms of 'Thought' in general (in fact on human thought) without knowing that in reality they are speaking of the thought of God the Creator. They thus reach a notion of thought which (leaving out of count the numerous confusions, inevitable under such conditions) is only appropriate to the divine thought, although they do not recognise the true God; they 'theomorphise' Thought in general.

[2]The 'cause' whose (ontological) conception so imposes itself on us is so little derived from an anthropomorphic schematisation of experience that it is only with difficulty and on condition of a considerable *diminution* that we discover it in the 'causes' of common experience. As to the 'causes' of scientific experience (and of the philosophy

philosopher has experimented in the non-sufficiency in itself of his thought: he has nowise experienced the 'insertion' in it of the creative activity on which it depends, but he cannot think of this non-sufficiency in itself of his thought without knowing that his thought depends on another—not only on the material conditions which limit it here on earth, but on something unknown from which it holds its very actuality and its being as thought, and which is therefore Thought or supra-thought. He causes in me with me my act of thought, in so far as it has being. . . . Thought in which my thought (and would it still be *my* thought) will only be a moment? Then it would share in the weakness of my thought and in multiplicity, and it would be also necessary to say of this that it is caused, is not self-sufficient. . . . Effect in itself of another thought? I do not know if this supposition has a meaning, in any case an infinite series is certainly not impossible in itself, but *here* an infinite regression is not possible, since it is a reason of being for which we are in search, and an 'infinite series' is exactly 'not a reason of being' (each term turns endlessly back on another, in postulating this reason of being).[1] There must therefore be a thought which will be Thought,

springing from mechanicism), they reduce themselves to the spatio-temporal condition, of a phenomenon, or a network of determinations with which this is bound up, which is only an analogue of the concept of cause so profoundly remodelled as to make the use of the word very nearly an equivocation. (See *supra*, pp. 182-3.) It is evidently not the 'cause' in these senses of the word which is in question here, but its full ontological meaning.

[1]Whatever the *way* in which it is employed, the consideration of intermediary causes is used in an entirely other fashion by St. Thomas than it is by Aristotle. In Aristotle's system the series of subordinate causes enters into the reasoning to lead to the Prime Mover by a hierarchy of cosmic degrees, whose structure absorbs the metaphysical presentation of the real; with St. Thomas this series only enters in fact as an auxiliary means which is only employed to make the fact visible that in any case it cannot carry on this process to infinity, and as a result the structure of this causal series does not interest metaphysics, for in fact the Pure Act to whom these ways lead will be explicitly known as the *creator*, and the creation of things admits of no intermediary (*Sum. theol.*, i, 45, 5). Thus, from the beginning, if St. Thomas shared Aristotle's image of the physical universe, his metaphysic is on the other hand, from the first line, free of that image. With regard to creative causality the hierarchy of intermediary spheres plays no part, all things being equally open to this causality (cp. E. Gilson, *L'Esprit de la philosophie médiévale*, i, c. iv). As to the *conservation* of things, where created causalities have their part, our image of the physical universe fits better than that of Aristotle with St. Thomas' metaphysical doctrine (*Sum. theol.*, i, 104, 2).

and which will be the first cause of my thought, and from which every relation such as that which its stuff or any material causality has with regard to my thought has been excluded—a cause comprehending in its pure efficiency the entire being of my thought, and absolutely separated by its very essence from it (which thus really remains *my* thought). It is this very absolute uncaused Thought which causes in and with me my act of thought. I have already indistinctly seen the rightful conditions of such a thought, which has in itself its existence and its object. I now know that its privileges are those of an existing reality. Absolutely self-sufficient for existence, he is pure act, and thus infinitely perfect: knowing that he exists I deduce his infinite perfections from his aseity. It is by a palpable sophism that Kant claims that such a deduction rests implicitly on the ontological argument used by Descartes and St. Anselm, and falls in ruins with it: for it is by no means in the identification of existence *a se* and total-perfection that the ontological argument consists, but in the claim to deduce its real existence from the simple idea of total perfection. If I first of all know and by another way (starting from a fact such as the existence of my thought) that being *a se* exists, I am evidently led to conclude, without the slightest recourse to the ontological argument, that, as the notion of aseity includes that of total-perfection (and *vice versa*), this being *a se* who exists is effectively all-perfect.

And the purport of this course of reasoning? It has led to the necessity of bringing to a pure state the analogic and polyvalent conceptual object: thought. And the higher analogue thus attained as absolute Thought infinitely surpasses the idea of thought, since it is not only thought, but being in itself, and every perfection issuing from the transcendental order; and since it is all this in absolute unity and simplicity, It is what is signified by the analogic concept of thought, that—and infinitely more.

St. Thomas' paths do not end in the first of a univocal series, a first cause which is like other causes, a being like other beings: greater, higher, more perfect, but like them circumscribed by the concept of being. This is why the criticism of them formulated by M. Edouard Le Roy is a veritable *ignoratio elenchi*. They lead to a first without any common measure with the second or all the subsequent series, to a first separated, isolated in infinite transcendence; the infinite abyss of difference of nature

which divides him from all is crossed by ananoetic intellection; but the analogous concepts of which it makes use avow in that very use their impotence to enclose or delimit the reality which they thus describe. *Ut omne genu flectatur.* They can only make God known in falling on their knees before him.

May I be permitted to point out what delicacy, what filial fear shines through that very word, *paths*, used by St. Thomas?[1] They are proofs, demonstrations. But when our business is with things proportionate with or connatural to our intelligence, demonstration, which, while being entirely submissive to the object, also in a way subjects the object to our grasp, to our means of verification, which measure, which delimit, which define it. It takes hold of the object, grasps it, manipulates and judges it. This is all the more obvious when the question is one of more material procedure. And perhaps Scholastics, who have inherited the high conception of a chaste science, whose very rigour and strict intellectuality came from a religious respect, an exigence of purity before being (and their mission is to maintain this like a sacred good), forget sometimes to what a point the terms of science, of demonstration, of proof, are charged with materialism in our modern usage, since thought turned before all to the domination of sensible nature, so that to 'verify' only evokes the idea of methods of measurement and the apparatus of a laboratory. In a just refusal of this degraded terminology they thus risk insufficiently explaining their own. But in any case they know that to demonstrate the existence of God is not to subject him to our grasp, nor to define or lay hold on him, nor to manipulate anything other than ideas which are inadequate to such an object, nor to judge anything except our rightful and radical dependence. The process by which the reason demonstrates that God is puts the reason itself in an attitude of natural adoration and intellectual admiration.

All has changed since the cartesian clear ideas, which dismissed into thin air all ananoetic intellection and knowledge by analogy. To enter by the intelligence into a mystery has become since then a contradiction in terms. If the cartesian reason, wholly suspended from God, will not treat of God as a thing made subject to it, it must needs submit itself to him with closed eyes, and only open them when it turns to the

[1] Cp. *Sum. theol.* i, 2, 2; *De Pot.*, 7, 3; *Contra Gent.* i 12; iii 39.

consideration of the created and the finite, and it is in this sense that Descartes 'never treated of the infinite except as subject to it'. This is the source of that great and seeming holy flight which precipitated him downward to earthly things. After him the same reason—which only knows in judging according to its own measure—is applied by Malebranche and Leibnitz to the justification of God: *natural theology* took on the name of *theodicy*, and set to work to comprehend the ways of God in order to render them acceptable, thus religiously preparing the way for atheism. All things are well done for it is He who hath done them, says the christian reason. It is He who has made them because it is well done and I know why, also it is difficult to think how to do them better, says Leibnitzian optimism. A materialised and corrupt scholasticism which would have seemed not only impious but absurd to a Thomas Aquinas.

III. THE DIVINE NAMES

Our knowledge of God does not only proceed from ananoetic or analogical intellection. It must be added that this analogy is uncontaining, *uncircumscriptive*.

In what I have called the transintelligible, the deity (let us describe by that name the divine essence as considered in itself, the *ipsissimum* divine) is infinitely more above the angels than the angelic essence above the body. The concepts and names which describe those perfections which belong to the transcendental order belong to him intrinsically and in their rightful sense; they do not vanish, do not fly in pieces, or lose their proper significance when applied to God. But although realising themselves far better in God than in things, they neither enclose nor delimit the divine reality, they leave it uncontained and uncircumscribed.[1] Because we receive from creatures (their inferior ana-

[1] 'Sic igitur, cum aliquod nomen ad perfectionem pertinens de creatura dicitur, significat illam perfectionem ut distinctam secundum rationem distinctionis ab aliis: puta cum hoc nomen sapiens de homine dicitur, significamus aliquam perfectionem distinctam ab essentia hominis, et a potentia et ab esse ipsius, et omnibus hujusmodi. Sed cum hoc nomen de Deo dicimus, non intendimus significare aliquid distinctum ab essentia vel potentia esse ipsius. Et sic, cum hoc nomen sapiens de homine dicitur, quodammodo circumscribit et comprehendit rem significatam: non autem cum dicitur de Deo, sed relinquit rem significatam ut incomprehensam, et excedentem nominis significationem.' (*Sum. theol.*, i, 13, 5.)

logues) these analogic intelligibles, we cannot think of them without thinking, at the same time as of what they signify, of the distinct outlines which they have in the things where we originally lay hold on them: we can only think of being as distinct from knowing, of knowing as distinct from loving: but if we have comprehended the nature of ananoetic intellection, we know that there are two things, which are inseparable for us, distinct in themselves: *what is signified* by the analogic and polyvalent concept, and the *mode of our perception*, limited to the inferior, material and created analogue. This significance belongs to the divine analogue, belongs to him even before it applies to creatures and more properly than to them: in itself the name of being belongs to God before being applied to things. The mode of perception in no sense applies to him,[1] not only, as in the case of the angels, because this mode applies exclusively to a material analogue, while the higher analogue is spiritual, but much more generally and radically, because it applies exclusively to a created analogue while the higher analogue is uncreated. Our way of conceiving being is totally deficient with regard to God.

All this comes back to saying that not only can we conceive of nothing except as delimited (it is the same for being itself, in so far as it is distinguished from its determinations), but more, that sometimes the limit belongs to the very significance itself, this is the case in notions such as those of the body, of movement, etc., which cannot be applied to God except metaphorically (perfections of this kind are in God *virtualiter-eminenter*), sometimes the limit only comes from our manner of conceiving, as is the case in notions which belong to the transcendental order, and which can rightly be applied to God.[2] Being, knowledge, goodness

[1] 'In nominibus vero quae Deo attribuimus, duo est considerare et scilicet ipsas perfectiones significatas, ut bonitatem, vitam et hujusmodi; et modum significandi. Quantum igitur ad id quod significant hujusmodi nomina, proprie competunt Deo, et magis proprie quam ipsis creaturis, et per prius de eo dicuntur. Quantum vero ad modum significandi, non proprie dicuntur de Deo: habent enim modum significandi hunc qui creaturis competit.' (*Ibid.*, i, 13, 3.) This distinction of the *significatum* and the *modus significandi* dominates the whole thomist doctrine of the Divine Names; it is everywhere in St. Thomas. Cp. *In I Sent.*, dist. 22, q. 1, a. 1, and most of all, a. 2; *Contra Gent.*, i, 30; *De. Pot.*, 7, 5; *De Ente et Essentia*, c. vi (and q. 13 of Cajetan's commentary), etc.

[2] Cp. *Sum. theol.*, i, 13, 3, ad. 1 and 3.

are in God *formaliter-eminenter, i.e.* as what is signified by these concepts (which remain and do not perish), but in a mode not only—as has been said of the angels—superior to that by which being, knowledge and goodness are in the things where I grasp them, but so much superior that these intelligibles lose there the delimitations which distinguish them and without which I, in myself, cannot conceive of them (but without which they can exist, since they are analogic, and their delimitations belong to their created analogues). All the divine perfections are strictly identical in God. The word being, when I say it of God, continues to signify being and does not signify, does not bring to my mind either goodness or knowledge,[1] and nevertheless the being of God is his knowledge and his goodness, his mercy and his justice.

Thus the deity is above everything which circumscribes the idea of being;[2] the idea of being, when held by itself like a platonic archetype, remains infinitely inferior to God. Nevertheless God is very, self-subsistent Being, *ipsum esse per se subsistens*; the name *He who is* is pre-eminently his rightful name; the concept of being passes over into God with all its intelligibility, and the law of being as being, the principle of identity continues to verify itself in God, or rather begins to verify itself in him:[3]

[1]Cp. *Sum. theol.* i, 13, 4: 'Hujusmodi nomina dicta de Deo, non sunt synonyma'.

[2]Cp. Cajetan, *In I*, 39, 1, n. 7: 'Res divina prior est ente et omnibus differentiis ejus, est enim super ens et super unum. . . .' St. Thomas writes against the Platonists, *In lib. de Causis*, lect. 6: 'Causa prima est supra ens, inquantum est esse infinitum;' the *esse infinitum* infinitely transcends in itself what would be the *idea* of being in the impossible hypothesis that the latter subsisted according to the platonic conception.

[3]In the treatise on the Trinity, St. Thomas shows that however profound the depths of the mystery the principle of identity is never in default. Let us remember that this principle in no wise consists in a simple reiteration of the same logical term, but that it expresses the extramental coherence of being with all its analogical degrees; in God it refers to a transcendent and infinite *esse*, to the deity itself, whose plenitude necessitates *a parte rei* our rational distinctions, and which contains *eminentissime et formaliter* the totality of all perfection and the relations of the Trinity (Cajetan, *In I*, 39, 1); and because the divine essence is thus 'virtually multiple' a real distinction can intervene, by the fact of the relative opposition, between the hypostases which from the point of view of their absolute perfections only differ from the essence by a rational distinction. Cp. *Sum. theol.*, i, 28, 3, ad. 1 (and John of St. Thomas, *Curs. theol.*, on the same article, disp. 12, a. 3): In God the subsistent relations are really identical with the divine essence, from which they only differ by a rational distinction, and nevertheless they really differ from one another; because, 'as the Philosopher says in the Third Book of the

not that God can be subject to the principle of identity 'as to the Styx or the fates'.[1] But if that principle is a law of being as such, to which all created or creatable things are subject, it is (in the ontological order, *in via judicii*) because primarily God is, in the very essence and the thought in which this axiom has, like all the eternal truths, its root and its foundation; our knowledge of God is subject to it, God in himself is not so subject, he renders it necessary by his rightful necessity; in such a way that in order to annihilate the truth and necessity of the principle of identity, it would first of all be necessary to annihilate the divine essence. For our knowledge, which starts from below, the divine being is one of the analogues of the concept of being, which precedes it. In itself it is the divine Being which comes first, giving a basis to the intelligibility of analogous being, and infinitely transcending all created or creatable being.

The divine essence, constituted as an object for us, not in itself, but by the objectivation of created subjects (considered in their perfections of a transcendental order), is attained and known in things which at once resemble and infinitely differ from it.[2] In the very degree to which

Physics, two things identical to a third are necessarily identical with one another, when their identity with this third belongs at once to the real and notional orders, but not when it is accompanied by a difference in these notions (in his quae sunt idem re et ratione, sicut tunica et indumentum; non autem in his quae differunt rationes).' St. Thomas does not mean to say here, as at first sight it would seem, that no difference as to notion should exist between the third time and either of the other two; one could then object, taking up again Auriol's argument, that this would destroy the whole theory of the syllogism, since in every proposition the subject and the predicate are notionally different. As Cajetan points out, he wishes to say that the two extremes only need to be identical in what makes their notion identical with the middle, in other words by the very reason of their identification with the middle. 'Non oportet eadem medio identificari inter se, secundum id in quo non identificantur medio; id est quod non est ratio identificationis ipsi medio.' The divine Persons are really distinct the one from the others by reason of their relative opposition; but by reason of absolute reality each is really identical with the divine essence, each has the same absolute reality, and by reason of the absolute reality there is no distinction between them.

[1] 'It is in effect to talk of God as though he were some Jupiter or Saturn, and to subject him to Styx and the fates, to say that these truths are independent of him.' (Descartes, letter to Mersenne, 15th April, 1530.) They are not independent of him, but they depend on his essence in so far as it is distinct from his intellection, not on his free will, but his creative will. Cp. J. Maritain, *Le Songe de Descartes*, chap. iv.

[2] 'Unde similitudinem rerum sensibilium ad substantias immateriales translatas vocat Dionysus, *II Cael. Hier.*, dissimiles similationes.' St. Thomas, *In Boet. de Trin.*, q. 6, a. 3.

they make it known to us, our concepts, while remaining themselves, are absorbed into its abyss; in God they lose their significance, without our being able to know how, according to our mode of conceiving. The divine essence is thus rightly attained to by our metaphysical knowledge, but without being penetrated; it is known, but its mystery remains intact, uncontaminated. In the very degree to which we know it, it escapes our grasp, infinitely overflows our knowledge. 'Quamcumque formam intellectus concipiat, Deus subterfugit illam per suam eminentiam,' says St. Thomas,[1] echoing St. Augustine and Boethius.

The very Doctor who asked 'What is God?' in the first awakening of his intelligence, who never ceased explaining and detailing the divine perfections, and whose own particular task was to lead the human soul to some intelligence of the mysteries of the deity, affirms that here below we cannot know God as he is in himself, *nos non scimus de Deo quid est*, and may only know him in that apprehension which assures us of his existence; *quamvis maneat ignotum quid est, scitur tamen quia est.*

Previous comments have given us in advance the sense of these formulas, in which it would be vain to seek for a shadow of agnosticism or semi-agnosticism. The first does not mean: 'We do not know what God is,' in the sense that we do not know what predicates should be intrinsically and in their proper meaning attributed to God; for we know by certain knowledge, more certain than that of mathematics, that God is simple, one, good, omniscient, all-powerful, free. . . . We are more certain of the divine perfections than of the beating of our own hearts. This formula means that 'we do not know what is God', in the sense that we do not attain to the quiddity of God in itself, we do not know in what the Godhead itself consists; for in attributing any predicate to God, it is not in its formally grasped essence as such, but a perfection

[1] *In I Sent.*, dist. 22, q. 1, a. 1. 'Sicut Deum imperfecte cognoscimus, ita etiam imperfecte nominamus, quasi balbutiendo, ut dicit Gregorius.' (*Ibid.*) St. Thomas takes up and explains the same formula in *De Pot.*, 7, 5, ad. 13: 'Deus subterfugit formam intellectus nostri quasi omnem formam intellectus nostri excedens; non autem ita quod intellectus noster secundum nullam formam intelligibilem Deo assimiletur.'

'Deus est potior omni nostra locutione et omni cognitione et non solum excedit nostram cognitionem et locutionem, sed universaliter collocatur super omnem mentem etiam angelicam et super omnem substantiam,' St. Thomas says again (*In Div. Nom.*, c. 1, lect. 3).

which is certainly comprised in that essence, but which we cannot conceive otherwise than it is, which we attribute; and that a predicate is attributed to God is in itself a result of our inadequate manner of conceiving,[1] for in him there is no duality of subject and predicate: to know him as he is should be an absolutely simple vision.

Indeed the highly formal language of St. Thomas has here the precise technical sense of the Peripatetic School, and it would be a total misunderstanding to think that *scire de aliquo an sit* or *quia est* consists exclusively in its bearing on judgments of existence with no knowledge of what the thing is. To translate *scire quia est* accurately into modern terms it is necessary to say, in the first case, to know in the order or perspective of a simple affirmation of fact, in the second, to know in the order or perspective of the reason of being, or of explication.[2] All knowledge which does not attain to the essence *in itself* belongs to *scire quia est.* In apprehending a thing not in its own essence, but in what relates to its existence, in apprehending it, not in the perspective of its reason of being but only in that of fact, it always attains in an imperfect manner to what the thing is (if not, it would not know how to posit its existence); it includes a certain diminished knowledge of the essence, known, not in itself in dianoetic intellection, but in another thing.

Thus in a nominal definition, it is already the thing which is signified, although in a way which is highly confused and imperfect: as in empiriological knowledge where the essence of corporeal things is attained, but blindly, in the signs which are like a succedaneum of it. Much more, when we know God by means of created perfections, which in their very essence, in their most intimate and radical depth, stamp in the heart of things a likeness to God, do we know the divine essence, not certainly in itself, *sicuti est,* nor by a real definition which is assuredly impossible, but very truly and very certainly, by virtue of an analogy which, while being wholly uncircumscriptive, attains to what is rightly and intrinsically found in that essence, and so allows us to assign—in the place of an impossible real definition—what is, according to our mode of conceiving, the formal constituting factor of the divine essence. The inviolable secrecy of the Godhead does not thus prevent the divine

[1]Cp. *Sum. theol.*, i, 13, 12, ad. 2; *De Pot.*, 7, 4.

[2]See R. Garrigou-Lagrange, *Dieu, son existence et sa nature,* 5th edit., p. 512.

essence being known by us, not in itself, but because it communicates a created participation of itself to what is not it—this word, 'participation', expressing in the ontological order the same thing as is expressed in the noetic order by the word 'analogy'. And the more close is the knowledge, the more it witnesses to the transcendence. A formula of endothermic reaction which the chemist quietly writes on a sheet of paper and arranges with his pen announces a vertiginous conflagration; in saying, 'Subsistent Being itself', or 'in Him there is no real distinction between essence and existence', the metaphysician unseeingly describes that sacred abyss before which the angels fall trembling with love and terror.

The divine nature remains veiled, hidden from our metaphysical gaze, not objectified in what it is in itself, attained in things, ungraspable in itself. And yet, thanks to ananoetic intellection, it constitutes the object of completely stable knowledge, of a science which contemplates and draws out determinations in it which only imply negation in our mode of conceiving. Loyally leaving intact its absolute Simplicity, and precisely because we are loyal to the point of misconception, we introduce into it all our rational distinctions: such a perfection and such another, science of simple intelligence and science of vision, antecedent and consequent will, determining and permissive decrees. . . . The multiplicity of these rational distinctions, requisite because of the very eminence of the reality to be made known, attests only the humility of such a form of apprehension. It is not the divine Simplicity which is divided, only our concepts which we adapt and twist and bend, so that together with them our intellects may bend and work, so as to know the Almighty according to the mode of our poverty.

THE NAME OF PERSON

A person is a centre of liberty, which confronts things, the universe, God, talks with another person, communicates with them by intelligence and affection. The notion of personality, complex as it is, belongs primarily to the ontological order. It is a metaphysical and substantial perfection which opens out in the operative order in psychological and moral values.

The first metaphysical root of personality is what is called subsistence.

Subsistence presupposes a (substantial) nature which is individual and singular (*i.e.* having, in the line of nature or essence, its ultimate point of actuation and determination); and what it rightly signifies, in as much as it finds in the order of creation[1] its final achievement, is that this nature, by the fact that it is endowed with subsistence, cannot communicate with any other substantial nature in the very act of existing; it is, if one may say so, absolutely enclosed in itself with regard to existence. My personality exists before acting; and it possesses its existence, like its nature, in an incommunicable way which is absolutely its own. Not only is its nature singular, but it so possesses the existence which actuates it that it desires single possession, unshared with any other.

If in all things that are not God essence is really distinct from existence, and is found in the same relation to existence as that of potency to act, it is nevertheless clear that the act of existing does not achieve the essence in the line of the essence itself, since it is of another order (it declares the position *extra nihil* of the essence entirely constituted in its line). In order that the existence which it receives should be *its* essence, actuate it as rightly belonging to it and unable to actuate another at the same time, it is therefore necessary that the nature receive first of all another kind of achievement or termination, a metaphysical mode thanks to which it will face existence as a closed whole, as a subject which appropriates to itself the act of existing which it receives. This is that *subsistence*, about which there has been so much dispute, the notion of which imposes itself the moment one has grasped the bearing of the intuition of genius by which St. Thomas saw in the essence itself with all its intelligible determinations a potency with regard to the act of existing.

Subsistence is for the nature like the ontological stamp of its unity. When this nature is complete (a soul separated from its body is not a person), above all when it is able to possess itself, to take itself in hand

[1]The finite and created subsistence of Peter signifies that no other substantial nature can share with him in the act of existing. If one passes over into the uncreated order, the uncreated and infinite subsistence of the divine nature signifies that it can share the act of existing with nothing which is not itself or which is not already itself. Each of the Divine Persons is God, and thus each exists with the same common existence which is the uncreated essence itself. God is eminently all things and thus the uncreated subsistence of the Word, since it is infinite, can 'terminate' and cause to exist with divine existence a finite nature (without its own subsistence) hypostatically assumed.

by the intellect and the will, in short, when it relates to the spiritual order, then the subsistence of such a nature is called personality.

Such, in the vocabulary of the Schoolmen, is the metaphysical notion of personality: it is this notion of which we all make use (like M. Jourdain's prose) when we say that every man has a personality, is a person, endowed with free will. But in subjects which are corporeal as well as spiritual, and who share one specific nature, so that the personality of any one implies his individuation by matter, and which are dark to themselves, and whose rightful condition is mobility, this metaphysical root, hidden in the depth of being, is only made manifest by a slow self-conquest, achieved in the course of time. Man must gain his personality like his liberty, and it is dearly bought. He is not a person in the order of action; he is only *causa sui* if his rational energies and virtues and his love—and the Spirit of God—gather his soul into their hands—*anima mea in manibus meis semper*—and into the hands of God. They give a face to the torrent of multiplicity of which he is the stream-bed, freely seal him with the ontological seal of his radical unity. In this sense one knows true personality and liberty, another knows them not. The personality (in metaphysical contradiction) is subject to many checks in the psychological and moral order. It runs the risk of contamination by the misfortunes of material individuality, by its lyings and cheatings, its vanities, its complexes, its narrownesses, its hereditary oppositions, its habitual régime of rivalries and contradictions. For the same man who is a person, and subsists with all the subsistence of his soul, is also one of a species and dust in the wind.

The great truths weigh heavily on the shoulders of men. One could say that India has not known how to bear the idea of the divine transcendence, as if an intense sense of the solitude of God had led her to an a-cosmic metaphysic which, in a despairing circle, runs the risk of ruining in its turn this same transcendence. On the other hand, by having felt too keenly that there is nothing, if one may put it so, so wide-extended as the divinity (for we cannot make a step without striking against the manifestation of an attribute of the Creator), so that in the universe there is nothing rightly profane, but all is sacred and saturated with the signs of God, the Graeco-Roman world fell into the adoration of creatures and into Stoic or Neo-platonic pantheism.

In the one as in the other the personality of the true God is destroyed. It is obvious that the god of immanence, be it the naïve immanence of the old pantheists or the senile and rehashed immanence of modern idealism, cannot be a personal god, lost as he is, either in things or in the thought of professors and philosophers. On the other hand, the idea of divine transcendence, when too humanly understood and insufficiently transcendentally, seems at first sight equally incompatible with personality: immense, high above all things and all the concepts which we employ to name him, how can he be a person, one who says 'I' as we do? In speaking so we have at once forgotten the bearing of ananoetic intellection and the real meaning of personality; we are still dominated by images, both in representing the divine eminence and in thinking of the concept of a person.

All that the latter includes of the laborious and the limited, all that is at once indigent and complicated, of re-working over a poverty-stricken centre and narrow plans, the current notion of the word personality itself, the whole weight of the anthropomorphic charge which weighs it down (and how can that surprise us? It describes in man the high-point of humanity) uniquely belongs to the link in us between personality and individuation, and thus to our material condition. We must free the word personality from this matrix to grasp its transcendental value and ananoetic force. The great ontological characteristics which I have signalised remain: individuality (not individuation: individuation by matter is exclusively a characteristic of bodily things), unity and integrity, subsistence, intelligence, will, liberty, the possession of the self by the self. 'The notion, person,' says St. Thomas, 'signifies what is most perfect in nature.'[1] Dream for a moment of the possible nature of angelic personality! Such a one is still a created subject, but each includes in his sole self a specific essence; finite with regard to God, he is infinite in comparison with us; immutably subsistent above time, a mirror of God and of the universe, a personality transparent to itself, who knows himself in the word which expresses his very substance and who knows all things in the depths of his self-consciousness, and whose liberty knows only unconfined acts; it is among these myriads of pure spirits, resonant from the height to the depth with intelligible communications and the

[1] *Sum. theol.*, i, 27, 3.

interchange of speech unconfined by sounds, that the concept of personality begins to show in the amplitude and purity of its trans-intelligible analogues.

In reality, as soon as one escapes from images in thinking of the divine transcendence, one sees that it necessarily and absolutely requires personality. This personality is the very seal of transcendence, lacking it, the ocean of infinite perfections, however high above our thought we recognise them as being, would not achieve separated existence, and transcendence would give place to that urge for an endless over-passing, a passing beyond the already experienced, which the Modernists substitute for it, and which only attests the inexhaustibility of our own nature or the indefinite spiritual becoming which is ours. If God lacked personality, the universal participation of the divine attributes would never be united in an absolute self-sufficiency which has no need of things, the resplendent warp and woof of divinity would never be woven in one. O treachery inherent in metaphor! That personality should be a core, a synthesis of many, is its rightful condition in the creature, but in its uncreated analogue it is a pure simplicity.

In the Pure Act there is absolute unity, absolute integrity of nature, absolute individuality (*i.e.* perfection of nature in its ultimate degree), there is subsistence which is identical with the essence: since subsistence gives to the essence the power of self-appropriating existence, and since the divine essence is precisely its own existence, these three terms are absolutely identical in God. In him thought is in its pure state, and, in necessary consequence, love and liberty; there is possession of the self by the self in its pure state, since his existence is his intellection and his love. Thus he not only exists and knows himself by intelligence and by love as do created minds: uncreated Spirit, for him to exist is thus his self knowledge.

Thus metaphysics knows demonstratively that the divine essence subsists in itself, as infinite personality (and faith holds by revelation that it subsists thus in three Subsistences or Personalities, really distinct one from the other, but not from the divine essence; so that in the godhead there is at once a trinity of persons and perfect community and without any sharing of the same individual nature, because there is perfect personality without any shadow of individuation, not even, as

in the angels, by reception in existence in essences distinct from it). We know that the divine transcendence is that of an absolute subject[1] (on condition that we take away in the notion of a subject all passivity and receptivity, and leave only the significance of a reality in itself and for itself—whose transobjective profundity is so immense that even the blessed spirits who *see* it will never *comprehend* it); the superexcellent subject, separated absolutely by its very infinity from all others, created or creatable, whose unending multiplication could never add one comma to the perfection which He already is (with their creation there would be *beings*, not more *being*).

Knowing that he is thus truly and really transcendent in his essence, we know also that he is immanent in all things by his immensity, more intimate to them than their own selves, in order ceaselessly to give them being and movement; we know that all mutability being on the side of things, not of the pure Act, who alone specifies his science and his love, absolutely nothing would have been changed in him if he had not created things, and yet he knows and really loves them since they fall as contingent terms attained in fact, but not as specifying objects, under the very knowledge by which he knows himself, the love by which he loves himself, the will by which he necessarily wills his goodness. By this, it seems, we are given a chance of glimpsing how the evil which he permits—which supposes the existent creature and its voluntary deficiency, which is in itself only a bankruptcy of the good which is due—can be known by God without having God for its cause, the creature having the primary initiative in the line of evil, as God in the line of good. And we can also on the other hand dimly see how his love of his creatures to the point of making them enter, as other than himself, having that community of life with him which is natural to friends, into that unchanging love which he bears to himself and his unchanging joy—'*Enter into the joy of your Lord*'—is so profound a characteristic of the Godhead that there was need of the christian revelation to tell us it like the proper name of God: *Deus caritas est.*

So it is that integral realism first knows things, intelligible subject subsisting outside the mind, in order to mount to the transintelligible cause of things, infinitely transcendent and sovereignly personal.

[1]In that sense we can allow Kierkegaard's saying that God is *infinite subjectivity*.

interchange of speech unconfined by sounds, that the concept of personality begins to show in the amplitude and purity of its trans-intelligible analogues.

In reality, as soon as one escapes from images in thinking of the divine transcendence, one sees that it necessarily and absolutely requires personality. This personality is the very seal of transcendence, lacking it, the ocean of infinite perfections, however high above our thought we recognise them as being, would not achieve separated existence, and transcendence would give place to that urge for an endless over-passing, a passing beyond the already experienced, which the Modernists substitute for it, and which only attests the inexhaustibility of our own nature or the indefinite spiritual becoming which is ours. If God lacked personality, the universal participation of the divine attributes would never be united in an absolute self-sufficiency which has no need of things, the resplendent warp and woof of divinity would never be woven in one. O treachery inherent in metaphor! That personality should be a core, a synthesis of many, is its rightful condition in the creature, but in its uncreated analogue it is a pure simplicity.

In the Pure Act there is absolute unity, absolute integrity of nature, absolute individuality (*i.e.* perfection of nature in its ultimate degree), there is subsistence which is identical with the essence: since subsistence gives to the essence the power of self-appropriating existence, and since the divine essence is precisely its own existence, these three terms are absolutely identical in God. In him thought is in its pure state, and, in necessary consequence, love and liberty; there is possession of the self by the self in its pure state, since his existence is his intellection and his love. Thus he not only exists and knows himself by intelligence and by love as do created minds: uncreated Spirit, for him to exist is thus his self knowledge.

Thus metaphysics knows demonstratively that the divine essence subsists in itself, as infinite personality (and faith holds by revelation that it subsists thus in three Subsistences or Personalities, really distinct one from the other, but not from the divine essence; so that in the godhead there is at once a trinity of persons and perfect community and without any sharing of the same individual nature, because there is perfect personality without any shadow of individuation, not even, as

in the angels, by reception in existence in essences distinct from it). We know that the divine transcendence is that of an absolute subject[1] (on condition that we take away in the notion of a subject all passivity and receptivity, and leave only the significance of a reality in itself and for itself—whose transobjective profundity is so immense that even the blessed spirits who *see* it will never *comprehend* it); the superexcellent subject, separated absolutely by its very infinity from all others, created or creatable, whose unending multiplication could never add one comma to the perfection which He already is (with their creation there would be *beings*, not more *being*).

Knowing that he is thus truly and really transcendent in his essence, we know also that he is immanent in all things by his immensity, more intimate to them than their own selves, in order ceaselessly to give them being and movement; we know that all mutability being on the side of things, not of the pure Act, who alone specifies his science and his love, absolutely nothing would have been changed in him if he had not created things, and yet he knows and really loves them since they fall as contingent terms attained in fact, but not as specifying objects, under the very knowledge by which he knows himself, the love by which he loves himself, the will by which he necessarily wills his goodness. By this, it seems, we are given a chance of glimpsing how the evil which he permits—which supposes the existent creature and its voluntary deficiency, which is in itself only a bankruptcy of the good which is due—can be known by God without having God for its cause, the creature having the primary initiative in the line of evil, as God in the line of good. And we can also on the other hand dimly see how his love of his creatures to the point of making them enter, as other than himself, having that community of life with him which is natural to friends, into that unchanging love which he bears to himself and his unchanging joy—'*Enter into the joy of your Lord*'—is so profound a characteristic of the Godhead that there was need of the christian revelation to tell us it like the proper name of God: *Deus caritas est.*

So it is that integral realism first knows things, intelligible subject subsisting outside the mind, in order to mount to the transintelligible cause of things, infinitely transcendent and sovereignly personal.

[1]In that sense we can allow Kierkegaard's saying that God is *infinite subjectivity*.

This sovereign personality is what is at once farthest from us—the inflexible infinite confronting my mere manhood—and what is nearest to us, since incomprehensible Purity has a face, a voice, has set me before it to confront it, that I may speak to him and he respond. The light of his countenance has been stamped upon us. 'What is man that thou shouldst magnify him? or why dost thou set thy heart upon him? Thou visitest him early in the morning and thou provest him suddenly. How long dost thou not spare me, nor suffer me to swallow down my spittle? . . . Thy hands have made me and fashioned me wholly and now wouldst thou destroy me! . . . But yet I will speak to the Almighty, and I desire to reason with God. . . . Who would grant me a hearer, that the Almighty may hear my desire; and he himself that judgeth would write a book; that I may carry it on my shoulder, and put it about me as a crown? . . . Then the Lord answered Job out of a whirlwind and said: 'Who is this that wrappeth up sentences in unskilful words? Gird up thy loins like a man: I will ask thee and answer thou me.'[1] All mysticism is a dialogue, one that is addressed to an anonymous interlocutor without personality avows itself a deception by that fact. Though still unable to name the Father, the Son and the Holy Ghost, metaphysics should find its natural and necessary end in a recognition of the divine Personality. If it does not do so, it lacks its aim, it betrays itself, it is unforgivable. This is what St. Paul, when he condemned the *sapientes hujus mundi*, called 'keeping truth captive' and 'fainting away in their own thoughts'.

Since God is sovereignly personal, the notion of creation has a meaning; he is the absolute cause, by his intelligence and liberty, of all things which are not him; the notion of sin has a meaning: to mar the order by which the nature of what is demands the self-government of free-wills is to wound God himself in what he wills and necessarily loves: justice, and in what he wills and freely loves: things and created wills (and since they are there is a justice which concerns them, an order which is required of them by nature, and which the positive law, divine or human, can achieve); the notion of revelation has a meaning: he can speak to us, by human instruments which he chooses; the notion of grace has a meaning: he can make us enter into par-

[1]Job, vii, 17-9; x, 8; xiii, 3; xxxi, 31-6; xxxviii, 1-3.

ticipation with his very deity and his inward life, and make of us his friends.

THE WAY OF KNOWLEDGE AND THE WAY OF IGNORANCE

Since our concept of being, and our concepts of all the perfections belonging to the transcendental order, cannot be freed from the limitations which belong to them, not in regard to what is signified, but as to their mode of conception and signification, while being itself and its transcendental analogues lack in God these limitations, it is clear (St. Thomas, echoing the whole tradition of wisdom, repeats it incessantly),[1] that *apophatic* theology, which knows God by the mode of negation or ignorance, knows him better than *cataphatic* theology, which proceeds by that of affirmation and science.

Nevertheless this implies an essential condition, that this apophatic or negative theology should not be that of a pure and simple ignorance, but of an ignorance which knows, in which lies its mystery. If not, the atheist who says 'There is no God' would be possessed of an equal wisdom with St. Paul. Not knowing how to write because one does not know the alphabet, and being unable to write because the Summa which you have composed now seems to you only straw; to ignore the rules of art because you cannot learn them or to ignore them because you can use them at your pleasure, to hold oneself below reason because one is not yet born into rational life, or above reason because one has entered into contemplation, are two different forms of behaviour which must not be confounded. *In finem nostrae cognitionis Deum tanquam ignotum cognoscimus*, at the end of our knowledge we know God as unknown, says St. Thomas, quoting Dionysus.[2] 'For it is then above all', he adds, 'that the mind has the most perfect knowledge of God, when it is known that his essence is above everything that can be apprehended in this present state of our life. And thus, by the very fact that in itself the Godhead remains unknown, there is a greater knowledge than ever

[1]Cp. *In I. Sent.*, dist. 22, q. 1. a. 2, ad. 1 (the expression is still more pointed in *De Pot.*, 7, 5, ad. 2, and in *Sum. theol.*, i, 13, 3, ad. 2, and 12, ad. 1); *Contra Gent.*, i, 30; iii, 49, and numerous other texts.

[2]*Myst. Theolog.* c. 1.

of God even as he is,'[1] *tanquam ignotus cognoscitur*. It is not that he remains unknown to us, but that he is known by us, is known in himself, as remaining unknown.[2]

A purely conceptual apophatic theology would be nothing, since this negative knowledge only advances by the method of ignorance in order to pass beyond the limited method of concepts. There is indeed an element of equivocation in the phrase, which explains its varying fortunes; it holds us in suspense on the dividing line of the rational and the mystical, and can hold a different sense as seen from the one side or the other. In as much as the *via negationis* announces that God is like no created thing, it is one of the ways of metaphysical or ordinary theological apprehension at its highest point. But in as much as *theologia negativa* constitutes a form of knowledge, a wisdom of a higher order (and that is certainly what is meant when it is distinguished from theology as being theology of another kind), it is mystical experience or it is nothing. It establishes itself in order to experience mystically in that mode without modes what cataphatic theology knows in divine things from the outside, in that reserve of ignorance which is the crown of the communicable knowledge of these things. To say that in God there is neither composition nor imperfection, neither limitation, nor mutability, nor multiplicity, that God is not beautiful as things are fair, is not as things are, loves not as we love, is still to be occupied with the formulation of theses[3] (although negatively, as may happen in any science), is

[1] 'Et sic quamvis maneat ignotum quid est, scitur tamen quia est.' St. Thomas, *In Boet. de Trin.*, q. 1, 1, a. 2, ad. 1.

Cp. *De Pot.*, 7, 5, ad. 14: 'Ex quo intellectus noster divinam substantiam non adaequat, hoc ipsum quod est Dei substantia remanet nostrum intellectum excedens, et ita a nobis ignoratur; et propter hoc illud est ultimum cognitionis humanae de Deo quod sciat se Deum nescire, in quantum cognoscit, illud quod Deus est, omne ipsum quod de eo intelligimus, excedere.' Cp. also *De Veritate*, 2, 1, ad. 9.

[2] 'Hoc ipsum est Deus cognoscere, quod nos scimus nos ignorare de Deo quid sit. . . . Et sic cognoscens Deum in tali statu cognitionis illuminatur ab ipsa profunditate divinae sapientiae, quam perscrutari non possumus. Quod etiam intelligamus Deum esse supra omnia, non solum quae sunt, sed etiam quae apprehendere possumus, ex incomprehensibili profunditate divinae sapientiae provenit nobis.' *Ibid.*, *In Div. Nom.*, c. vii., lect. 4.

[3] The phrase 'apophatic theology', if it is used to designate these negative enunciations, then relates to the *via negationis*, which is opposed but strictly co-relative to the *via eminentiae*, these two ways being alike at once implied by the doctrine of the divine names, and both making part of one and the same discursive apprehension, which may

not yet a leaving behind of cataphatic theology, a passing over into a higher kind of wisdom, in as much as these truths are only known, not experienced, only spoken of, not lived.

be the first philosophy (natural theology) in the order of purely rational knowledge, or, in the order of reason elevated by faith, *theologia per modum doctrinae seu cognitionis.*

Thus in the *Summa* the *via negationis seu remotionis* is systematically employed conjointly with the *via excessus seu eminentiae* in the building up of sacred doctrine. In particular—in conformity with that methodological principle that, in the *imperfect* knowledge of the essence or *quid* implied by all science set in the simple perspective of fact (*quia est*), what, in the case of material substances, is knowledge by some proximate or remote *genus* and by certain characteristic *accidents* becomes, in the case of immaterial substances, knowledge by *negation* or by the way of *causality* and *eminence* (cp. *In Boet. de Trin.*, q. 1, a. 2, and above all q. 6, a. 3)—Q. 3 and 11 of the *Pars Prima*, which treat of the things 'quae ad divinam substantiam pertinent' (q. 14, proem.), are placed primarily under the sign of the *via negationis* ('quia de Deo scire non possumus quid sit, sed quid non sit, non possumus considerare de Deo quomodo sit, sed potius quomodo non sit,' q. 3, proem.; 'et tunc de substantia ejus erit propria consideratio, cum cognoscetur ut ab omnibus distinctus. Non tamen erit perfecta cognitio, quia non cognoscetur quid in se sit', *Contra Gent.*, i, 14; see also iii, 39); while in questions 14-28, which treat of the things 'quae pertinent ad operationem ipsius' (q. 14, proem.), after the doctrine of analogy has been expressly disengaged (q. 12-13), it is the *via causalitatis* and the *via eminentiae* which appear the most (without, certainly, excluding the *via negationis*, for in reality these three are connected, cp. *De Pot.*, q. 7, a. 5, and the *via negationis* is, as I have recalled above, the highest).

Two classes of references are found in St. Thomas in regard to the *via negationis*. The first belongs to the method of negation used, as we have seen, in the theology which St. Thomas calls *per modum cognitionis* (i, 1, 6, ad. 3). Cp. for example, *In Boet. de Trin.* (q. 2, a. 2, ad. 2):'Hoc ipsum quod scimus de Deo quid non est, supplet in divina scientia locum cognitionis quid est; quia sicut per quid est distinguitur res ab aliis, ita per hoc scitur quid non est;' and again, *Contra Gent.* i, 14.

The other relates to knowledge by ignorance considered as constituting the highest kind of wisdom, in other words to apophatic or negative theology in so far as this signifies a knowledge higher than that of cataphatic theology. Apophatic or negative theology is then identified with mystical theology and thus (since mystical theology is itself identical with the *pati divina*) with knowledge of God *per modum inclinationis* or the wisdom of the Holy Ghost (i, 1, 6, ad. 3; ii-ii, 45, 2). Cp. for example, *In Boet. de Trin.*, q. 1, a. 2, ad. 1, and *Div. Nom.*, c. vii, lect. 4, cited *supra*, p. 292; and also *Contra Gent.*, iii, 49: 'Et hoc est ultimum et perfectissimum nostrae cognitionis in hac vita, unde Dionysus dicit in libro de *Mystica Theologia* (c. ii) quod Deo quasi ignoto conjungimur. Quod quidem contingit dum de Deo quid non sit cognoscimus quid vero sit, penitus manet incognitum. Unde et *ad hujus sublimissimae cognitionis ignorantiam* demonstrandam, de Moyse dicitur (Exod. xx, 21) quod *accessit ad caliginem in qua erat Deus*;' and again, 'Quando in Deum procedimus per viam remotionis, primo negamus ab eo corporalia; et secundo etiam intellectualia, secundum quod inveniuntur in creaturis, ut bonitas et sapientia; et tunc remanet tantum in intellectu

Apophatic theology has only a meaning when it is more than cataphatic theology (as a mode of knowledge); it is not its double, it should not be substituted for it; it stands upon its shoulders, it knows the same things, only better. It is negative, not because it simply denies what the other affirms, but because it attains more by affirmation of negation, *i.e.* more than by communicable enunciations, because it experiences by the mode of ignorance the reality which the other affirms and can never affirm sufficingly. If an ignorant shepherdess can be raised to such wisdom, it is true that she is ignorant of metaphysics and theology, not that she is an ignorant; she has faith, and by faith she grasps in their divine source those truths which theologians disclose in the sweat of their brows. And if she is ignorant of cataphatic theology, there are others in the Church who are wise in it. In itself, on the ladder of apprehension, this theology is a step which comes before contemplation and should lead thither.

nostro, quia est, et nihil amplius: inde est sicut in quadam contione. Ad ultimum autem etiam hoc ipsum esse, secundum quod est in creaturis, ab ipso removemus; et tunc remanet in quadam tenebra ignorantiae, secundum quod ignorantiam, quantum ad statum viae pertinet, optime Deo conjungimur, ut dicit Dionysus, et haec est quaedem caligo, in qua Deus habitare dicitur.' *In I Sent.*, dist. 8, q. 1, a. 1, ad. 4.

This last passage is full of very obvious echoes of Dionysus, and could lead one to believe in a dialectic ascension leading in itself to the *divina caligo*. In reality, for St. Thomas, there is only here an *appearance* of dialectic, *i.e.* the rational movement which successively posits these various negations certainly corresponds to an intellectual consciousness which accompanies and justifies it, which bases on reason for the contemplative the movement of his contemplation: but this takes place *by virtue of* the connaturality of love, not *by virtue of* a dialectic. I believe it was already so, though much less clearly, for pseudo-Dionysus himself, who close as he was to neo-platonism and endowed with a wholly neo-platonic culture, thought out in terms of neo-platonic conceptualisation a doctrinal substance which in reality is much more Pauline than neo-platonic. In historical fact, I am led to believe that the author of the *Divine Names* and the *Mystical Theology* could believe himself a good platonist, and twisted to his use neo-platonic terminology in order to express an experience in reality incompatible with it. A sort of tutelary *displacement* of terminology was thus produced, thanks to which negative theology, in the christian sense of the wisdom of the Holy Ghost, in fact, I believe, prevailed (*in actu exercito*) in the pseudo-Dionysus, despite his outward marks of neo-platonism which are so marked, and incontestably prevailed in the Fathers, even in the use of certain platonic formulas, until christian thought, having become fully conscious of itself, could with St. Thomas, then with St. John of the Cross, expressly (*in actu signato*) build up from this negative theology or wisdom of the Holy Ghost a speculative and practical science, freed from all neo-platonic contamination, where the essential part played by the connaturality of charity (hardly indicated by Dionysus, *Divine Names*, c. iv, St. Thomas, lect. 4, 9–11) is fully recognised and made manifest.

The contemplative knows no further revelation than the theologian, the field which he covers is no more extensive; his knowledge is only more penetrating, more unitative, more divine. There is no supernaturally accessible object which is attained by contemplation which is not spoken of by dogmatic formulas infallibly and with a perfect exactitude and absolute truth. But in its way of attaining exactly what is taught in dogmatic formulas, in its way of apprehension, mystical theology is higher than its speculative brother.

If the wholly apophatic theology of Philo of Alexandria did not resolve itself into a pure agnosticism, it is because in reality it implied a cataphatic theology against which, dazzled by the divine transcendence, Philo unwisely turned, in order to destroy as unworthy of the divine the ground on which he stood, without seeing that he was destroying in the same stroke the affirmation of transcendence itself. In the course of that admirable progress to which it has been constrained by revealed dogma, and which began in the first centuries, to reach in Thomas Aquinas its perfect doctrinal formulation, christian philosophy has grown to understand more and more that pantheism and agnosticism can only both be struck down because a knowledge of the affirmative and propositional order is possible, courageous in the very degree to which it is humble, speculatively valid and rigorously true, but at the same time ananoetic and inevitably deficient in mode, which can signify in a rightful sense what is in God.[1] Certainly no advantage lies in a present-day retrogression, as is the desire of certain so-called modernist philosophies, to Philo's position. An apophatic theology which ascends at the expense of the cataphatic, which is reduced to a simple 'as if', or regarded as approximate, will vanish in smoke in the same degree to which it soars.[2]

[1] *I.e.* not metaphorically, but making known to us the perfections which are found formally and intrinsically in God. Cp. p. 304 and M. T. L. Penido, *op. cit.*

[2] 'Intellectus negationis semper fundatur in aliqua affirmatione: quod ex hoc patet quia omnis negativa per affirmativam probatur; unde nisi intellectus humanis aliquid de Deo affirmative cognosceret, nihil de Deo posset negare. Non autem cognosceret, si nihil quod de Deo dicit, de eo verificaretur affirmative.' St. Thomas, *De Pot.*, 7, 5; cp. *Sum. theol.*, i, 13, 12: 'Propositiones affirmativae possunt vere formari de Deo'. It is always the same principle (the distinction between what is signified and the mode of signifying) which applies: 'Possunt hujusmodi nomina et affirmari de Deo et negari: affirmari quidem propter nominis rationem, negari vero propter significandi modum.' (*Contra Gent.*, i, 30.)

But why was it that the Alexandrian School were led despite themselves to leave only a negative theology? Because, being absolute intellectualists, they desired an intellectual knowledge of God of which the very mode should be divine, not human, and wished at the same time that this supreme and apophatic knowledge should remain in the intellectual mode, should be a philosophy. And it is impossible to have at one and the same time a philosophy which to be true must enunciate, and a philosophy which in being true destroys enunciation; the one cancels out the other. Thus, and as an effect of this same absolute intellectualism, the tendency to reject or depreciate affirmative theology was for them bound up with the mortal equivocation of the neo-platonic apophasis, which claimed to be mystical, and at the same time remained metaphysical, a dialectic ascension to ecstasy. The same ambiguity reappears in history with every return to neo-platonism. Nicholas of Cusa extended one hand to pseudo-Dionysus and the great mystics of the Middle Ages, but the other to Boehme and Hegel. The phrase apophatic theology then describes an intellectual super-knowledge raised about yes and no, where contraries are identified, in place of the reality of apophatic theology which is 'mystical theology' itself, the contemplation in charity of the saints.

This contemplation is essentially supernatural. As I hope to show in the next chapter, there is no natural mystical contemplation. But, in a much more general sense, it is possible to have a natural spirituality, which belongs to the natural love of God: because this natural love does not suffice to make God effectively loved above all things, nor to the connaturalisation of the soul with the deity, it cannot lead to mystical contemplation rightly so called; but it can inspire the desire of that unknown union which in fact that contemplation is alone able to realise.

Whether it is directed towards God known or misknown, loved as God or at least desired as the supreme truth of which we know not the name, such a motion, such a mystical urge animates all great philosophy—I say, *ex parte subjecti*: because no man is a philosopher, if he does not love the absolute and wish to be united with it. But sometimes it animates philosophy as tending towards an end which transcends philosophy, and which does not intervene in its specification (for this latter

depends purely on the object, which is here entirely of the rational order), sometimes as tending towards an end immanent in philosophy, which intervenes in it in order to constitute its proper object and to specify it. In the first case the very purity of philosophy as such seems, above all in the eyes of the unphilosophical, to run the risk of concealing the value and the efficacy of this urgency; but at least there is a pure and authentic contemplation to which it may bear the soul beyond itself. In the second case, the very confusion suffered by philosophy makes more manifest and sensible the presence within it of this urgency; and it is this too beautiful witness which is given to eternal aspirations which, in their very fall and at whatever price, cause the metaphysician to revere Plotinus and the sages of old India. But it is in nothingness—taking the end as simply natural—that this issues; or, at least, if higher influences enter in, whether they come from the angels or from grace, it is indubitably still a confusion, in which deception will play a great part.

THE SUPER-ANALOGY OF FAITH

If mystical contemplation (or the veritable apophatic theology) is essentially supernatural, a new principle of capital importance necessarily here supervenes, between the domain of metaphysics and that of contemplation: theological faith, the root of all supernatural life. And this faith itself must first advance cataphatically, making known the mysteries of the Godhead to us in communicable enunciations before raising us to such experience. Without too greatly anticipating the substance of later chapters, I would only indicate here a third degree of analogical or ananoetic intellection which must here be signalised.

In effect it is God himself, as he is known to himself, the divine transintelligible as he is in himself and object to himself—to himself and to the blessed—in as much as he gives himself to our grasp, who is attained by faith: but without meanwhile our being able to lay hold of him, without his becoming in himself and by himself an object for us, not seen as the blessed see. He is only the object of our understanding in the ananoetic mode or as in a mirror—*per speculum aenigmate*—of which the metaphysical knowledge of God has already

furnished an example, *i.e.* by the objectification of other subjects which fall within the reach of our senses and are in themselves intelligible to us, and whose attributes have in the Godhead their sovereign analogue.

But a capital difference with metaphysical knowledge here intervenes: for metaphysical knowledge of God it is in the heart of the intelligible that our intellect, having discovered the ananoetic value of being and the objects which belong to the transcendental order, rises, thanks to these, to the divine analogue. On the contrary in the knowledge of faith it is in the very heart of the divine transintelligible, in the depth of the Godhead itself that the whole process of knowledge starts in order to return thither, that it makes, by the free generosity of God, choice, in the intelligible universe which falls under our senses, of objects and concepts of which God alone knows that they are analogical signs of what is hidden in him, and of which he makes use to speak of himself to us in our language. *No man hath seen God at any time: the only-begotten Son, who is in the bosom of the Father, he hath declared him.*[1] That the notions of generation and sonship, or of three having one nature, or of a coming in the flesh and a personal union with human nature, or of creaturely participation and of brotherly love with the creature, could have a value in the very order of the deity itself and in regard to the inward life of God, we should never in any way have known if God himself had not revealed it.

The analogical instrument put in our hands wherewith to attain God by such notions is not only an *uncircumscriptive analogy*: it is a revealed analogy, the proxy or substitute of vision, what we may call a *super-analogy*. The mode of conception of signification is as deficient here as in that of the metaphysical analogy; but what is signified—revealed, *i.e.* stripped of the veils which belong to our natural knowledge, but left or shown *under other veils*—is this time the Godhead as such, God as he sees himself, and who gives himself to us—in darkness and without our laying hands on him, for we do not see him. (Indeed the divine essence, which surpasses every concept, could only be intellectually possessed or grasped if it is seen by itself and without concepts.) Such an ananoetic knowledge is thus supra-rational with regard to the uncreated object in

[1]John, i, 18.

which it ends,[1] and remains conceptual and human in regard to the created objects through which it passes. These created analogues form part of our most earthly and human world: what is more earthly than a father and his son? What notion is more common, more heavy with human echoes, than that of buying back? Thus the super-analogy of faith is more humble than that of metaphysics, it wears the livery of poverty. But we know from God it attains to divine secrets which metaphysics does not know. Once shown by revelation as likenesses to what is hidden in God, the mind perceives that things like paternity and filiation can be referred to the transcendental order, have an analogical value of rightful proportionality. The names of Father, Son and Holy Ghost are not metaphorical, they describe (without all the time containing or circumscribing) what the divine persons formally and intrinsically are. The word redemption is not a metaphor, and intrinsically and formally expresses the work accomplished by the Son of God. Under the livery of poverty the superanalogy of faith hides a supernatural vigour, by it we attain in darkness to the Godhead itself, the divine essence in that in which no creature can participate naturally, and as no created perfection can in itself show it to our reason.

It should be added that in order to make us attain to the intimacy of God it does not only make use of the notions whose ananoetic value revelation itself so to speak disengages for us: it also makes use of notions which cannot be in themselves transcendentalised as such, and whose ananoetic value, assured as it is by revelation, remains as a result concealed in a metaphorical analogy: in the Apostles' Creed itself do we not say 'and sitteth at the right hand of the Father'? The whole poverty of the tongue of men is thus redeemed by revelation: all the imagery of the inspired Scriptures, all the symbols of the *Canticle of Canticles* are

[1]It is because it does not *see* this object that it must be said even of faith that it does not know God quidditatively. 'Quamvis enim per revelationem elevemur ad aliquod cognoscendum, quod alias esset nobis ignotum, non tamen ad hoc quod alio modo cognoscamus nisi per sensibilia; unde Dionysus, *I Cael. Hier.*, dicit, quod impossibile est nobis aliter superlucere divinum radium, nisi circumvelatum varietate sacrorum velaminum. Via autem quae est per sensibilia, non sufficit ad ducendum in substantias supernaturales secundum cognitionem quid est. Et sic restat, quod formae immateriales non sunt nobis notae cognitione quid est, sed solum cognitione an est, sive naturali ratione ex effectibus creaturarum, sive etiam ex revelatione quae est per similitudines a sensibilibus sumptas.' St. Thomas, *In Boet. de Trin.*, q. 6, a. 3.

thus admitted to bear witness to the uncreated Glory. Indeed, as Dionysus points out, terms of the lowest extraction furnish the best images, because they hazard less than the more noble the risk of forgetting the divine transcendence. St. Thomas quotes this passage from Dionysus, in the article in the *Summa* where he explains that sacred doctrine had the right to use bodily metaphors. All these metaphorical terms truly make known—although improperly when taken literally—the inwardness of God, because they conceal an authentic ananoetic significance (an analogy of rightful proportionality), which appears when we have recourse to other names,[1] although it is too rich for any name to suffice to express its plentitude: so that in the same text of the Bible, says St. Thomas following St. Augustine, there may be numerous literal senses.[2] Thus considered in its maximum amplitude, by which it even comprehends sacred metaphors, the superanalogy extends its confines to the point where one might christen it the *parabolic* analogy. The parabole in fact is a metaphorical analogy which conceals, and in this very fact lies its mystery, an analogy of a rightful proportionality, assignable and expressible in itself, but inexhaustible and so superabundantly crowded with meaning that the sense is always more than any expression of it.[3]

It is written that God made for Adam and Eve in their exile garments of skin. He has alike made for us, by means of his prophets, then of his incarnate Son and his Church, clothing woven of words and of notions to hide the nakedness of our exiled minds, until we see him.

So it is that faith must necessarily proceed cataphatically since it communicates to us, in virtue of the testimony of the First Truth, *i.e.* by the infallible veracity of God's revelation, and thanks to the propounding of the Church, the knowledge of what is hidden in the depths of the Godhead. How shall they understand if they are not taught? And how should they be taught if not by enunciations and notions? And how

[1] 'Ea quae in uno loco scripturae traduntur sub metaphoris, in aliis locis expressius exponuntur.' *Sum. theol.*, i, 1, 9.

[2] *Ibid.*, a. 10.

[3] Unlike the myth, which signifies fictionally certain traits of the creature, but which with regard to divine things has in itself only an entirely undetermined metaphorical value, and holds in itself no rightful assignable analogy of proportionality.

should they teach infallibly, if these enunciations and notions did not in a (superanalogical) analogical mode signify exactly those things which are in God? We understand by this how it is that faith attains to the deity, and that in enunciations which are rigorously true, but yet from afar, at a distance, i.e., thanks to the analogical process implicit in the very use of these notions and enunciations. In order to become wisdom and contemplation, the knowledge of faith must, by a divine grace of inspiration and illumination—and yet always in a trans-luminous obscurity, which will remain as long as God is not seen in himself—cease to advance *from afar* and *at a distance, i.e.* must become experimental and advance apophatically, in freeing itself from the limited mode of concepts, not by an intellectual knowledge which transcends yes and no, but by a passion for those things that are divine which tastes and touches in the No the infinite profundity of the Yes.

PART TWO

THE DEGREES OF SUPER-RATIONAL KNOWLEDGE

Chapter V. Mystical Experience and Philosophy

Chapter VI. Concerning Augustinian Wisdom

Chapter VII. St. John of the Cross, the Practician of Contemplation

CHAPTER V

MYSTICAL EXPERIENCE AND PHILOSOPHY

I. THE THREE FORMS OF WISDOM

IT SHOULD be made plain from the outset and once and for all that the words 'mystical experience' are used here in no more or less vague sense (covering all manner of phenomena of a more or less mysterious and preternatural character, or even simply religious feeling), but in that of the *experimental knowledge of the deep things of God*,[1] the *passion of divine things* which leads the soul through a succession of states and transformations until in the depths of its own being it knows the touch of divinity and 'feels the life of God'.[2]

On the other hand, the highest degree of the inferior borders on the superior: and if, in using the word philosophy, it is above all necessary to think of the philosophy of nature when studying the relations between experimental science and philosophy, here, in this present chapter, in speaking of philosophy it is of metaphysics we should think first of all.

It is fitting, indeed fundamental, to distinguish three degrees of wisdom in the rightful meaning of the word; wisdom being defined as a

[1]St. Thomas in describing the *pati divina* speaks sometimes of 'quasi-experience', sometimes of 'experience'. (Cp. R. Garrigou-Lagrange, *Revue Thomiste*: Nov.-Dec., 1928, pp. 469-72; A. Gardeil, *ibid.* May-June, 1929, p. 272.) This *quasi* is there to preserve the privileges of the divine transcendence: it in no way diminishes what is properly experimental for us in infused contemplation. It is clear that an *absolutely* immediate and therefore *perfectly* experienced knowledge of God is reserved for the beatific state. But on this side of that end a knowledge truly, however imperfectly, immediate may begin in this life (see *infra*, p. 322, n. 3); which, making all the necessary reservations, as P. Gardeil has pointed out, permits as free a use of the words 'experience' and 'experimental' as served heretofore for a John of St. Thomas.

[2]St. John of the Cross, *The Living Flame of Love*, str. 1, v. 1.

supreme form of knowledge having a universal object and proceeding from first principles. The first and least elevated form is metaphysical knowledge, the highest science of the purely rational or natural order. This, rising above the world of visible things for which it seeks the ultimate rationality, recognises by reasoning the existence of God, as the first cause and author of nature. So God, his existence and perfections, his unity, his simplicity, the real and absolute distinction between him and the world, may be known by reasons drawn from created things—τοῖς ποιήμασιν[1]—rising by the chain of causality to the first Principle of all being.[2]

The knowledge of God thus obtained by the reason constitutes that prime philosophy, metaphysics, or what Aristotle called 'natural theology'. It is ananoetic knowledge or knowledge by analogy, which is by no means to be confused with metaphorical knowledge. It makes use for the knowledge of God of those notions which we seek for in things, and which we, because of this, in as much as they are realised in created things, conceive as limitations, but which *in themselves*, in their significance, imply neither limitation nor imperfection, and which can therefore be applied in a rightful sense to the Uncreated as well as to the creation. A light of knowledge broken in the prism of creation, but veritable for all that.

St. Thomas, is it necessary to say? never regarded the human intelligence as in itself limited to sensory knowledge, to which could be added in illusory prolongation a metaphorical perception of spiritual and invisible realities. This contemptuous interpretation, which is occasionally put forward, represents a radical misinterpretation of his thought. If our intelligence, in as much as it is human, is primarily ordinated to the perception of being made concrete in sensible things, it is also, just in the degree to which it is intelligent, ordinated with being in its fullness, and the perception of being drawn from material things is

[1]St. Paul, Rom. i, 20.

[2]It is known that this point has been the object of a definition by the Church at the Vatican Council, later made still more precise by Pius X: 'Deum, rerum omnium principium et finem, naturali rationis lumine *per ea quae facta sunt* (cp. Rom. i, 20) hoc est, per *visibilia* creationis opera, tanquam causam per effectus, certo cognosci, adeoque demonstrari etiam posse. . . .'

already an object of thought which reaches beyond the visible and itself constrains the mind to conceive of a zone of being freed from the limitations of the sensory and to seek in that region for the reasons of all the rest. Thus our native position in regard to the being of objects on the same plane with ourselves is like some bait, some allure, which forces us to rise to a superior plane. From the point of view of speculative knowledge, as from that of ethics, we must agree with Aristotle in saying that human nature exactly by what is essential in it, that is to say the νους, demands of us an ascension above the human.

Metaphysics cannot of itself attain to the divine essence: nevertheless it may rightly know God, in the divided mirror of those transcendental perfections which are analogically common to the uncreated and the creation; and as it lays hold, in the imperfect manner native to limited things, on those realities which, in their pure fullness and overflowing the limits of all our concepts, pre-exist in the incomprehensible simplicity of the Infinite.

Above this wisdom of the natural order, metaphysics or natural theology, stands the science of revealed mysteries, theology properly so called: which rationally develops, in the discursive manner which is of our nature, the truths virtually comprised in the deposit of revelation. Proceeding according to the method and sequences of reason but rooted in faith, from which it receives its principles, the rightful light of theology, drawn from the science of God, is not that of reason alone but of reason illuminated by faith. By this very reason its certitude in itself is higher than that of metaphysics.

Theology has for object[1] not God as witnessed to by creatures, Deity as the first cause or author of the natural order, but God in the very mystery of his essence and inward life, inaccessible by reason alone; not God known in those things which reason discovers he has analogically in common with other beings, but God in the absolute of his own being, in that which belongs to him alone, *deitas ut sic* as the theologians say: the God who will be known face to face in the beatific vision.

[1]In order to avoid unnecessary verbal complication, I have here taken no account of the distinction established by the scholastics between the *subjectum* and the *objectum* of a science. Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 1. disp. 2, a. 11 (Vives, 1).

Deity as such, he who is above all being and all conceivable perfection, God considered according to his own essence and his inward life, *sub ratione suae propriae quidditatis*,[1] so to speak, the inwardness, the *ipsissimum* of Deity, is the common object of the vision of the blessed, the theological virtue of faith, and of theology. But these three visions attain to their end in three differing ways, by means of three reasoning processes which are formally different.

The beatific vision knows him *by and in his very essence, sicut in se est*,[2] as he is in himself, in a manner adequate to what he is, without the mediation of any creature or any idea. It is *scire de Deo quid est*, to know his essence in itself. 'Then', says St. Paul, 'I shall know even as I am known',[3] and St. John: 'We shall see him as he is, *sicuti est*, καθώς ἔστιν.'[4] In that vision the divine *ipsissimum* will be apprehended as in itself it is.

Faith, the craving here below for that vision, the beginning of eternal life, knows the same object *without seeing*, by means of an infallible adhesion given in our obscurity and uncertainty to those things which the very Truth has revealed of itself. A virtue essentially supernatural, suprarational, because its formal motive, *Veritas prima revelans*, is itself essentially supernatural, faith also knows, in the very imperfect manner which is alone possible for the communication to mankind of the treasure of revelation, that which God and the blessed see in God. In its adherence to the testimony of the primal Truth, it reaches up to the inwardness, the selfhood of God, *Deum secundum propriam quidditatem*,[5] though unseen. This is the object which is the end of faith, the thing before which it stays,[6] where it is fixed by revelation.

[1]Cajetan, *In Sum. theol.* i, 1, 7: 'Deus secundum ipsam rationem deitatis.' John of St. Thomas, *Curs. theol.*, in 1, P. q. 1, disp. 2, a. 11, n. 4. (Vives, B. 1.). God, in the very nature of his deity, *sub ratione deitatis*, is the prime object of the beatific vision, of faith and of theology, as also of infused wisdom. All these, at the same time, have also the creation for object, but all in reference to God, and thus only as a secondary.

[2]St. Thomas also uses the expression *secundum quod in se est*. Cp. *Sum. theol.* ii-ii, 1, 2, ad. 3; 8, 2.

[3]I Cor. xiii, 12. [4]John iii, 2. [5]Cajetan, *loc. cit.*

[6]*Actus credentis non terminatur ad enuntiabile, sed ad rem.* (*Sum. theol.*, ii-ii, 1, 2, ad. 2.) Cp. *ibid.* 1, 6, ad. 2. *De Veritate*, 14, 8, ad. 5. 'Veritas igitur divina, quae simplex est in seipsa, est fidei objectum; sed eam intellectus noster accipit suo modo per viam compositionis; et sic, per hoc quod compositioni factae, tanquamverae assentit, in verita-

But it is in the symbols of language and through the medium of human thoughts that this communication is made. How else indeed could we receive it? God speaks in our tongue that he may be heard by us. These means of transmission of the divine truth, these conceptual enunciations by which we attain to the uncreated light—and which the Church, the mystical body of Christ, whose head, assisted by the Holy Spirit, tends our belief, sets forth in strict exactitude—are the intermediaries of faith, which she uses to attain to deity; are, in the words of St. John of the Cross, that *outward silver* by whose means the spirit grasps the pure gold of divine reality. We may say that this is the object of faith, not as taken from the side of the thing itself believed in, *ex parte ipsius rei creditae*, but from the side of the *means or signs* which serve the believing soul, *ex parte credentis*.[1]

We see here a certain return to the method of knowledge by analogy, in the degree to which revelation makes use of human terms. It does not determine the prime form of the object known, for the essential content is God, not known as in metaphysics by analogy with the creation, but in the depth of his selfhood. But it reappears just in the degree to which such signs and terms present that object to our awareness. To express the mystery of the Trinity it is necessary to make use of the ideas of Father and Son and Spirit, of generation and procession, of nature and person, notions already supplied to us by the creation, and which God himself, speaking by his Son who is in his bosom and by the Church,

tem primam tendit ut in objectum; et sic nihil prohibet veritatem primam esse fidei objectam, quamvis sit complexorum.' It is because the end of faith is thus the quiddity of God himself, *secundum seipsum* and in his indivisibility, that it is necessary to say that reason alone (unpossessed of even implicit faith), though it may know certain truths of the natural order implicit in the truths of faith, such as the existence and unity of God, cannot thereby by any means or in any fashion attain to the object of faith. 'Quia ut Phil. dicit IX Metaph., in simplicibus defectus cognitionis est solum in non attingendo totaliter.' (*Sum. theol.* ii-ii, 2, 2, ad. 3.)

[1] 'Objectum fide dupliciter considerari potest: uno modo ex parte ipsius rei creditae; et sic objectum fidei est aliquid incomplexum, scilicet res ipsa, de qua fides habetur. Alio modo ex parte credentis; et secundum hoc obiectum fidei aliquid complexum per modo enuntiabilis. . . .

In symbolo tanguntur ea, de quibus est fides, inquantum ad ea terminatur actus credentis, ut ex ipso modo loquendi apparet: actus autem credentis non terminatur ad enuntiabile, sed ad rem: non enim formamus enuntiabilia, nisi ut per ea de rebus cognitionem habeamus, sicut in scientia, ita in fide.' St. Thomas, *Sum. theol.*, ii-ii, 1, 2, corp. et ad. 2.

which guards and explains the words of the Son, has gathered together in dogmatic enunciations: analogical concepts made use of by the light of faith, *lumen infusum fidei*, which is something more 'formal' than they, more secretly and vitally supernatural, to reach after the inwardness of God.

It is important, as has been pointed out at the end of the preceding chapter, to distinguish clearly between this use of analogy in the domain of faith and in that of metaphysics. It is a capital difference which cannot be stressed too often. In the case of metaphysics analogy constitutes the very form and rule of knowledge. God is not attained either in his selfhood or his incommunicable nature, in the indivisibility of his most pure and simple essence, but only as he is manifested in the changeable but truthful reflections, the analogical participations, which are shown to us by the things proportionate to our reason. We do not attain to his essence, only to that which is told by created things as they themselves speak to our intelligence. Thus, not only is the manner of knowledge human, but, even more, the very object which is set before the mind and constitutes the end of knowledge (*sub ratione primi entis*) is only grasped, so to speak, in the degree to which he condescends to the human reason, showing himself in the mirror of sensuous things and by the analogy of being.[1] Metaphysics stands on the summit of the created world and from there gazes towards the invisible point where all the perfections of the creation converge, that inaccessible end which it can only know as that purest light is broken in the multiplicity of its perfections. At that point faith is at home, dwelling in the heart of the Increate; only God has laid his hand over her eyes. And it is by the images of those created things which she remembers from the earth below that she shows forth his mystery.

Faith attains to Deity as it is, but unseen, and without other power of apprehension than by analogy with those created things which God has chosen for our instruction. It cannot, by these ananoetic means, know the divine essence in itself, *scire tantum de Deo quia est*;[2] and yet already,

[1] Just as, in all knowledge acquired by our own proper powers, the formal principle itself by which the object is conceived of as an object is itself relative to our manner of knowing and in the same degree as it.

[2] Cp. chap. iv, pp. 282–3, 298.

in the degree of reality which it has attained, it knows God in his essence, or according to the nature of his essence. In other words, the super-analogy of faith accommodates to our weakness a mode of knowledge whose formal rule (*veritas prima revelans*) is absolutely above us. Thus there is for faith an astonishing disproportion, dislocation, if I may dare to speak so, between the *end of knowledge*, the reality made known which is God in the very nature of his inwardness, in his most holy and indivisible essence, revealed by the witness of the primal Truth, and the *mode of knowledge* which remains proportionate to our nature.[1] A formal object which is essentially superhuman, a mode of knowledge which is essentially human, here lies he reason why faith, even as we noted just now in passing, perpetually strives to overpass her own manner of knowledge; why, unlike metaphysics, she will always hold in her soul, at least at its root, the unconditioned desire of mystical contemplation in the exact meaning of the word, that contemplation which abides in its own sphere and to which faith by herself, by her own powers, cannot attain.[2]

The God thus known by faith, known on the testimony of the Primal Truth and by means of dogmatic definitions, believed in but not seen, is also the object of theology, as seen from the standpoint of 'virtual revelation', as it is called, that is to say, those things which reason illuminated by faith draws from the principles of formal revelation.

This is not the place to enter into any long discussion of the nature of theological wisdom. It is only necessary to affirm that it is something quite distinct from a simple application of the philosophical method to the matter of revelation: truly a monstrous conception, which would

[1]This is so because faith is a revealed knowledge. St. John, i, 18. Here the prime form under which the object is known belongs not to our manner of knowledge, but to Him who has revealed and to his knowledge in itself. Thus both faith and theology are forms of knowledge inferior to the knowledge of God and of the blessed.

[2]Cp. St. Thomas, *De Veritate*, 14, 2. 'Unde oportet quod ad hoc quod homo ordinetur in bonum vitae aeternae, quaedem inchoatio ipsius fiat in eo qui repromittitur. Vita autem aeterna consistit in plena Dei cognitione, ut patet Joan. xvii, 3: *Haec est vita aeterna ut cognoscant te solum Deum verum.* Unde oportet hujusmodi cognitionis supernaturalis aliquam inchoationem in nobis fieri; et haec est per fidem. . . .' *Ibid.* ad. 1. '(Fides) est prima inchoatio et fundamentum quoddam quasi totius spiritualis vitae.' John of St. Thomas, *Curs. theol.*, ii-ii, q. 1, disp. 2, a. 1, n. 9. (Vives, t. vii, p. 28): 'Fides importat notum quemdam intellectus ad visionem in qua quietatur.'

submit the substance of revelation to purely human observation and subordinate theological knowledge to philosophy.[1] There is no science or knowledge which does not meet in the soul with a proportionate intellectual virtue, a light of discernment proper to its object. When that object is those depths which are divinely revealed, inaccessible by the light of reason, the responsive light in the soul cannot be only that of philosophy, but must be proportionate to its object, the light of supernatural faith where it takes over and directs both the natural movement of reason and its native manner of knowledge. Theology then is not the simple application of natural reasoning and philosophy to the substance of revelation, but the elucidation of the substance of revelation by a faith vitally united with reason, progressing by reason, armed with philosophy. This is why, far from subserviating theology to itself, philosophy is rightly the 'servant' of theology, and is fitted to the service of its master. Theology is under no obligations to philosophy and is at liberty to choose among philosophical doctrines whichever will serve best in its hands as the instrument of truth. And when a theologian loses the theological virtue of faith, he may keep indeed all the machinery, the intellectual paraphernalia of his craft, but they will be only dead matter in his mind: he has lost his rightful light; he is no more a theologian than a dead corpse is a live man.

THE BEATIFIC VISION		seen in his essence (*sicuti est*)		God In his proper life (*sub ratione deitatis*).
faith	with the gifts of Holy Ghost (mystical wisdom)	experienced	witnessed to by the Primal Truth	
	alone	formally revealed		
	and reason (theological wisdom)	virtually revealed		
reason (metaphysical wisdom)			shown by his effects	God considered as the First Cause (*sub ratione primi entis*).

[1] Cp. my *Songe de Descartes*, chap. 3. On the relations between theology and faith, see also F. Martin-Sola, '*L'Evolution homogène du dogme catholique*, Fribourg, 1904.

To sum up: God Himself as seen or quidditatively known is the object of the vision of the blessed. God himself, believed in and formally revealed, is the object of faith. God himself believed in and virtually revealed is the object of theology.

It has been said that over and above metaphysical wisdom stands theological wisdom. Above theological wisdom again there stands infused wisdom, what is also called mystical theology, which consists in knowing the essentially supernatural object of faith, God as he is in himself, *in a manner in itself superhuman and supernatural.* In the profound words of pseudo-Dionysus, here it is necessary not only to apprehend but to endure those things which are divine. It is to know God by experience, when all creatures are silenced and all representations dissolved, in a manner of knowledge proportionate, in as far as may be possible in this world below, to the end for which it seeks. For this faith alone will not suffice; it must be made perfect by the gifts of the Holy Ghost, the gift of knowledge and above all of wisdom. It is this mystical experience of a supernatural order whose conditions we are now called upon to study.

II. SANCTIFYING GRACE

In seeking rightly to define the mutual relations of mystical experience and philosophy and for the more particular consideration of the problem whether mystical experience of a natural order is possible, it is necessary to begin by an examination of that supernatural mystical experience which is witnessed to by all the saints and whose authenticity is indubitable, and also to conduct our study in no empiric or external fashion, but scientifically and on a firm foundation. For this it is strictly necessary to have recourse to theology, for the processes and terminology of philosophical thought alone are essentially insufficient in regard to a supernatural object. This is why it is necessary to commence with a theological exposition, drawn from St. Thomas and his most faithful interpreters; and where, in order to treat of mystical and supernatural experience either scientifically or according to intrinsic principles, proceeding from the first and radical elements to those nearer at hand, it is necessary first of all to consider briefly certain points.

First, the primary ontological conditions of this experience, that is to

say, sanctifying grace and the inhabitation of the three Divine Persons in the soul; then, in the sequence of exercise and operation, the manner in which this experience takes place and its conditions, that is to say, the gifts of the Holy Ghost and the connatural awareness of supernatural charity.

The whole theology of sanctifying grace is founded on the words of St. Peter: grace makes us participants of the divine nature, *consortes divinae naturae.*[1] How can we be thus made gods by participation, receive the communication of what belongs to God alone? How can a finite subject participate *formally* in the nature of the Infinite?

The Thomists answer: it is by right of *relation to the object* that the soul is so made infinite. A formal participation in the divine which would be impossible if it meant to have the deity as our essence (that what is not divine should have the divine for its essence is a rank absurdity), is possible in that it means to have the divine for object: that what is not God should be raised, in the depths of its nature and in the energies which precede its operations, so that it has God as the object of its intelligence and its love, God as he is in himself, is impossible by the force of nature alone, but not an absolute impossibility. Grace supernaturally confers on us the intrinsic power of laying hold of the Pure Act as our object; a new root of spiritual action which gives us as our specific and proper object the divine essence in itself.[2]

In the intuitive vision of the divine essence the beatified creature will receive—and with no shadow of pantheism—infinitely more than the most audacious pantheism has ever dreamed: the infinite and transcendent God himself, not that miserable totem-god tangled in matter and dragging himself forth by our efforts imagined by pantheism and the philosophies of becoming, but the true God, eternally self-sufficient, infinitely blessed in the trinity of the Three Persons—in this vision the creature becomes the very God himself, not in the order of substance, but in that of that immaterial union which fashions the intellectual act.

Sanctifying grace is an inherent quality, the vital germ or rich seed—

[1] *θείας κοινωνοὶ φύσεως*, II Peter, i, 4.

[2] Cp. John of St. Thomas, *Curs. theol.*, i-ii, q. 110, disp. 22, a. 1. (Vives, t. vi, p. 790 sqq.)

planted in us here below according to the manner of nature or as a *radical principle*—of that full flower which is the beatific vision. The first gift of love, given without claim or merit, it is a new spiritual nature grafted into the very essence of our soul, which asks as its due to see God even as he sees. As our thinking nature has as proportionate object the being of things material as ourselves, as angelic nature has for proportionate object spiritual essences, this spiritual supernatural principle has for its connatural object the supernatural Subsistence; makes us proportionate in the depths of our nature to an object which is essentially divine. And if without doubt it will only flower in the fullness of the vision which is its end, it flourishes here below in supernatural charity, which is '*on earth as it is in heaven*', in however imperfect a manner; for of its nature it seeks that vision and only proceeds from faith in the degree to which faith is the ambassador of the vision of beatitude.[1] And with and through charity, its inseparable dominion, this new nature develops in us a complete organism of supernatural energies, the theological virtues of hope and faith, the gifts of the Holy Ghost, the infused moral virtues, which establish our 'conversation which is in heaven'.

This is how grace, while it leaves us—in our order of being—wholly and infinitely distant from the Pure Act,[2] is in the order of spiritual operations and of relation to the object a formal participation in the divine nature. A seed of God: *semen Dei*.[3] This is nothing metaphorical, or simply moral: but a 'physical' reality, in the word of the theologians, that is to say, ontological, the most solid of realities, than which nothing can be more positive or efficient. It is at the point of this radical transfiguration, which renders us in truth the adopted sons of God, and makes us live *modo aeterno*, in the very life of the Eternal, that we must place ourselves to have any not too imperfect idea of that distinction between the natural and supernatural orders which is the very heart of the Catholic faith. If we hold a sufficiently high idea of grace any back-

[1]Cp. John of St. Thomas, *ibid.*, i-ii, q. 72, disp. 17, a. 3, n. 28.

[2]This is the sense of the definition of the Fourth Lateran Council, precisely with regard to grace: 'Inter Creatorem et creaturam non potest esse tanta similitudo quam sit semper major dissimilitudo notanda.'

[3]John, i, 3.

sliding into naturalism becomes impossible. Some, like Leibnitz, more or less confound the kingdom of grace with that of spiritual beings. This is a capital error.

There is a spiritual, metaphysical order superior to external nature where not only the metaphysician but the poet may live, above all the mechanism and laws of the material world. With this order all that is hidden in the deepest recesses of our personality is connected, the freedom of moral activity, the motions of the will in as much as they are self-contained in the mind: as such it is no part of this universe (that is why the angels do not naturally know the secret of hearts[1]), it rises above the created world, the sensible and the supra-sensible both, precisely as an *artefactum*, a work of art. But this world of spirits and of liberty, far from including in itself a formal participation in deity, is rather the summit of nature, in the general sense of what has its own proper consistence in so far as that can be said of something other than God, and it remains, in as much as it is not freely raised above itself, an entirely natural world. There is still an infinite distance between this order and the order of grace, grace which is above not only the world of the senses, but the whole creation and potencies of creation of nature, all the natural exercises of our liberty. Supernatural charity is infinitely more above the highest created mind than that mind is above its body: the smallest child's act of faith or love is something incomparably more precious, more vigorous, more efficacious, incomparably surpasses the most resplendent natural act of the highest of all the angels. Pascal's famous phrase about the three orders expresses an elementary truth of Christianity. *Bonum gratiae unius majus est, quam bonum naturae totius universi.*[2]

The theological reasons for this fundamental truth have been indicated. Grace ordinates us to the vision of the divine essence, of Deity itself, which is above all being, whereas by nature we are ordinated only to the knowledge of things in general and the being of sensible things.

It is obvious what danger lies in the slightest confusion between these two formal objects. It would be to risk confounding our natural intellect with our knowledge in grace.

[1] Cp. John of St. Thomas. *Curs. theol.*, i, P. q. 58, disp. 22, a. 3. (Vives, t. iv.)

[2] St. Thomas, *Sum. theol.*, i-ii, 113, 9, ad. 2.

Doubtless by our very nature as reasonable beings we are *capable* of an approximation to the divine essence as our object of vision. But we are only *so ordinated* by grace, it is the quality of grace so to shape us, radically by itself, proximately by the light of glory. And this is entirely supernatural. The capacity for this proportion lies in the obediential potency of our souls with regard to the First Agent.

In any supernatural operation two activities are united, but not in juxtaposition: nature does not begin from below what grace completes from above; from the beginning nature only acts as grace has raised it up. If nature and grace *shared* in the performance of supernatural acts, in the vision of God in heaven, in an act of theological virtue here on earth, then there would be brought in an element of mechanical addition. No: it is precisely because our natural powers of action are in themselves in a condition of docility and potentiality with regard to God that supernatural acts rise out of the depths of our nature, from the heart of our soul and our faculties, but *only as* they have been raised up by grace, as they have been *drawn on* by infused qualities toward possibilities which are entirely inaccessible to our nature in itself.

THE INHABITATION OF THE THREE PERSONS OF THE TRINITY IN THE SOUL

The effect of our elevation to a state of grace is a new form of the presence of God within us, what the theologians call the coming of the three Divine Persons and the inhabitation of the Trinity in the soul.

God is present in us, at the most intimate heart of our nature, at the very core of our being, by his immensity, his infinite effect, for at each instant he endows us with our action and our being. But it is quite another matter than this general and common presence which is in question here. It is that special presence which is peculiar to a soul in the state of grace.[1] This special presence without doubt presupposes God's gene-

[1]'Divinae Personae convenit mitti, secundum quod novo modo existit in aliquo; dari autem, secundum quod habetur ab aliquo. Neutrum autem horum est nisi secundum gratiam gratum facientem. Est enim unus communis modus quo Deus est in omnibus rebus per essentiam, potentiam et presentiam: sicut causa in effectibus participantibus bonitatem ipsius. Super istum autem modum communem, est unus specialis, qui convenit creaturae rationali, in qua Deus dicitur esse sicut cog-

ral presence and without it would be impossible, but in itself, in its own proper exigency, it implies a *real and physical* (ontological) presence of God within us.

How is this possible? By what reason? By right of the *object.*

It is no more by reason of the efficient principle of primary causality which gives all its being to the soul, but by reason of that end to which the soul is directed, redirected, converted, ordered, the object of its knowledge and its love—be it added at once, for this is the heart of the question, not in any generalised sense of love and knowledge, no, but a fruitful, an experiencing love[1] and a knowledge which bring us into possession of God, unite us with him not at a distance, but in truth. For if the Three Divine Persons give themselves to us it is so that we may possess them, that they be *ours.*[2] The gift of God is of such a nature that we are given, in the words of St. Thomas, the free enjoyment of the Three Persons. How could this possibly be if they were not really, ontologically present, giving themselves to us, within us?

Doubtless it is only in the future life and in the beatific vision that man will enjoy this perfect possession. But God does not give himself to us as the object of our fruition in order that this gift should remain a dead let-

nitium cognoscente, et amantem in amante. Et quia cognoscendo et amando creatura rationalis sua operatione attingit ad ipsum Deum: secundum istum specialem modum Deus non solum dicitur est in creatura rationali, sed etiam habitare in ea sicut in templo suo. Sic igitur nullus alius effectus potest esse ratio quod divina Persona sit novo modo in rationali creatura, nisi gratia gratum faciens. Unde, secundum solam gratiam gratum facientem mittitur et procedit temporaliter Persona divina. Similiter, illum solum habere dicimur, quo libere possumus uti vel frui. Habere autem potestatem fruendi divina Persona est solum secundum gratiam gratum facientem.' St. Thomas, *Sum. theol.*, i, 43, 3.

This question of the presence of grace and the indwelling of the Trinity in the soul is magnificently set forth by John of St. Thomas, *Curs. theol.*, i, P. q. 43, disp. 17, a. 3. (Vives, book iv.) These pages together with St. Thomas's articles on the mission of the divine Persons represent the essential doctrinal source. Cp. A. Gardeil, *La Structure de l'âme et l'expérience mystique*, vol. ii, pp. 74-76; pp. 238-56, and R. Garrigou-Lagrange, 'L'Habitation de la Sainte Trinité et l'expérience mystique' in *Revue thomiste*, Nov.-Dec., 1928, pp. 449 et seq.

[1] 'Novo modo efficitur Deus praesens mediante gratia ut objectum experimentaliter cognoscibile et fruibile intra animam.' John of St. Thomas, *Curs. theol.*, i, P. q. 43, disp. 17, a. 3.

[2] St. Thomas: *In I Sent.*, dist. 14, q. 2, a. 2, ad. 2.

ter in the present, to be reserved wholly for the future life. *Carissimi, nunc filii Dei sumus*, says St. John:[1] here and now we are already the sons of God. 'Do you not know that your members are the temples of the Holy Ghost, who is within you, whom you have received from God, and that you are not your own?'[2] The beginning of eternal life is here and now. This life begins here on earth, it should grow in us unceasingly till the dissolution of our bodies, so as to fully realise by mystical experience and infused contemplation, as much as is possible here below, in the night of our faith, 'when it hath not yet appeared what we shall be',[3] exactly that possession of God for which sanctifying grace is essentially ordered.

Thus mystical experience and infused contemplation are seen as the normal end, the rightful life of grace, one might even say are that highest point towards which all human life is directed: for, in this world at once fallen and redeemed, where grace presses in on every side, all human experience leads towards the christian life, just as all men belong by right to Christ, the head of the human race: and the christian life itself aspires and leads towards the life of mystical experience.

THE GIFTS OF THE HOLY GHOST

Sanctifying grace and the indwelling of God in the soul in a state of grace: these are the ontological bases, the first principles of mystical experience.

What are the secondary principles, in other words, how is it realised?

[1] I John, iii, 2. Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 8, disp. 8, a. 6. (Vives, book ii): 'Hic autem est unio fruitionis inchoata, et imperfecta. Vere tamen ratione illius dicitur Deus, non solum communi modo suae immensitatis et contactu operationis esse in anima, sed per modum inhabitantis, et amici, et conviventis et finis possessi. Nec solum hoc intelligitur fieri in gloria, sed etiam hic quando datur gratia; tum quia invisibilis missio Personarum, per quam Spiritus Sanctus personaliter datur, et non solum dona ejus, non solum fit in gloria, sed etiam quando fit sanctificatio in gratia, vel aliquod speciale augmentum (ut dicit div. Thomas, q. 43, a. 6), tum etiam quia I Cor. iii. 16-17, ubi dicit Apostolus: *Templum Dei estis, et Spiritus Sanctus habitat in vobis*, statim: *si quis autem templum Dei violaverit, disperdet illum Deus*. Loquitur ergo Apostolus de statu in quo potest hoc templum violari, qui est status viae et non patriae.'

[2] St. Paul, I Cor. vi, 19.

[3] I John. *loc. cit.*

Two characteristics of this experience strike us first of all in a theological analysis such as this. In the first case, it is knowledge of a superhuman kind: second, it is a manner of knowledge by connaturality.

It is a superhuman and supernatural manner of knowledge. The natural human manner of knowledge (natural, *mutatis mutandis*, even to the angels), consists in knowing by ideas or concepts, and then, in what concerns the things of God, by analogy from those created things whence are drawn the measure and manner of significance of our concepts. This is why faith, though it attains to the knowledge of God in himself and in his inward life, *secundum suam propriam quidditatem*, only does so at a distance and remains an intermediate knowledge, enigmatical, in the words of St. Paul, in the sense that faith has to make use of the formal means proportionate to our means of natural knowledge, concepts and conceptual formulas, analogical, or at best superanalogical notions.

In order to know God no longer at a distance, in as much as it is possible in this life, to overshoot the natural human method of concepts (and so, as St. John of the Cross so often insists, to abandon all distinct conceptions, all clear knowledge[1]) not only is there need of some direction from above, but specifically of a principle of superior objective direction, in other words, the special inspiration of the Holy Ghost. Mystical experience is a knowledge which is supernaturally *inspired.*

On the other hand, if it is true that mystical experience is in line with the normal development of the life of grace, there must be in the soul in a state of grace filaments delicately sensitive to the breath of heaven, in scholastic language, permanent dispositions or *habitus*, which assure the possibility, the normal right, of the achievement of this inspired knowledge. Such are the gifts of the Holy Ghost, whose particular office is to render the soul exquisitely sensible to divine inspiration. (All the more so, that, as St. Thomas teaches, in a much more general manner these gifts are themselves necessary for the christian life,[2] since reason alone cannot be a sufficient first principle for the use of super-

[1]For it is clear that to know God at once *not at a distance and clearly* can only be realised in the beatific vision. Meanwhile, the darkness will grow in proportion as the distance diminishes. St. John of the Cross, *Cant.*, str. 1, second redaction.

[2]*Sum. theol.*, i-ii, 68, 2.

rational powers, such as the theological virtues, which are divine in their object. We are like children who have been endowed with a supernatural art, a pencil wherewith to write on the sky. It is necessary that God himself should put his hand over ours to guide our trembling lines.)

Mystical experience then is knowledge in a superhuman manner, which presupposes a special inspiration from God, which is given by the gifts of the Holy Ghost, at least by those which are most concerned with our knowledge, the infused gifts of knowledge and of wisdom.

CONNATURAL KNOWLEDGE

Mystical experience has a second characteristic : it is knowledge by connaturality.

There are two methods, says St. Thomas,[1] of judging, for example, in those things which concern chastity: either we may have in our intelligence that moral science which creates in us an intellectual proportion with the truths concerning chastity, and which when it is consulted responds in pure observation of its object. Or we may have the desire for the virtue of chastity incorporated in, rooted in our faculties, grown into our bones, which desire enables us to reply, no longer in the manner of external knowledge, but by instinct, by our immediate inclination, by our co-naturedness (connaturality) with chastity.

Face to face with God we have no other means of surpassing knowledge by concepts than our connatural knowledge, our '*co-naissance*', as Claudel has called it, our co-nativity with him.[2]

What is it in us can make us radically connatural with God? Sanctifying grace, by which we are made *consortes divinae naturae*. And what is it in us which brings out into action, makes flower this connaturality rooted in us? Supernatural charity. We are co-natured with God by charity. Charity, which is not the name for any kind of love, but which presupposes sanctifying grace, whose dominion it is, and which lays hold on God, knows him as really present within us, by the gift of his goodness, our friend, our eternal companion. More, charity wins to God as in

[1] *Ibid.* ii-ii, 45, 2; cp. i, 1, 6, ad. 3.

[2] P. Claudel, *L'Art Poétique.*

himself he is, in the inwardness of his life which is our beatification. Charity loves God in and by and with God.[1]

To go more deeply into the points which have here been gathered from such theologians as John of St. Thomas and Joseph of the Holy Spirit,[2] would imply a long development. Here a brief summary must suffice.

The things of God having been so intimately joined with our nature, made ours, bred into our bones by the love of supernatural charity, the property of the gift of wisdom is to make use of this love, this infused charity, under the inspiration of the Holy Ghost, so that it may progress in scholastic language from the *objective means* of knowledge to the *objectum quo*,[3] in such a manner that we not only experience our love

[1]Cp. the passage of St. Thomas quoted *infra*, p. 334, and also chapter vii, pp. 394-8, *infra*.

[2]Cp. Joseph of the Holy Spirit, *Cursus theologicae mystico-scholasticae*, ed. nova, Bruges, 1925 et seq.

[3]'Et sic affectus transit in conditionem objecti.' John of St. Thomas, *Curs. theol.*, i-ii, q. 68-70, disp. 18, a. 4, n. 11.

Under the special inspiration of the Holy Spirit the soul so passes from the side of the object, or enters into an objective condition, not to be itself the object known, but rather to be the means of knowledge or *objectum quo* (cp. R. Garrigou-Lagrange, *Perfection chrétienne et contemplation*, 6th edit. vol. ii; *Revue thomiste*, Nov.-Dec., 1928, pp. 465-6; A. Gardeil, *Structure*, vol. ii, p. 248; *Revue thomiste*, May-June, 1929, pp. 272-3). What I have here called *objectum quo* is neither charity nor wisdom taken as *habitus*, but the feeling actually experienced by the soul, the actual effects which serve as an actual medium of knowledge under the illumination of the Holy Ghost. So God is still known *by his effects* (necessarily so in so much as he is not seen in his essence), but these effects are no longer the things or objects already known to the soul by which it rises in the ananoetic manner of human knowledge, where God is known by his *shoulders*, in the words of St. John of the Cross (*Cant.* str. 32, 19. See also chap. vii, *infra*); they are like the touches of connaturality which are felt under the light of the Spirit, and by which the things of God are experienced in themselves. Briefly, the objective intermediary is there neither an infused idea nor a principle of inference, it is the actual infused love which has passed under the illumination of the Spirit into the condition of an *objectum quo*, by which and in which the contact between God and the soul is felt: 'Spiritus testimonium reddit spiritui nostrum *per effectum amoris fidelis*, quem in nobis facit' (St. Thomas, *In Ep. ad Rom.*, viii, 16). When the soul has become nothing but love, when nothing in the soul presents an obstacle to the light of the Holy Spirit or stays in self-consciousness, it becomes wholly a means of perceiving God by means of a certain spiritual touch and savour. So that instead of being known by his effects even according to a superhuman manner God is known *immediately* or 'by his face' says St.

of God, but it is God himself whom we experience in our love. 'It is by the very virtue of the gift of God', writes John of St. Thomas, 'and in the union of experiencing love that mystical wisdom attains to divine things, which that love makes more at one with us, more immediately touched and tasted, and enables us to see that what is so felt by the affections is higher and more excellent than any consideration of the cognoscitive virtues.'[1] And again: 'Faith attains to God while remaining at a certain distance, in so much as faith is 'the substance of things not seen', but charity attains to God in himself, intimately united to that which is hidden from faith, And thus though faith rules over both love and its union with God in as much as it is faith which proposes their object, yet in another way, by virtue of this union by which the soul takes an immediate hold on God, the intelligence is raised by this affective experience to a point where it may judge of divine things in a higher manner than is possible to the obscurity of faith, because it penetrates to and knows those *more hidden things* which faith itself cannot make manifest, ever finding there more to love and to taste of in love: and the more love experiences these things which are hidden the more highly does it judge of divine things, by a special instinct of the Holy Spirit.'[2]

A precious passage which demonstrates how mystical wisdom judges the things of God by an affective experience which bears it on to those

John of the Cross (*loc. cit.*), since these created effects are no longer there like a *quod* in which, as in a mirror, a certain likeness to God may be read, but only as a *quo* or means of attaining to God himself. This is not an absolutely immediate knowledge (only the beatific vision is that), but it is knowledge truly if imperfectly immediate, without passing through any created *quod* in order to reach the divine; so that God is attained, not only without the reasoning whereby a substance is known *per accidens*, but touched and obscurely experienced: what the mystics in speaking of the highest stages of experience and union have described as 'substantial touches' and as 'a meeting of naked substances, that is to say, the soul and the divine' (St. John of the Cross, see *infra*, chap. vii).

If it is necessary to be still more precise, we may say that infused love and the touches of connaturality here spoken of are not in themselves 'formal signs' or the pure *in quo* of intellection like the concept, but that, under the illumination of the Holy Ghost, they are able to play a part comparable to that of the formal sign, but in a knowledge which is wholly obscure, experimental and apophatic, which unites the soul to a hidden God, *quasi ignoto*.

[1] John of St. Thomas, *Curs. theol.*, i-ii, q. 68–70, disp. 18, a. 4, n. 9, and 5. In the French translation, chap. iv, pp. 138–9 and 142.

[2] *Ibid.*

things which are hidden from faith. It is in the very degree to which the divine reality is hidden from us—transcendently beyond the grasp of any created idea—that this secret wisdom knows its experience. Truly thou art a hidden God, the God of our salvation: all the more the living and saving God in that thou art hidden! The soul cherishes these shadows of faith because it knows that they are fecund, because it knows, it feels that only in them can it intimately taste, know by experience the depths of our God. This is the theological root of the doctrine of St. John of the Cross: 'Seek him by faith and by love, and like a blind man these two guides will lead thee by roads thou canst not know into the secrecy of God. . . . He is hidden from thee if thou doest not hide thyself like Him in order to know Him and to feel Him. If a man wishes to find something hidden he must enter into the secrecy of its hiding place to find it, and when he finds it he is hidden as it is. . . . Always thou must know that he is hidden and serve his hiddenness in hiding thyself. . . .'[1]

Thus, finally, it is the connaturality of charity of which the inspiration of the Spirit makes use so that we may judge of the things of God under a direction from above, by a new formal reason: in such a way that we attain, in the obscurity of faith, not only to an entirely supernatural object, the *ipsissimum* divine as such, as does theological faith, but also to a manner of knowledge which is in itself superhuman and supernatural.

Illustre quiddam cernimus,
Quod nesciat finem pati. . . .[2]

It must be clearly understood that what I am speaking of here is not a perfect experience, that is reserved for the kingdom of the blessed, but the commencement of that experience, which can never be fully or wholly achieved in this life; how charity, by virtue of its affective union with God dwelling in our souls, under the motion of the Holy Ghost, experiences and possessively knows near at hand—by the suprarational perception of the gift of wisdom—God made present in the soul as a gift, as the object of experience and possible fruition. It is the dedication written in the heart of the very nature of sanctifying grace itself; this

[1] St. John of the Cross, *Cant.*, str. 1, second redaction.

[2] Hymn for the Transfiguration.

experimental fruition in God which mystical wisdom seeks to realise here below.

FIDES ILLUSTRATA DONIS

It is obvious that this is an experience, if the word experience signifies the knowledge of an object as present, where the soul takes the impress of an action exercised upon it, and perceives by reason of this submission. It is a vital, a free, a meritorious operation, but one in which the soul does not move itself (in as much as 'to move oneself' is to perform an act by virtue of an anterior act), but where it is moved and put into immanent activity solely by the work of the grace of God, as the living instrument of the Holy Spirit, which raises it to a higher direction in the suspension of its human manner of action: which is why the mystics describe it as a passivity or non-action. This experience can be called immediate in the sense that it makes use of no intermediary images, drawn from creatures, since it goes beyond the method of concepts and analogies. But it is not immediate in the sense that it is not the vision of the divine essence and God is still, as St. Theresa[1] teaches us, known *by his effects, i.e.* by the effects which he produces in the affections and in the very roots of the powers of the soul, and which are like some touch or taste which is spiritually known in the darkness of faith.[2]

[1]Cp. her *Autobiography*, chap. xxvii, 'By the effects which God produces in the soul we understand that he is there.' St. Theresa is speaking here of 'the presence of God which is often felt by those who are favoured with the union of prayer and quietude', and which she opposes to the intellectual vision of the humanity of Christ. But the words are applicable to all the degrees of mystical experience of deity, on the condition that it is clearly remembered that in the highest degrees there is no question of the slightest *inference* from the effects to the Cause, but an immediate knowledge of the Cause in the effects.

[2]Cp. p. 322, n. 3, *supra*. Also, John of St. Thomas, *Curs. theol.*, i, P. q. 43, disp. 17, a. 3, n. 13 and 17: 'Sicut contactus animae quo experimentaliter sentitur, etiamsi in sua substantia non videatur, est informatio et animatio, quae corpus reddit vivum et animatum, ita contactus Dei quo sentitur experimentaliter, et ut objectum conjunctum, etiam antequam videatur intuitive in se, est contactus operationis intimae, quo operatur intra cor, ita ut sentiatur et experimentaliter manifestatur, eo quod *unctio ejus docet nos de omnibus*, ut dicitur I Joan. iv. Haec cognitio experimentalis datur etiamsi res intuitive non videatur in se, sufficit quod per proprios effectus, quasi per tactum et vivificationem sentiatur, sicut animam nostram experimentaliter cognoscimus, etiamsi intuitive ejus substantiam non videamus.'

What then has become of concepts? They have not been obliterated, that would be contrary to the very nature of our intelligence, which has need of them to be. They are still there. But all distinct concepts have grown silent, are asleep, as the Apostles slept on the Mount of Olives. And the confused concepts which intervene, and which may remain wholly unperceived, only play a purely material part. I would say indeed that if mystical experience passes through them, it is not by way of the formal means of knowledge which regulates and measures our knowing, it is without being measured by them, as conditions which are required on the part of the subject, and that is why they may be so confused, so indistinct, as little discernible as one will: the formal means and the law of mystical knowledge come from elsewhere. It is the connaturality of charity as it is guided by the Holy Spirit which plays the formal part. The proper light of infused contemplation is the ardour of a love which burns in the night. This is why this supreme wisdom, this supernatural knowledge of love, which, says St. John of the Cross, we may compare to 'a warm light',[1] is described as a renunciation of knowledge and an ignorance, 'a ray of darkness for the mind', in the words of Dionysus the Areopagite. An apophatic or 'negative' contemplation, we may add, which unites us experimentally to the God hidden from and superior to all our knowledge, *Deo ignoto*. Finally, we see how mystical wisdom, feeling and suffering by love those things to which faith attains in concealment, enables us to judge and to estimate in a higher and richer manner than we can know by faith, but does not discover any other object of knowledge than that of faith. Mystical experience perfects faith in the mode of knowing, not in the thing known. Indeed, how could it go beyond faith when faith is at the centre, possessed in itself of knowledge of the inward and hidden life of God? It is the God of faith who is experienced here on earth by his reverberation, his implanting in the soul by love, the God of the beatific vision who will be at once seen and tasted in the life of the world to come: for mystical experience is the beginning here on earth of the experience of our homeland of heaven.

When in the act of infused contemplation the gift of wisdom, under the action of God, delivers faith from the human mode of concepts and analogy—I do not say from conceptual formulas which express the revealed

[1] See *infra*, chap. vii, p. 417.

truth! I mean the actual distinct use of such conceptual formulas as a formal means of knowing—it obliterates in a certain way, not by sight but by the experience of love, that distance from its object which is the state of faith alone. So, as Joseph of the Holy Spirit has shown,[1] it is faith itself which—in attaining its object by a new formal modality due to the gifts of wisdom and knowledge, and of which it is incapable by itself—is rendered more savorous and penetrating,[2] and makes us adhere in a purer, more perfect, a superhuman manner to its ultimate object, to that divine reality of which the conceptual formulas are the sign, and which is there possessed in the unity of the spirit: *Qui adhaeret Domino, unus spiritus est.*[3]

It is a disastrous illusion to look for mystical experience outside the bounds of faith, to imagine the possibility of a mystical experience freed from theological faith. Living faith illuminated by the gifts of the Spirit is the very core of this experience, and to recall the royal words of St. John of the Cross, which no philosophical commentary will ever be able to efface, it is the single direct and proportionate way to the mystical union.

III. A TRANSITION TO THE CONSIDERATION OF CERTAIN PROBLEMS

It is necessary to insist on these theological considerations, they are the unique method of knowing what one is talking about in speaking of the experience of divine things. Before approaching any new problems certain explanations are necessary.

There is only one spirituality for man in the pure and simple, the *absolute* sense of the word: supernatural spirituality, that which is given by the Holy Ghost, and which translates our whole life into love, ren-

[1] 'Fides illustra donis est habitus proxime eliciens divinam contemplationem.' *Curs. theol. mystico-schol.*, t. ii, disp. 13, q. 1, sect. 3, n. 15.

[2] 'St. Thomas (iii, 55, 2, ad. 1) says that the faith of the Apostles seeing the risen Christ was *fides oculata*, a faith which sees. . . . In contemplation there is a form of *fides oculata* in another sense, a faith which is rendered experiencing, not by the sensible light of the eyes, but by the supernatural light of the gift of wisdom, by the *special illumination* of the Holy Ghost *using the savour and connaturality of love*. . . . It is possible to say that by the gift of wisdom and in contemplation faith receives not positively sight, but as it were *taste and touch*. . . .' R. Garrigou-Lagrange, *Perfection chrétienne et Contemplation*, 6th edit. v. 2.

[3] ὁ δε κολλώμενος τῷ κυρίῳ ἓν πνεῦμα ἐστιν, I Cor. vi. 17.

ders it entirely spiritual. It is in this sense that St. Paul speaks of the spiritual man in opposition to the 'carnal', the animal or physical man, to everything which is not of the order of holiness. 'For the sensual man perceiveth not these things that are of the Spirit of God; for it is foolishness to him, and he cannot understand: because it is spiritually examined. But the spiritual man judgeth all things and he himself is judged by no man. For who hath known the mind of the Lord, that he may instruct him? But we have the mind of Christ.'[1]

Why it is so I have already endeavoured to explain: 'The animal or natural man receives by his senses everything which comes to him from without: he gathers his ideas from them by means of intellectual activity. Reason, which transcends the senses, works nevertheless in their stockyard. Even the highest philosophy remains a tributary of their materialism.

'This is why mystical language knows only two terms: life according to the senses and life in the spirit: those who sleep in their sensuality and those who watch in the Spirit. Because we have only two *sources*: the senses and the Spirit of God.

'Man has a spiritual soul, but it informs a body. Reason cannot suffice to bring us into a wholly spiritual life. Man's sole authentic spirituality is bound up with the grace of the Holy Ghost'[2]—this applies to spirituality in the pure and simple meaning of the word, that fills and takes hold of the entire being.

But the mark of spirituality may be imprinted on only some part of our being or our life, on some one aspect or from a certain side. This is already spirituality *of a kind*. In this sense there exists a natural spirituality of multiple degrees and of various kinds, by which the human soul bears witness to its proper essence. We find it in the exercise of the speculative intelligence: weighed down as it is by other things, there is a spiritual element in the work of the scholar and the philosopher, of the

[1] ἡμεῖς δὲ νοῦν Χριστοῦ ἔχομεν. St. Paul, I Cor. ii, 14-16.

Cp. St. Thomas's comment on the same text: '... In omnibus ille qui recte se habet, rectum judicium habet circa singula; ille autem qui in se rectitudinis defectum patitur, deficit etiam in judicando. Vigilans enim recte judicat et se vigilare et alium dormire; sed dormiens non habet rectum judicium de se, nec de vigilante.... Et ideo ab homine non spirituale spiritualis homo judicare non potest, sicut nec vigilans a dormiente.'

[2] J. Maritain, *Dialogues, Chroniques du Roseau d'Or*, 1928.

mathematician and the logician: we can also find it in the work of the practical intelligence, for the will like the intellect is a spiritual faculty and there can be neither liberty nor virtue without some spirituality: already it is there, like some secret principle of animation, in the humblest efforts of the peasant or the artisan to impose the form of reason on earthly things. But it is in the moral life of metaphysics or poetry (of the poet or the musician or any other of the creators of forms), when man is touched by an inspiration which, whether it directs him to rise upward or to sink downward,[1] remains or may remain nevertheless in the natural order, that this natural spirituality[2] is rightly seen. In its highest degree it shows itself as bound up with that natural love of God which is inscribed in the heart of our being, but which—without grace and supernatural charity—cannot establish its single dominion over our will; and this is why it resembles a strange reflection, a strange homesickness for the spiritual plenitude of those whom St. Paul calls 'perfect' or 'the sons of God'.

I would hold in particular, as has been pointed out in the last chapter, that a mystical inspiration traverses all great metaphysics: it would appear, and we will return to this point later on, that a definite—but ineffective—desire to know the first Cause in its essence is like a secret fire

[1]I would like to reproduce here a note from my *Réponse à Jean Cocteau* (pp. 58-9): 'Aristotle, or rather the author of *Ethics to Eudemes*, has written, It will be asked perhaps if it is a man's good genius which makes him desire what he should and when he should. Without thinking, deliberating or taking counsel, he is able to think and to wish for what will suit him best. What is the cause of this unless it is a man's good genius? But what is this good fortune in itself and how does it come that it holds these happy inspirations? This comes back to asking what is the supreme principle of the motions of the soul? Now it is manifest that God, who is the origin of the universe, is also that of our souls. All things are moved by him, who is himself present in us. . . . The origin of reason is not reason, but something higher. But what is higher than reason and intelligence if not God? This is why the ancients said, Happy are those who without deliberating are moved to do well. This does not come from their will, but from a principle which is present in them, which is superior to their intellect and their will. . . . Some even by divine inspiration foresee the future.'

The old philosophers are not alone in recognising this special movement of God in the natural order, the theologians do so also. Cp. R. Garrigou-Lagrange in *La Vie spirituelle*, July, 1923, p. 419.

[2]On this problem of natural spirituality, cp. the forthcoming book by Charles Du Bos, *Du spirituel dans l'ordre littéraire*, of which the first chapters of an admirable and penetrating quality have already appeared in *Vigile* (1930-31).

in the heart of the metaphysician. He does not know what he so desires, the philosopher as such cannot even have an idea of the beatific vision, of what God has prepared for those that love him. This desire is natively mystical.

On the other hand there is—if one takes the word contemplation in its widest sense, as meaning a form of concentrated meditation—there is a 'natural contemplation', which, said Albertus Magnus, 'is for the perfection of him who contemplates, and which remains in the intellect', without 'passing on into the heart by love'. *Contemplatio Philosophorum est propter perfectionem contemplantis, et ideo sistit in intellectu, et ita finis eorum in hoc est cognitio intellectus. Sed contemplatio Sanctorum est propter amorem ipsius, scilicet contemplati Dei: idcirco, non sistit in fine ultimo in intellectu per cognitionem, sed transit ad affectum per amorem.*[1]

The 'contemplation of the philosophers', if it does not progress into the heart by love—that is to say, for it is necessary to take these words in the strictest sense, if it does not itself proceed by the steps of love, *gressibus amoris*, and does not proceed by the very quality of the union of love (which would suppose the love of supernatural charity)—may nevertheless be united with a natural love of the contemplated object, be filled with a fondness for it, which gives it the colour of an affective and experimental experience. It is in itself an entirely different thing from mystical experience properly so called, where distance is overpassed and which attains not only an object intellectually contemplated and affectionately coloured by reason of its conformity to the desires of the mind, but lays hold on a reality which is loved with passion, penetrated through and through with the fire of the love with which it enflames the soul, and with which the soul is united. There, as we have seen, it is the connaturality of love which, under the illumination and special inspiration of the Holy Spirit, is the formal means of knowledge. Still, in regard to the exterior and outwardly visible signs by which outsiders judge of these things, certain extrinsic resemblances may be found between the two conditions.

[1]*De adhaerendo Deo*, chap. ix. After for a time having attributed this precious little book to Jean de Castel, criticism now once again recognises Albertus Magnus as its author. Cp. C. H. Scheeben, 'Les Ecrits d'Albert le Grand d'après les Catalogues' (*Revue thomiste*, Mar.-Apr. 1931).

When this 'natural contemplation' is cultivated by minds in quest of spiritual perfection and makes use of those natural means of a moral and ascetic order which contemplation rightly so called normally presupposes, it is understandable why the discernment of the difference may become difficult, despite the diversity in their essential natures and the possession of various means of judgment. We are well aware, for example, of the difference between animal and vegetable species, but in a given instance the biologist may know considerable hesitation between the two. Let us only here remark that this 'contemplation of the philosophers' in a pure state remains as the highest point of that rational and discursive activity which is rightly human, but whose stability is always precarious, for nature is always pressing us on. It soars, but it cannot rest. It has neither that inert passivity of those subnormal states due to temperament, sickness or imagination (which is a sort of pseudo-contemplation which rests but cannot soar), nor the supernatural passivity of 'the contemplation of the saints', which is in reality the most incomparably profound activity, and which produces in the soul a unique suppleness and self-mastery. That contemplation at once soars and reposes: *et volabo et requiescam.*

IS THERE AN AUTHENTIC MYSTICAL EXPERIENCE IN THE NATURAL ORDER?

Thus we have admitted on the one hand the existence of a 'natural spirituality' (taking the word spiritual in a relative sense) and on the other that of a 'natural contemplation' (the word contemplation being used in a loose and inaccurate sense). We have admitted that there is a *natural mystical desire* or natural aspiration towards mystical contemplation; and that there is (in the large sense of the word) a certain *natural contemplation*, not in itself mystical, which can nevertheless be made use of by this mystical desire.

The ground being so cleared, we are confronted by another and much more relevant question: *i.e. Is there a mystical contemplation of a natural order?* Is there a mystical experience in the natural order? Evidently, if one gives to the words 'mystical experience' a vague sense, inclusive of all the diverse analogies which the natural order may present to infused contemplation, an affirmative answer is easy and I

easily allow it. It would be useless to dally over a mere quarrel of words. But the question so put loses all its interest. The question is, is there an *authentic mystical experience in the exact meaning of the words, i.e.* which is (1) neither a counterfeit nor an illusion; (2) which bears on God himself and makes us sensible of the divine reality: is an experiencing knowledge of God possible in the natural order?

To this question we must reply in the negative and that in the most categorical fashion. For it is the whole distinction between nature and grace which is here called in question.

The theological exposition which has been set forth above has made evident one capital truth: that the exact quality of grace, of that infusion which grafts into us a new spiritual nature and turns us face to face with God, of that proper and special presence of the Trinity in the just soul as a gift and object of fruition, *is to render possible* that passion of divine reality, this experience of the deep things of God. *To realise* this experience of God is the peculiar end of those gifts of knowledge and wisdom which, under the inspiration of the Spirit of God, raise the mind to know its object in a superhuman mode due to connaturality and charity. It is therefore *precisely and only the supernatural* which permits of an experimental knowledge of God and this is its *particular direction.*

To admit in any degree, even in the simplest imaginable form, an authentic experience of the depths of God upon the natural plane would necessarily imply:

1. Either confounding our natural intellectuality, which is made specific by being in general, with our intellectuality in grace, which is made specific by the divine essence itself:

2. Or confounding the presence of immensity, whereby God is present in all his creatures by the power of his creative might, with the special and holy indwelling of God, that special presence in the soul in a state of grace:

3. Or again muddling up in the same hybrid concept the wisdom of the natural order (metaphysical wisdom) and the infused gift of wisdom:

4. Or finally attributing to the natural love of God what exclusively belongs to supernatural charity.

In one way or another this would be to confound what is absolutely proper to grace with what is nature and of the order of nature.

There can be no 'immediate seizure' of God in the natural order: authentic mystical contemplation in the natural order is a contradiction in terms: an authentic experience of the depths of God, a felt contact with God, a *pati divina*, can only take place in the order of sanctifying grace and by its means.

FIRST OBJECTION

God is sovereignly intelligible being sovereignly immaterial, the pure act of intellection in himself. It is because of this that he is present within us. Does not the immaterial presence of such intelligibility in a created mind suffice for it to perceive at least obscurely that presence?

This does not suffice. (If it were sufficient we could then attain at least confusedly to the formal object of the beatific vision and even know the beatific vision itself here on earth, for the question is that of perceiving God in his essence and that cannot be done obscurely or by halves.) There is another condition necessary for God to be present *in right of the object*: the powers and subjective vitality of the created mind must be proportionate to this absolutely transcendent intelligibility. And what makes the created mind so proportionate to the divine essence is sanctifying grace in its radical principle of operation; the immediate means in the case of perfect possession are the *lumen gloriae*, or, in the obscure and imperfect possession which can be known here on earth, living faith and the gifts of the Holy Ghost.

SECOND OBJECTION

According to the teaching of St. Thomas,[1] every creature naturally loves God more than itself, though ineffectively in the case of fallen man, who without grace cannot rightly direct himself towards his true end. There is therefore a natural love of God which is distinct from supernatural charity.[2] Why cannot this natural love of God produce, as charity in the supernatural order, a knowledge of God by connaturality?

Reply: Connaturality means conformity in the same nature. Now God is supernatural subsistence; and it is absurd to suppose that we

[1] *Sum. theol.*, i, 6, p. 5: and i-ii, 109, 3.

[2] The church defined this point against Baius. Cp. the Bull of Pius V, *Ex omnibus afflictionibus*.

can be connaturalised to the supernatural without being ourselves supernaturalised. Only the theological virtue of charity, because it is a supernatural love, can make us connatural with God. (1) It presupposes sanctifying grace which makes us formal participants in the divine nature. (2) It attains to God as the object of love really present in us by right of gift,[1] and as the friend in whose life and beatitude we may share. (3) Proceeding from supernatural faith which however obscurely and at a distance attains to God according to his essence, and not constrained as the cognoscitive virtues are to reaching its object by means of conceptual signs and the knowledge of it produced by them in the mind, but attaining to, loving its object as it exists in itself, charity already here below loves God *immediately and in himself* (as faith cannot know him); it loves God in his Godhead, in the very mystery of his inward life, in his very essence as God.[2]

The natural love of God has none of these characteristics. Even supposing it were capable, which it is not in our fallen nature, of making us effectively love God above all, this love, which proceeds from our essence as creatures infinitely distant from the Pure Act, which cannot be described as making any real friendship between man and God,[3] which cannot attain to God as really present within us by right of gift, which, finally, ruled as it is by an analogical knowledge where God is only known through its means as the transcendental being—by right of the first Being—can only love God as he is so known as the transcendental good—in as much as he is the supreme and subsistent Good,[4] this natural

[1] *Sum. theol.*, i-ii, 66, 6: and ii-ii, 23, 6, ad. 3.

[2] 'Deus qui in hac vita non potest seipsum cognosci, potest per seipsum amari,' *Sum. theol.*, i-ii, 27, 2, arg. 2. 'Charitas viae immediate Deo adhaeret.' *Ibid.* ii-ii, 27, 4, sec. c. 'Charitas est, quae diligendo, animam immediate Deo conjungit, spiritualis vinculo amoris.' *Ibid.* ad. 3.

[3] A rightful *friendship* between man and God is not possible in the natural order and cannot exist without grace and supernatural charity (Salimanticensis, *Curs. theol.*, t. xii, *De Charitate*, disp. i. Cp. St. Thomas, *In III Sent.* dist. 27, q. 2, a. 4; *Sum. theol.*, i-ii, 65, 5; 109, 3, ad. 1; ii-ii, 25, 2, ad. 2).

[4] It is not in the degree to which he is the supreme Good, but in his Godhead, in his deity and inward life, that God is the object of supernatural beatitude and is immediately attained to by charity. 'Naturalis cognitio non potest attingere Deum, secundum quod est objectum beatitudinis, prout tendit in ipsum spes et charitas.' *Sum. theol.*, ii-ii, 4, 7.

love of God is incapable of our rightful connaturalisation with divine things and so of procuring a knowledge of God by connaturality, a mystical experience of the deep things of God.

Without doubt, man being made, in the natural order, in the image and resemblance of his Creator, we can very well admit—if, at least, we assume as hypothesis the standpoint of the state of pure or integral nature, where we would be able to love God as the author of our being effectively above all by our simple natural powers—we can well admit that this natural love of God, which is supposed as loving God in an effective fashion, may create an active similitude, a form of natural sympathy with God in so far as he may be attained to by creatures. From which would follow an affective complaisance towards the rationally known object and even, under a special inspiration of the natural order, judgments on the divine perfections by the processes of inclination and instinct.

This would produce a very high analogy with the mystical experience, but which, no more than any other analogy, cannot be taken for the thing itself. For it implies no rightful *experience* of the divine reality present within us, no *passion* for God suffered in the soul, no *felt contact* with God, but a knowledge which is always essentially at a distance, however determined by affection. And this feeling or natural sympathy of which we have spoken cannot be called a true connaturality with God: at least, if we are not to confuse all words in one, the words mystical experience must be reserved for what is a formal and not only virtual participation in the divine nature,[1] *i.e.* participation in God in as much as he is God and not by example of created things.

But, most of all, this state of pure or integral nature does not exist: in fact, the possibility of loving God the author of our being effectively and above all things by our natural powers has simply not been given to us. The hypothesis is a fiction and is without any relevance to our real state.

Nevertheless the rough outline of this natural resemblance of the way of the natural love of God to mystical experience remains possible: in fact this love, for all that it remains incapable of making us effectively prefer God to all things else, can yet be both profound and intense, and

[1]This is why no *virtual* participation in the divine nature suffices to create a rightful friendship between man and God. (Cp. Salm., *loc. cit.*).

have effect, if not in our life, at least in the realm of our speculative aspirations: it can create in the soul this outline of resemblance and it is this which raises to a purer and higher degree of inspiration and natural spirituality the various natural analogies to contemplation which we shall consider at a later stage.

THIRD OBJECTION

There are mystical schools among Mohammedans, Buddhists, Hindus, etc. Their claim to mystical experience does not rest on theological faith. There is therefore a natural mystical experience.

One thing is certain: if we so encounter cases of authentic mystical experience, these cases result from divine grace and from infused contemplation, more or less modified in their typical forms by special conditions of development, existing outside the affluence of sacramental grace and the visible radiation of the revealed truth.[1] Everything leads us to think that such cases do exist, for we know that the unbaptized, though they lack the seal of unity and cannot participate by virtue of the Church in the proper work of the Church, which is the continuity of redemption, may nevertheless receive without knowing it that supernatural life which is the divine life-blood in the veins of the Church and the direction of the Spirit which guides the Church; may belong invisibly to the Church of Christ, and have sanctifying grace and so theological faith and the infused virtues.[2] From this point of view works like those of

[1]A man who has not been given a good as a birthright values it the more because he has had to win it for himself. Many of us Christians could from this point of view take lessons in fidelity from these infidels. But the very degree of the prestige in which contemplation is held by the spiritually-minded *in partibus infidelium* and the resources which they display in translating and considering what they have obtained, particularly where the faculty for poetic expression exceeds the experience, may deceive us in our estimate of the stage which they have reached. On the other hand, the whole 'physiology' which prepares for and accompanies contemplation (without speaking of accidental gifts which are frequently suspect), in these cases where the human search is stretched to its uttermost, may stand out in particular relief. If these observations are accurate, the case of Hallaj must be regarded as quite exceptional in its elevation and purity.

[2]That is to say, a heartfelt adherence to the two first truths of the supernatural order (God exists and wishes for my salvation, and will save those who seek for him: 'sine fide impossibile placere Deo; credere enim oportet accedentem ad Deum *quia est, et inquirentibus se remunerator sit*', St. Paul, Heb. xi, 6), and at least implicitly, by that fact, to the

Massignon[1] and Asin Palacios[2] on Islam, the contemporary study of Hassidism,[3] and the personal testimony of a Father Wallace or Mukerji[4] to Hindu spirituality, or still more the works of present-day ethnographers

other truths which are contained in a confused form in these two first. Cp. the study by the Rev. Fr. Schulte, *Fides Inplicita*, Pustet, Regensburg and Rome.

An adult can only be justified by some manner of belief in the redemption worked by Christ. This faith in Christ the Redeemer allows of three different degrees or states: explicit belief in the mysteries of the Incarnation and Redemption such as we Christians know; the idea of a mediator between God and men; and finally the conviction that God in his mercy has foreseen in some manner the salvation of the human race. St. Thomas, speaking of those who lived before the coming of Christ and who are saved by following the voice of their conscience, writes, 'Although they lacked an explicit faith (in a Mediator), they had nevertheless implicit faith in the divine providence, believing that God would save men by some means pleasing to him.' (*Sum. theol.*, ii-ii, 2, 7, ad. 3.) Thus to believe that God will save by those means which are pleasing to him is to possess an implicit faith in Christ the Redeemer. It is difficult to sustain the idea that the conditions are different for those who, living after the coming of Christ, have never heard of him. (Elisée de la Nativité, *L'Expérience mystique d'Ibn 'Arabi est-elle surnaturelle?* Etudes Carmélitaines, Oct. 1931.)

The teaching of the Church should be remembered here: 'Deus omnipotens *omnes homines* sine exceptione *vult salvos fieri* (I Tim. 2, 4), licet non omnes salventur; Christus Jesus D. N., sicut nullus homo est, fuit vel erit, cujus natura in illo assumpta non fuerit, ita nullus est, fuit vel erit, pro quo passus non fuerit; licet non omnes passionis ejus mysterio redimantur. . . .' (First Council of Chiersy. Cp. Council of Trent.) Basing herself on the words of St. Paul, that Christ died for all men (II Cor. v, 15), the Church has condemned the following propositions: 'Semi-pelagianum est dicere, Christum pro omnibus omnino hominibus mortuum est et sanguinem fudisse:' 'Christus dedit semetipsum pro nobis oblationem Deo, non pro solis electis, sed pro omnibus et *solis fidelibus*:' 'Pagani, Judaei, haeretici aliique hujus generis nullum omnino accipiunt a Jesu Christo influxum. . . .' 'Extra Ecclesiam nulla conceditur gratia.'

[1]L. Massignon, *La Passion d'Al-Hosayn-ibn-Mansour-al-Hallaj, martyr mystique de l'Islam*, 2 vols. Paris, 1922; 'Le Diwan d'al-Hallaj,' *Journal asiatique*, Jan.-Mar. 1931. With Al-Hallaj, the hero of the primary work of Louis Massignon, Ayn al-Qudat al-Hamadani, a mystic of the same lineage, may be connected, whose *Sakwa* was published by M. J. M. Benabdeljali (*Journal asiatique*, Jan.-Mar. 1930).

[2]Miguel Asin Palacios, *El Islam cristianizido, estudio del 'sufismo' a través de las obras de Abenarabi de Murcia*, Madrid, 1931. The case of Ibn-Arabi appears to call for much more reserve than that of Al-Hallaj. The simple value of verbal correspondences gives little ground for pronouncing, even approximately, on the value of a mystical experience.

[3]Cp. Horodetzki, *Ha-Hassidout-ve-ha-Hassidim*, Berlin, 1922; M. Buber, *Die Chassidischen Bücher*, 1928; J. de Menasce, *Quand Israel aime Dieu*, Paris, 1931.

[4]D. G. Mukerji, *My Brother's Face*, 1929; W. Wallace, *De l'Evangélisme au Catholicisme par la route des Indes*, Brussels, 1921.

on primitive prayer, give us the most precious confirmations of fact.[1] And these are only the first explorations in a difficult and complicated region.

But it is of no syncretism that we are thinking, and something very different from a phenomenalistic comparative mysticism, occupied in effacing its essential object and reducing all spiritual things to the material plane. What is desired is a theological comparative mysticism, which would seek to discriminate among and deepen the rightly spiritual values and recognise the passage of God, who leaves no spot without his witness. Only such a comparative mysticism would be in the position to discern and preserve everywhere what is authentic, because it would refer all likenesses to a known face, instead of peopling the world with a series of vain images which resemble nothing and which annihilate one another, or the endeavour to create a supposititious image by piling all the disparate elements in one confusion. Because there is a flock the Shepherd who leads it is also the guide of those 'other sheep' who without knowing him have also received of his plenitude and who have not yet heard his voice. Because she has received the deposit of revelation in its integrity the Church permits us to honour wheresoever they may be the scattered fragments of that revelation: The saints who belong to the visible Church enable us to recognise their far-off brothers who are ignorant of her and who belong to her invisibly: St. John of the Cross enables us to do justice to Ramakrishna.[2] The perfect imitator of Christ, the apostle Paul is the leader of all the truly spiritual men of all the world, in whatsoever country they may have been born, and just as the virtuous man is the measure of all human things[3] so in this supreme son of the spirit all authentic mystical life finds its exemplar and its measure.[4]

[1]Cp. L. Massignon (*supra*), and also *infra*, chap. vii; J. Maréchal, *Etudes sur la psychologie des mystiques*, vol. i (1924); O. Lacombe, *Orient et Occident*, Etudes carmélitaines, Apr. 1931. And the works of Rudolf Otto, F. Heiler, P. Maison-Dursel, M. Horten, etc.

[2]I do not at all ignore the dubious elements in the earthly destiny of a Ramakrishna, whose own personality appears to exhibit the features of a veracious contemplative, and with regard to whose school and his continuators there is need of considerable reserve; elements which are the less surprising in the lack of the maternal succour of the visible Church.

[3]Aristotle, *Nic. Ethics*, book x, chap. v.

[4]Both Deissmann (*Paulus*, 1911) and Evelyn Underhill (*The Mystic Way*, 1931) recognise this pre-eminent and universal importance of St. Paul. (Cp. N. Arseniev, *Das 'ganz andere' in der Mystik, Philosophia perennis*, v. ii, pp. 1043 et seq.)

However difficult it may seem, the discernment of these authentic cases is not impossible, at least in the order of probability. The criticism of expressions and evidence, the study of their analogies with and correspondence to the witness of the saints can help us; and no love which dispossesses a man of himself is without its indications, however fugitive they may be, when it penetrates the whole being with the desire to be dissolved and to be with God, that desire of two aspects of which one cannot exist without the other.

On the other hand, a large harvest of doubtful or apocryphal cases appears only too probable when we take into account the fact that states of intense meditation and concentration more or less privileged, more or less forced, may present an external resemblance to supernatural contemplation, and that what may be called the 'physics' of the interior life with all its train of phenomena ('the weakness of ecstasy', in the words of St. Hildegarde), may be roused by purely natural causes as well as by higher influences. In those instances where that natural or philosophical 'contemplation' which was in question above plays a considerable part, it is seldom that it continues in a single or pure state. Where it is not assisted and raised above itself by actual graces, particularly where its 'realisation' is most passionately sought and lacks at the same time the disciplining control of dogma, how can it fail to be exposed to corruptions and illusions, to the lower influences of bodily conditions and of the imagination, and to higher influences which are yet of the natural or preternatural order, which are not divine and may indeed be perverse?

This problem of the relations between the human mind and these other separated intelligences is presented with particular sharpness in relation to those regions where the 'too great love of God' has not been revealed and where nevertheless a heroic desire of spirituality may come to light. It is not only a question of those frauds and deceptions of the fallen spirits which menace the reasoning animal seeking to escape from the mediocrity of his nature. We cannot exclude the idea that certain ascetic efforts, certain sequestrations of the soul in itself, in non-christian regions, may tend in fact (on the side of the subject) to a mental commerce with the angelic nature as such, which is the same in the good and the evil angels; and that these dispute, for their own ulterior ends

which are proper to themselves, the possession of this immaterial *convivium* with the human soul. The care which St. Thomas took to refute the theories of Avempace, Averroes and others on the possibility for man of an immediate achievement of the world of pure spirits by intellectual intuition,[1] shows to what point this temptation may prove seductive to philosophers. In this hypothetical case which I have suggested however, the human spirit might find that it had conceded to this attraction, not so much in a desire of seeing the pure spirits and sharing their beatitude, but in order to receive their assistance in being carried to a superhuman contemplation, where it might imitate in some fashion, in a suspension of knowledge, in a night but quite another night than that of infused contemplation and the luminous cloud about Tabor, their manner of self-knowledge and knowledge of the Supreme.

If it is so, we can more easily understand how a certain kind of intellectual mysticism, which seeks for ecstasy or 'realisation' by means of asceticism and an entirely metaphysical dialectic, and of which we can find examples among the Neoplatonists and the Gnostics or in various oriental schools of thought, may achieve that absorption into the unity of which Porphyry speaks apropos of his master, and so reach a form of superhuman state which seems due to the collusion of a higher intellectual world: but it is equally comprehensible how infinitely far such metaphysical ecstasy, where the human mind brushes against an angelic abyss, is from any *interpenetration of divine things*, and indeed must almost inevitably find its end in pantheism.

It remains that the authentic forms precede the others. In regard to the sacred traditions of India I would hold that the Upanishads depend originally, in the first case, less on a philosophy than on a contemplative source, and on a powerful intuition, which is more mystical than metaphysical, of the transcendence of the Supreme. *Neti! Neti!* It is not this, it is not that! The tragedy has been that this contemplation has been continued into a luxiant, hypertrophic rationalistic discussion, one which has never been able to disentangle its proper form according to the laws of philosophy and metaphysics, like any other work of the

[1] *Sum. contra Gent.* book iii, chaps. 41-5. Cp. also *Sum. theol.* i-ii, 3, 7: 'Aliqualem autem beatitudinem imperfectam nihil prohibit attendi in contemplatione angelorum, et etiam altiorem, quam in consideratione scientiarum speculativarum.'

human reason, which in its essence it is. At the same time the waters of the original spring have been joined by less pure currents and tributaries. If the pantheism of the Vêdantas is more apparent than real, endured rather than desired,[1] and seems to be produced most of all by the lack of conceptual technique, if the immense mystical effort which runs through Hindu thought brings clearly into play those natural aspirations for perfect contemplation which seem to prefigure it in the natural order, the natural processes of asceticism and intuition which prepare its resting place, and a metaphysic which looks for and prepares for it—the permanent temptation for those who seek to conquer by their own efforts a supernatural gift, which runs through all this thought, of thinking of a choice of a supreme despair or pure abolition as the absolute good, is an unequivocal sign of the fact that where infused contemplation has not been given by grace it cannot be arrived at by natural means.[2] The inevitable alternative remains: either an authentic and supernatural mystical experience (which may be overlayed by adventitious but accidental elements) or a natural contemplation which does not unite with divine reality: though the two may be variously commingled: no *natural* experience of the depths of God is to be found.

DOES METAPHYSICS ITSELF REQUIRE A MYSTICAL EXPERIENCE?

A new question requires to be examined: can a mystical experience of divine reality be incorporated in any fashion in philosophy or metaphysics? (or rather, supposing that the philosophical intellect is in a condition to overpass the method of concepts, would it in itself be capable of such an experience? or, on the contrary, since the philosophical intelligence, reduced solely to the conceptual process, would be by its nature incapable of completing its metaphysical enterprise, in the degree to

[1]Cp. R. P. Dandoy, *L'Ontologie du Vedanta* (Coll. des Questions Disputées), Paris, 1932.

[2]In order to avoid any misunderstanding arising from a dubious use of words, it is perhaps not unnecessary to recall here that the words *natural* and *supernatural* are being used in the sense of Catholic theology (see pp. 314-17, *supra*), not in the lessened sense allowed by some, notably by certain interpreters of Hinduism, according to which 'natural' is applied to sensible and empiric nature and 'supernatural' to everything which transcends *that* nature.

which it has an absolute need of the mystical experience to attain its object and fulfil its line of development, in order to become wisdom, does it in itself demand to be completed by this experience?). In other words, does the wisdom towards which the metaphysical effort tends require of itself a mystical experience, a *pati divina*?

Once again the answer must be in the negative.

This mystical experience which would be required by metaphysical effort would necessarily be either natural or supernatural. We have already seen that there is no rightfully described divine experience of a natural order. To affirm the possibility of such an experience would be to compromise radically the distinction between nature and grace.

Would the mystical experience which would be required by metaphysical effort be of a supernatural order, that of infused contemplation? This experience certainly exists, but to incorporate it in philosophy, to regard it as in itself demanded by metaphysical effort, is once again to make a confusion between the orders of nature and grace, by making an essentially supernatural knowledge a requisite or constituting co-principle of an essentially natural form of knowledge.

The dilemma is brutal. I know of no way of escaping from it, despite any of the intermediate degrees which may be observed between metaphysical knowledge and infused contemplation.

Such intermediary degrees exist without doubt. When anyone thinks that philosophy itself postulates a mystical experience of divine things it is because we have classified as mystical experiences, making use of the word mystical in an improper sense, states which, though not yet rightly mystical, are yet beyond the limits of metaphysical science and its natural demands. But it is clear that the existence of these intermediary conditions denotes no intrinsic necessity in the nature of philosophy by which it must end in mystical contemplation.

Metaphysics belongs in itself to the domain of the third degree of abstraction, the world of being as such and of pure immateriality. Under pain of risking the value of our faculties of knowledge and the power of the ananoetic process in itself, which is essential to our natural knowledge of God (as in dogmatic definitions and the formulas of belief), it is certainly necessary to admit that the intelligence, by its own proper and exclusively intellectual means, can take cognisance of that

world, which it has made, by its own abstractive power, its object. It is only by carrying the rational instrument to the highest degree of intellectual purification, in having recourse to the most strictly abstract demonstrations, that we may come to sure determinations in this order of knowledge which is precisely that which is least *open to experiencing*.

Does this necessarily imply the denial of the existence of all *metaphysical experience*? I do not think so, at least in a real meaning of the word (and here I am in agreement with certain of the views of M. Bergson). Being as we are spirits in the highest part of our nature, we can have an experience of the things of the spirit even while remaining on the natural plane. It is so that we may know experimentally not only the existence of the soul and of our free will, but may also arrive at a certain obscure and experimental perception of the liberty of the spirit within us and its transcendence in regard to the whole material universe, and even (as is notable in much contemporary literature[1]) of the nothingness immanent in everything which is created. Again, a truth of the natural order, such as the basic reality of being hidden under sensible phenomena or the existence of the First Cause, may under the influence of actual grace reach the intensity of an intuition, of immediate evidence; the intellect can receive like a sudden revelation something which has been the proper object of the third degree of abstraction—the words of a very intimate friend of mine are witness: 'Before being received into the faith,' she said to me, 'I often experienced a sudden intuition of the reality of my own being, of the profound, original principle which divided me from nothingness. It was a powerful intuition, whose force was positively frightening to me, and which first gave me any knowledge of a metaphysical absolute.'[2] Or even better, at the sight of a blade of grass, of a windmill, the soul will suddenly know in an instant that these things are not only themselves and that there is a

[1]For example in the letters of Jacques Rivière to Paul Claudel (see *Correspondance de Jacques Rivière et Paul Claudel*, Plon, 1927).

[2]A similar experience is mentioned by Jean-Paul Richter in his *Autobiography*: 'One morning, while I was still a child, I was standing on the doorstep, looking to my left-hand, towards the woodpile, when suddenly there came to me from heaven, like a flash of lightning, the idea: *I am an I* (Ich bin ein Ich), which since then has never left me; as though I saw myself as a self once and for all.'

God. 'Suddenly', to quote the same friend again, 'all creatures seemed to appear as symbols to me, to have no other office than to show forth the Creator.'

But far from being integrally part of or necessarily requisite to the science of metaphysics, these forms of metaphysical experience or intuition, whether they are of an exclusively natural order or are supernatural in their means of production, are all outside the proper sphere of that science, and may even, without its proper regulation, however true they may be in themselves, give rise to the most fundamentally false interpretations. Far from being the exclusive property of the metaphysician, no discipline is without such privileges and indeed they are far most frequently encountered by poets. Let us not forget that it is supremely unreasonable to make use of what is *accidental* to judge a *thing in itself*. Because God filled Beseleel and Ooliab with a spirit of wisdom and understanding that they might make works of sculpture and of art, for the graving of stones and the carving of wood, for the weaving of patterns in rare purple, in glowing scarlet, in velvet and fine linen,[1] is no proof that these arts in themselves demand a mystical communication. Because St. Theresa received in supernatural prayer the infused knowledge of the presence of God in all things in his creative immensity is no proof that this metaphysical truth, which is in itself accessible by reason alone, demands for its understanding a mystical experience. Because all the pagan philosophers exhibit themselves as incapable of setting out in a clear light the idea of creation does not prove that that idea is inaccessible by philosophical reasoning and postulates in itself the light of revelation. Because for certain people the form of metaphysical experience which I have described may give support at certain points to the rightful science of metaphysics is not in the least a proof that that science needs in itself to be completed by such intuitions in order to exist in itself as a perfectly certain method of knowledge and to attain an effectual knowledge of being.

Another of these intermediary degrees between metaphysical speculation and infused contemplation is furnished by what is called acquired contemplation, which is like the fruit of the exercise of meditation. Without entering into the controversies which this notion has aroused,

[1]Exod. xxxv, 30-35.

we may admit, in accord with the Carmelite theologians and Fr. Garrigou-Lagrange, the existence of this acquired contemplation, of which the prayer of active recollection described by St. Theresa in chapter xviii of *The Way of Perfection* appears to be the highest point. But it can be seen that this contemplation, which is supernatural in its object and by the virtue of faith from which it proceeds, and which nevertheless remains natural in its mode, and so by definition alien from the passivity which is proper to the supernatural mode of the gifts, cannot be called mystical, and remains on this side of that experience where the soul truly endures those things which are divine.

On the other hand, bearing as it does on the mysteries of revelation, it is absolutely apart from and above, not only metaphysical science, but the whole order of the truths which are as such accessible by reason.

In consequence it offers no more indication of any necessity immanent in the nature of metaphysics for it to overflow its limits and integrate itself in mystical experience. There are—and these will be the object of our final consideration—living relations, in the synergic activity of the soul, between mystical experience and philosophy, but without any transfusion, any mixing of their natures. Philosophy considered in the exigencies of its own nature and essence does not itself require a mystical experience. The intermediary states which are discoverable between the two are outside the proper sphere of metaphysical science, whether they are essentially so by and through their object, as in the case of the prayer of acquired contemplation, or *per modum*, by the manner in which knowledge is given to the soul, as in the case of certain experiences of metaphysical intuition.

THE NATURAL ANALOGIES OF MYSTICAL EXPERIENCE

If there is only a rightful experience of divine things in the supernatural order, nevertheless do we not find in the natural order (as has been already pointed out with regard to the effects of the natural love of God) modes of knowledge which are like *analogies* of this experience? Assuredly. Those forms of experience and metaphysical intuition which

have just been in question are an example. Further, and in a much more general fashion, all forms of natural knowledge by intuition and sympathy, or by connaturality, supply a more or less distant analogy of mystical experience.

Where do we find at every instant in the natural order this knowledge by inclination? In the immense domain of those judgments which are concerned with action, of practical judgments. It is a domain *par excellence* of knowledge by connaturality, which necessarily intervenes in all prudential judgments, where the object being singular and contingent the intellect needs to judge in conformity with the rectitude of the will. Let me recall my quotation from Aristotle, *the virtuous man is the measure of all human acts*; he judges of them according to the inclination of his virtue: according to the classic example which he uses and which is taken over by St. Thomas, the chaste man judges by inclination in those things which concern chastity, in consulting his own inward leaning. These are certainly judgments with an intellectual value, and St. Thomas is on his guard against any disregard for them (on the contrary, he makes them the particular instrument of our moral life), but which, connected as they are with the practical intellect, interpenetrated by the will and the appetite, remain alien to the speculative mode of science and of philosophy.

It should be noted that the moral virtues—and even the first natural outline of these virtues in us—create in the soul a certain affinity with *the spiritual order*, in the most indeterminate sense of the words, and, feebly it is true, can also incline the intelligence and the instinctive judgments in favour of the great truths of natural religion. This is one of the notable ingredients in the philosophy of Rousseau: a disposition towards these truths, an aspiration for metaphysical knowledge. It is clear for all that that in this expectation we are very far from the knowledge of, the possession of a sure means of determination for, these problems of primary philosophy. Furthermore, these judgments are only capable of certitude on the supposition of their being in reality more or less conscious apperceptions of common sense or of the spontaneous intelligence, which are in themselves of a rational order.

But it is not only in the region of the practical intelligence that it is

necessary to consider matters of moral activity. Knowledge by connaturality has a place also in the activity of the artist, in the worlds of art and poetry.

I am not referring only to aesthetic contemplation, which at once places us in connivance with its object, and in which one can often see, and not without reason, a far-off image on an inferior plane of mystical contemplation.[1]

The point in question is the virtue of art itself. If in the natural order there is any man who has an understanding with, who, if I may dare to use the words, has entered into a sort of metaphysical complicity with God as the Cause of all being, it is not the philosopher, it is the poet, he who in his own human manner is also a creator, and whose art, in the words of Dante, is 'the grandchild of God'. 'Il faut ignorer son art', writes Claudel, 'pour trouver au Vôtre quelque défaut'. The poet is more prepared than any other to understand the things that are above, to know those forms of metaphysical experience which have been in discussion. His aim is to create something which gives joy to the spirit, in which shines the radiance of a form; he gazes into things and offers a witness, tremulous as it may be, to the spirituality which fills them; he is connaturalised, not to God himself, but to the mystery, which comes from God and is scattered through all things, of those invisible powers which play through the universe.

Prayer, sanctity, mystical experience—poetry, even 'pure poetry', is none of these things. But it is their most beautiful and dangerous natural symbol.[2] And because it responds to the allusions which are scattered through all nature and because nature itself is a reference to grace, it gives us, without our knowing it, a presentiment of, an obscure desire

[1]The psychological process nevertheless is quite different in the two cases. Before the beautiful object, we perceive the beauty before being connaturalised with its object, and it is this perception indeed which makes us enter into sympathy with it, a sympathy which on its own side will determine a form of knowledge. (Cp. J. Maritain, *Art and Scholasticism*, note 55). While in mystical experience it is the connaturality which causes the perception.

[2]For this aspect of poetry, and for the distinction which it is necessary to make, in making use of the most accurate sense of the words, between art as such and poetry, cp. my essay on 'The Frontiers of Poetry' (*Art and Scholasticism*) and my *Réponse à Jean Cocteau*, 1926.

for, supernatural life. Someone who has never written a poem, but who is yet a true poet, said to me one day, 'I do not think it can be possible to be a poet and an atheist.' But he did not for all that imagine because of this that poetry must needs be an integral part of philosophy.

Finally, to bring these considerations to an end, we must not forget the most obvious and most natural of all the natural analogies of mystical contemplation, the one which mystical language uses as its current tongue: human love, with its trials and its joys, the profound and hidden experience of another which it produces—even in its most mortal madness, for divine things are so lofty and transcendent that sometimes it is only in the negative correspondences of sin that they are able to show forth their analogies.[1]

[1]An analogy is a delicate thing and difficult to manage. The danger always exists of taking an analogy between essentially distinct and even infinitely distant terms (as in the case where one analogue is formally divine by participation and the other may be subject to sin) for a natural continuity or tendency: to which danger Plato and numerous heretical mystics are witness. Actually it is necessary to point out from this point of view the defects of a certain kind of literature which usurps the name of mystical and which risks compromising the best efforts of the art of to-day, efforts which are difficult enough in themselves. 'There is only one love', a certain reverend Father wrote some years ago, captivated by the lofty sentiments and the dialectic of the *Symposium*. 'It is with the same heart that we love God and man; the object varies, but the moving principle, the feelings are the same (I speak of love, not of debauchery). Take a human love, cleanse it from all its ugliness, from all its insufficiency, idealise it to the point of the ineffable, extend it to the infinite, fill it with grace: if you bring to bear such a passion on the sole Being who can fulfil it, you have the love of the mystics.' (*Translator's note.*—M. Maritain is probably referring to the work of the Abbé Bremond, as also in his reference to 'pure poetry' *supra.*)

This idealism is as false as it is ambitious. If 'the object varies' and if 'grace informs it', is it not obvious that the love specified by a divine object and proceeding from sanctifying grace is intrinsically different from human love, the one being supernatural *quoad substantiam*, the other being natural: the one being purely spiritual, the other composed of flesh and spirit like man himself? 'Refer such a passion to the sole Being, etc. . . .' is a phrase which, truly, means nothing or is an error: for either this idealised passion remains natural in its essence, and then it cannot attain to God as an object effectually loved above all, it cannot be *brought to bear* on God, so as to constitute an authentic mystical love. Or better still, it is supernatural in its essence (the love of charity) and so is not *brought to bear* on God because it is God who makes it specific, and it is he it seeks first of all and above all. It is with the same heart that a man loves God and his beloved, certainly: but not with the same love.

I would pay tribute to the generous intentions of the author whom I am criticising. But I am obliged to add that religious under vows, happily cut off by the three vows

The Song of Songs, St. Paul's teaching of the great mystery of the union of Christ and the Church under the figure of marriage, lead us to see in the love of man and woman an image, which may be impure but which always retains some impress of its original nobleness and its metaphysical dignity, the image of a love which is better and essentially holy. There is no more powerful thing on earth: nevertheless it is only a simple image, a weak and rather inconsistent image, of that which it signifies. If the image is so borne on by the force of its similitude that no creature can ever be truly loved without that infinite exigence wherein human love sacrifices itself, how can the trials and interchanges of this love, the mutual gift which it demands and unceasingly demands of the whole personality, fail to present the directest of all analogies to the trials and interchanges of mystical love? It is remarkable that the more innocent the soul is the less it seems to hesitate before using for the things which are divine a symbolic language of which in the human order it has no experience.

THE CONNECTIONS BETWEEN METAPHYSICS AND MYSTICISM

A final question remains: in order to distinguish absolutely, as we have done, between mystical experience and metaphysics, is it necessary to suppress all organic relation between them?

Certainly not. There are vital relations between them. It is advantageous to affirm these relations and to endeavour to make their nature more precise. They imply at the same time (1) an ineffectual aspiration, (2) a dependence of fact, in the subject and by reason of subject, in metaphysics with regard to mystical experience.

One might say that, without the power of attaining it by itself, and without it being necessary for its own proper achievement, metaphysics aspires in some way to mystical experience. Let what I am say-

from the tempests of the world, have something better to do than to platonise about Eros. The less protected life of laymen, who have to battle through this vale of tears, at least assures for them a surer experience of certain themes.

The love of charity may inform and vitalise profane love. Otherwise our poor psychological mechanisms would have to find a place for numerous interferences and accidental collusions, notably in certain cases of dubious mystics, between the two loves. It is therefore all the more necessary to mark the essential difference between them: the former is not in any way a 'sublimation' of the latter, it is a love *of a more sublime essence* where the features of profane love may be discovered anew *analogically*.

ing be clearly understood. We have found that metaphysics does not in itself postulate, does not in itself require mystical experience in order to exist in its own species, effectively to grasp the intelligibly real, or to arrive at that perfection of certitude which it needs by reason of its own essence. But it is a general law that the lower—without quitting its own nature and its specific limits—tends always towards the higher and seeks to enter into continuity with it: *supremum infimi attingit ad infimum supremi*. We can now add, which in no way contradicts the previous thesis, but only completes it, that metaphysics naturally engenders in the soul an inclination, which it has not the power to fulfil, a confused and indeterminate desire for a superior knowledge, which is only authentically realised in mystical experience, in the contemplation of the saints.

How does this happen? Firstly because there are many problems, particularly those which are concerned with the destiny of man and with the conduct of the universe, which metaphysics can posit but cannot solve, or only solves imperfectly, and whose solution, given us by faith, is only seen in its truth and its fittingness by the light of infused contemplation. Again, because metaphysics, like all other human sciences, leaves us unsatisfied. Directed as it is towards the first cause and filled by nature with the desire of perfectly knowing it, it is natural that metaphysics should make us desire—with an ineffectual and conditional, but for all that real, desire—to see the cause as it is in itself: the desire to contemplate the essence of God.[1] This thirst it cannot slake. When grace super-

[1]In the first case the object of my desire is God as I know him (by reasoning) as *the first cause of beings*, and to whom I transfer, as though from without, in virtue of the 'ascendant' analogy which is proper to metaphysics, the denomination 'known in himself or in his essence' taken from other created things which are so known by me, *without knowing if or how this is possible in the case of God*; and remaining *in a state of complete indetermination* as to the nature of such knowledge. Briefly, it is God *who is known to me by his effects* whom I desire to know in himself.

In the second case, it is God who is *known to me according to his proper essence* that I desire to know in himself. The object of my desire is the God whom I know (by faith) *secundum suam propriam quidditatem* (and in Trinity), and whom I know as able to give himself to me *even as he is the object of the divine knowledge itself*, by grace of an incomprehensible communication of which revelation has assured me the divine essence *can be the formal end*, and whose 'supra-analogy' produced by faith, in search among created things for a means wherewith to describe it, tells me that it is to see God in his essence even as I am seen by him.

The Christian, who has an idea of the mystery of the beatific vision, knows that 'to

venes and flowers in a man, it does not procure him this vision here on earth, but a foretaste, its proxy, which is infused contemplation; which

know the First Cause in itself' is in fact or materially (*identice*) the same thing as that which theology calls 'to see the deity face to face' or 'as he is'. The philosopher as such, limited to the use of the unaided powers of his reason, does not know this, because he has no idea of the second term of this identity.

His desire to know the first cause in itself is a desire produced by and deriving from the nature of the intellect, produced, but entirely spontaneous, instinctive, unconsidered beforehand, and provoked by a knowledge of that first source which precedes all reflection on the means for realisation of such a desire. On reflection it will appear to him as conditional (or even, when he perceives that no simply human or natural process of knowledge is capable of attaining to God himself, he may judge that it is unrealisable: is not the way in which Hindu thought aspires to a nirvana witness at once to this natural desire for the knowledge of God in himself and to the renunciation by the intellect of so seeing him?)

Thus the desire of nature to see the First Cause is *conditional* in so far as it is simply natural. This is why, if man had been placed in the order of pure nature, or if in fact the means of achieving the vision of the divine essence were lacking, this natural desire would find itself frustrated—or only satisfied by inferior substitutes which procure a relative and fleeting beatitude—without thereby any violation of the principle of finality, which protests against any desire of an unconditional nature being in vain.

But when once man is raised to the supernatural order, he knows on the one hand that the desire to know the first Cause in itself is the same thing as to see face to face the God of faith; and on the other—being assured by faith that he can attain to absolute beatitude—his natural desire to attain to the first Cause in itself, perfected by grace and the supernatural desire of the beatific vision, becomes by the same act *unconditional*. He then understands that if the natural desire to see the first Cause *cannot* be satisfied (it being an obediential power and a means of elevation to an order which is above everything natural), the principle of finality would be violated, because this desire, which is conditional in regard to nature alone, is in fact, for him, unconditional, in so far as grace has perfected it with a supernatural desire.

This view is, I believe, in accord with the arguments of St. Thomas, *Sum. theol.*, i-ii, 3, 8, and i, 12, 1. St. Thomas only demonstrates the possibility for man of seeing the divine essence, because without this possibility the natural desire would be in vain, as a theologian, not simply as a philosopher, and in presupposing the possibility of man's attaining *perfect* or absolute beatitude (of which faith alone assures us, for this beatitude is above nature, *beatitudo excedit omnem naturam creatam*, i-ii, 5, 7, also ii-ii, 4, 7, ad. 2, and therefore reason alone can only supply arguments of suitability), and then in envisaging a natural desire which is rendered unconditional by the supernatural desire which perfects it and which proceeds from the knowledge of faith. And so, *quamvis homo naturaliter inclinetur in finem ultimum, non tamen potest naturaliter illum consequi, sed solum per gratiam, et hoc est propter eminentiam illius finis.* (*In Boet. de Trin.*, q. 6. a. 4, ad. 5.) See also *Sum. theol.*, i-ii, 114, 2. Cp. *Sum. theol.*, i, 12, 4; i-ii, 5, 1 and 5; ii-ii, 2, 3; *De Veritate*, q. 8, a. 1, 2, 3; *Sum. contra Gent.*, iii, 48, 50-2, 57, 63; *Compend. theol.*, cap. 104-5.

fulfils the highest aspirations of metaphysics but of which metaphysics can have no idea, and by which it remains astonished: crucified wisdom which is foolishness to the wisdom of pure reason.

Lacking supernatural gifts, metaphysics runs the danger of trusting to some more or less fallacious substitute for infused contemplation to direct its aspirations for knowledge by pure awareness and the intuitive possession of the absolute. Finally, we can say that the intellect, in as much as it is a perfection of a transcendental order, realised in varying degrees on the ascending scale of minds, tends in an impotent desire to surpass those specific conditions which belong to it in human being, where it is at the lowest stage. And it is by this that we can understand the existence of that nostalgia for a higher contemplation to which, in the vast reaches of human history, so many schools of philosophy bear witness.

On the other hand, it is very clear, when we consider the subject and its synergic activity, that formal discontinuity does not destroy the solidarity of the living being. There is a profound solidarity in the soul in a state of grace between supernatural and human energies. Without doubt mystical experience is entirely independent of philosophy, marvellously overleaps it; without doubt it is not usually among philosophers that the great contemplatives are found. But, to consider things in the concrete, metaphysics itself, for all that it is not itself dependent on mystical experience, finds *in us*, just because it is inferior to it, a certain dependence on this experience.

But how? Because the virtues which perfect our intelligence are like so many ordered and united lights, are themselves in a hierarchy and in solidarity, the lower supported and fortified in its proper place by the higher. In the same way, says John of St. Thomas, as the lower angels are illuminated by the higher angels they are fortified by them in their own rightful intellectual light.[1]

Thus metaphysical wisdom, in regard to the truths which are proper to it, the truths which are demonstrable by reason alone, is fortified by supernatural faith and by theology. And if the lights of faith and of speculative theology bring to the philosopher greater power, greater perfection and certitude in his act of purely rational adhesion to the ob-

[1] *Curs. theol.*, ii-ii, q. 1. disp. 2, a. 1, n. 24 (Vives, vol. vii).

jects of philosophical knowledge, such as the existence of the transcendent first cause, and even to the first principles of the reason,[1] by how much more must the light of the highest wisdom, the mystical experience of divine things, assist and purify the philosophical intellect! St. Thomas himself is a supereminent example of this truth. And if it is true that the human intellect is so feeble by nature, so debilitated by the heritage of original sin, that it cannot attain to a complete philosophical wisdom that is not mingled with error without the succours of grace, one can hold in fact that metaphysics can only be kept in its purity among men if metaphysicians are comforted at times from on high by the experience of those things which are divine.

The significance of the thomist distinctions is sometimes misunderstood. I have said that the three forms of wisdom, metaphysics, theology and mysticism, are really distinct, because they are formally different objects and correspond to specifically distinct degrees of illumination. It is the proper nature of these three forms of wisdom as such which is here in consideration. Metaphysical wisdom, having a specific object of the natural order, does not carry in itself, *ratione sui ipsius*, any intrinsic or necessary claim on mystical contemplation, but only an ineffectual aspiration with regard to it: does not require, for the exigencies of its own proper essence, any other cognoscitive energies than those of the natural reason.

But we must not forget that it exists in a subject, in a human soul. And this subject is not itself in a state of pure nature, but of fallen nature, or in a state of grace. In fact, metaphysical wisdom, wisdom of an essentially natural order, cannot be constructed among us without being soiled with errors or avoid all the accidents which menace it, unless some help from on high, coming from habitual or actual grace, come to the assistance of the natural reason: for our nature is weak and has been wounded. It is not sufficient to have the gifts of grace within one to avoid metaphysical error: that, alas, would be going too far! But a condition may be necessary (*morally* necessary in the present case) without being by that sufficient. If, given the state of nature in which we find ourselves, metaphysical wisdom can be achieved by man and can maintain itself without defect, or at least in the straight path of a higher

[1] Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 1, disp. 2, a. 6 (n. 17) and a. 9 (vol. i).

tradition, it is because the supernatural energies of grace have at certain moments, in one way or another, come to the aid of the reason.

Thus, by reason of the subject, *ratione subjecti*, which is wounded in its nature and called to rise or in fact raised to the supernatural order, metaphysical wisdom clearly demands, at least in the normal course of things, to be consoled by a better illumination, a passage upward into the wisdom of the saints. Without speaking of the other differences between the conceptions of Thomism and that of M. Blondel, the conflict between the two is sharply delimited by the following point: a certain spiritual dynamism which the one explains by the exigencies and essential needs of knowledge and philosophy, and the other by the conditions of the subject and the synergy in it of specifically distinct intellectual virtues.[1]

The fact remains that if, as I have already endeavoured to demonstrate elsewhere,[2] we properly distinguish the nature of philosophy and its state in the subject, we have to affirm at the same time that philosophy in itself is a purely rational knowledge, and depends intrinsically only on principles of the natural order, and that it can only find the requisite human conditions for its full development in truth when it grows under the heaven of faith.

Finally, let it be noted that if it is true that mystical wisdom is the highest point of the life of the soul, where both knowledge and love bear their noblest fruits, it is equally certain that the philosopher and the metaphysician will find the greatest advantage, even for their own proper object, in the study of so transcendent an activity. But they can only rightfully do so when they have recourse to the light of theology, which is alone proportionate to such an object. It is a scandal to the intelligence and a profound offence to the sense of order to see psychologists and sociologists, or even philosophers and metaphysicians, seizing hold of mystical experience in order to judge of its nature by *their* light, in other words, to systematically misunderstand it. The philosopher has

[1] In being so limited the conflict, as I have previously pointed out, loses none of its gravity: for in philosophy the reasons by which a conclusion is reached are quite as, or even more, important than the conclusion itself. (Cp. J. Maritain, *Réflexions sur l'intelligence*, p. 86.)

[2] *De la philosophie chrétienne* (Coll. des Questions Disputées) Paris, 1933.

need to be initiated into some inferior science, such as mathematics for example, when he would deal with certain questions. He ought in the same way to ask the guidance of a superior science when he seeks, even for his own philosophical ends, to deal with an object which essentially surpasses philosophy.[1]

[1]See for this question the study by R. F. Maréchal, 'Science empirique et psychologie religieuse' (*Etudes sur la psychologie des Mystiques*, vol. i, 1914), and the articles by Roland Dalbiez, 'Une nouvelle interprétation de St. Jean de la Croix' (*Vie Spirituelle*, 1928: 'The integral interpretation of mystical experience must be theological or it cannot be', M. Dalbiez writes very justly): also the writings of R. P. Benoit Lavaud on 'Psychologie indépendante et prière chrétienne' (*Revue thomiste*, 1929) and on 'Les Problèmes de la vie mystique' (*Vie spirituelle*, June, 1931).

The pages of this book were already in the hands of the printers when M. Henri Bergson's *Les deux sources de la morale et de la religion* was published. It illustrates in its own way what I have said in this chapter, and have already treated at somewhat greater length in my *Questions disputées*, v. *supra*, note 2. Since everything that is human interests the philosopher, it is eminently fitting that he should meditate on what is at the very heart of humanity, the mystical life and sanctity. But, while all the time keeping to his own proper standpoint and his own rightful means of procedure, he must then have recourse, because of the intrinsic exigencies of such an object, to the information of theology; its scientifit powers are alone competent to deal with such a theme: for the reality which he is studying in this case is not purely natural and is moved by principles which are superior to reason alone. If the unbelieving philosopher cannot admit these principles and in consequence the theological science which is founded on them, his information will inevitably be deficient.

This is not the place for a full examination of a book in which appear, together with that serene elevation of thought, that scrupulous attention to experience, that happy subtilty which we admire in M. Bergson's work, the same refusal to depart from a radical empiricism and that 'ontological bankruptcy' (G. Marcel) with which one must reproach his philosophy. I must limit myself to a few brief remarks on the theme which is the concern of this chapter. My aim is not to criticise a courageous mind which, *in spite of* its philosophical appearance, in fact, due to its fidelity to its inward light, pursues a purely spiritual trajectory; but the need for truth demands nevertheless the pointing out of certain discordances.

M. Bergson has no difficulty in transcending the schemes of a vulgar psychological phenomenalism and in exhibiting the great mystics, whose 'intellectual robustness' he admires, as souls who have achieved a life which is in some way superhuman; his book has pages on this theme which are particularly moving, which show more than deferential attention, almost an affectionate emotion with regard to a reality which he feels as present and effectual. But the total interpretation which he himself proposes (and in which, in the absence of the proper instruments for a veracious analysis, one must be grateful for so many apt observations *ex communibus*) in itself shows that philosophy, in so far as it ignores the mystery of grace and of the Cross, cannot attain to the true nature of the mystical life, even when it pays honour to its good faith. It is possible to

ask whether M. Bergson's attempt, in as much as it is bound up with the system of ideas put forward in *L'Evolution Créatrice*, does not become in spite of everything an endeavour to reduce the spiritual to the biological, a biology, I admit, made so transcendental that it is conceived as the creative source of the universe, but which remains always biological, in the sense in which that word applies to the stages of life which are characterised above all by the organic and the psychical, where life manifests itself in the animation of matter and its immanent activity is in consequence essentially bound up with the conditions of transitory action and productivity. It is true that on this side of the world of grace and of supernatural life human spirituality can only transcend the biological sphere in a more or less imperfect manner.

If we believe in the experience of the mystics, why should we refuse to accept their testimony to the end? When they say that they are united to their source as the life of their life, they are thinking of no *élan vital* or any anonymous creative urge, which one can only conceive of as personal under the influence of a burst of enthusiasm or emotion; it is towards the depths of a supreme personality in the fullest sense of the word that they cry out that they are turned, it is to the deity itself that they adhere, the infinite 'fullness' of being and of perfections, to a sovereignly subsistent *Other*, of whom, before 'negatively' proving that he is above all names and all thought, they know already with all the fullness of certitude, the existence and the name. Far from being uninterested in such a question, they know perfectly, they do not cease from testifying, that the source to which they are united is 'the transcendent cause of all things'. They declare (and it is here that M. Bergson's book results, to say the least of it, in an equivocal position) that it is to no pure endless extension, no joy of the creative urge finally released from all termination, but exactly, on the contrary, to an infinite end that their will and their love is directed; and the prodigious impulse which animates them has its meaning and its existence only in the degree to which it brings them to this final End, where they are fixed in an unfailing life. They testify that their joy is not their joy, but the joy of their Saviour, and that it is crucified: they witness that their experience of divine things is founded on and proportionate to their faith, that it is inseparable from the doctrines wherein the primal Truth has made himself known to them, and if it is obscure and won by love, it is nevertheless a sovereign knowledge, the intelligence being nourished in this 'unknowingness' by its most noble object. They testify that if mystical contemplation overflows into action (for the wisdom of the saints is not purely theoretic like that of the philosophers, it is also practical and the regulation of life according to the divine rule, *Sum. theol.*, ii-ii, 19, 7, and this is in fact the sign of the superiority of christian mysticism), nevertheless its 'last stage' is not 'to sink into an abyss of action' and 'an irresistible urge which sweeps onward to unimaginably vast enterprises'. For the action of the great christian mystics, for example the Apostles and the founders of the Orders, is never anything but an overflow from their contemplation, whose primacy only appears the more clearly as the divine union is the more perfect. Besides, if their love extends itself to 'the infinite' of humanity, it is because it is first of all and essentially directed to God in Three Persons and to the personality of their neighbour. Finally it is forbidden to us to attribute to any *élan vital* marching to the conquest of the world what springs essentially from divine grace and is superior to all created or creatable nature.

M. Bergson has taken up a standpoint from which, as he says, he 'sees the divinity of

all men', and where in consequence 'it matters little if Christ is described either as a man or not' (p. 256). His philosophical doctrine which dissolves all ontological values, his abandonment in the regions of metaphysics, morals and religion, of almost all the order of properly intellectual and rational certitudes, his fundamental omission of the fact that mystical experience presupposes the naturally and supernaturally known reality of its object, and that it is nothing if it is not an adhesion to the subsistent Truth, thus against his will lure his theology into a form of fundamental pelagianism, where the most important distinctions matter the least.

If in forming an estimate of mysticism it is best to listen to the mystics themselves, and if the only mysticism which has plainly succeeded is 'that of the great christian mystics' (p. 243), it is unreasonable to reject their evidence on what is to them more important than their life, and to fail to listen to them when they affirm that mystical experience, far from having a content which we may regard as independent of revealed faith (p. 268), is only the perfect blossoming of that faith: which then certainly causes the philosopher to ask certain meta-philosophical questions and direct himself towards superior *sources*, but ought he not to love the truth more even than philosophy itself and its 'autocracy'? He will so be led to recognise, as has been set out in this chapter, that all authentic mysticism which has developed in non-christian countries, and which finds in the contemplation of the saints who grow endlessly in the Church its achieved exemplar, should be regarded as a fruit of the same supernatural life, that supernatural life which Christ, sovereignly generous in his gifts, communicates to those souls of good will who do not visibly belong to his flock.

Cp. Etienne Borne, *Spiritualité bergsonienne et spiritualité chrétienne*, Etudes carmélitaines, Oct. 1932; M. T. L. Penido, *Dieu dans le bergsonisme* (Questions Disputées).

CHAPTER VI

CONCERNING AUGUSTINIAN WISDOM

A TYPICAL PROBLEM

IF WE would make apparent, by a particular example, the nature of the problems which may present themselves in the order of the most secret dimension of the spirit, of that mysterious 'depth' in which the spirit turns back upon itself and towards that which it contains, differentiating its operations no longer according to objective degrees of abstraction and intelligibility, but by the very liberty of its standpoints and its rightful finality, the history of western thought presents to our attention no more striking case than the reciprocal *situation* of St. Augustine and St. Thomas.

A bishop of the fourth-fifth century, a scholastic of the thirteenth: not only are their epochs, their controversies, their intellectual circumstances entirely different, so also are their tasks. The one is a fisher of men, the other an architect of truths. One is the begetter, the discoverer of christian doctrine, holding it, fighting for it in opposition to the wisdom of this world: the other perfects it, consolidates it for and by itself. One is the source, the other the fruit.

Their vocation, their witness is different. The dwelling-place of the one is in the heart of our humanity; everything in that heart is known to him, and it is with the voice of the depths, the abyss of the soul, that he speaks when he would witness to the supreme truth: even on the purest heights of his theology we recognise that tone. He is a prodigal son, a lover, a convert, a man saved from the deadliest errors of the mind and of the flesh, instructed in, filled with evil, before the experience of grace reared him up to the height where he lays hold on those things that are divine; a man made to be a leader of men and a shepherd of souls, from one generation to another. The other lives in the intellect,

he is a friend of the angels, and it is with their tranquil and powerful gaze that he lights up for us the secrets of divinity and reveals us to ourselves. He is the son who can only be faithful, chaste, a crystal-clear fountain where the waters of divine wisdom ceaselessly accumulate; a mind made to lighten down the centuries and teach all minds.

It is not only a delicate and difficult task, paradoxical even, to compare St. Augustine and St. Thomas, it seems at first impossible. The intellect has to renounce its most normal procedure of comparison, the process by which two things are placed and confronted on the same plane and in the same light, the search for coincidences and deviations. It must needs transport itself to another plane and seek another illumination, where it is exactly in those points of non-coincidence that unity will be perceived. *Concordism* and *discordism* are both worth exactly as little and proceed from the same optical error.

On the one hand the originality of Augustine and of Aquinas with regard to each other is irreducible; their intellectual attitudes and their systems, if one reduces St. Augustine to a system, will not coincide. On the other hand, there is between the wisdom of the one and of the other not only an accord and a harmony, but a fundamental unity. How is this antinomy to be resolved? Without entering into those controversies which divide the specialists, I would endeavour to indicate what is to my eyes the basis of the solution.

'Le cœur a son ordre, l'esprit a le sien, qui est par principe et démonstration, le cœur en a un autre. . . . Jésus-Christ, Saint Paul ont l'ordre de la charité, non de l'esprit, car ils voulaient échauffer, non instruire. Saint-Augustin de même. Cet ordre consiste principalement dans la digression sur chaque point, qu'on rapporte à la fin pour le montrer toujours.'[1] This view of Pascal's needs to be made more precise, but it suggests the essential point: a difference of order, of formal point of view, of *lumen*. Christ not only wished to kindle a fire in the hearts of men, he wished to instruct them: but in the order, the light of the divine revelation itself. St. Paul is in the order and the illumination of the gift of prophecy in its highest and holiest form. The one and the other are too exalted to deign to philosophise. St. Augustine is alike in the order of charity; and if he philosophises abundantly, it is by love that he teaches and in order by

[1] Pascal, *Pensées*.

one and the same movement to move a human being both practically and towards its final end. How this can be will be considered in a moment.

St. Thomas is in the order of intelligence—put to work by love, in pursuit of love, but conducting his work in the rarefied atmosphere of objective exigencies (which only seem cold to those who do not love the truth). It is in the order of and by the light of theological science and of philosophy that he teaches us: in a discipline proceeding according to the mode of pure knowledge.

THE GIFT OF WISDOM MAKING USE OF DISCOURSE

What then is the true source of Augustine's teaching? I would make bold to say that this source is the highest of all, the wisdom of the Holy Ghost. I have said that he teaches by love. Why is this, if not because he teaches us in the order and light of the gift of wisdom? It is that wisdom which furnishes his *point of view*, it is from there that his thoughts rush forth to surround all things and ceaselessly lead them back to their centre. In the period of his philosophical intemperance, in his wanderings among the sects and the systems, it is this that he is ignorantly seeking. It is from grace alone that he won it, and without doubt one could descry from that point of view a progressive affirmation and growth in his thought with his conversion. It is in the degree to which he teaches by the full virtue of the unction which he has received that he holds all the force of this wisdom.

When I say that the point of origin of the teaching of St. Augustine, less high than that of the teaching of St. Paul, and *a fortiori* than that of Christ, is higher than that of St. Thomas (whose teaching proceeds according to the human and rational mode, and is much more perfect in it), let no one think because of this that St. Thomas himself was lacking in this infused wisdom; he possessed it superabundantly, just as he was superabundantly possessed of mystical graces. Aquinas had need of it to achieve his work as a theologian: but his work in itself is, strictly speaking, in the field of theology treated as a science (and in philosophy), which are indubitably forms of wisdom but in the human mode, and, in as much as they are technical processes, inferior to the wisdom which is

infused. In the City of God there are defined and differing functions: the teaching office of St. Thomas, universal as a theological discipline, is not that, yet more universal and supra-technical, of an Augustine.

It is here necessary to recollect that the wisdom of the saints, which judges of divine things by loving inclination or connaturality, *compassio sive connaturalitas*, and by virtue of union with God,[1] presupposes not only faith, but charity; that it is experimental, that it is not only speculative but also practical, proceeding from union with God and directing our activity towards that union, ruling human life by divine laws; finally, that it may make use of both discourse and argument.[2] Imagine this wisdom, no longer ineffably concentrated on the passion of divine things, as is the case in mystical contemplation, but royally overflowing in communicable knowledge: not in the endeavour to express lyrically, as does a St. John of the Cross, or if I may say (with no play upon words) oratorically, as does a Bérulle, mystical experience itself, but in order to extend over all the field of the intelligible and join in all the play of the rational powers, *making use* of all the natural instruments of knowledge with that respect, that courtesy towards both nature and the reason, but also that confidence, that ease, that hardihood, that sovereign loyalty which belong to the true spiritual liberty: such is the wisdom of an Augustine (and, more generally, of all the Fathers). The wisdom which is common to all Christians, doubly instinctive and spontaneous—for the least intelligent of the faithful has received alike of the Holy Ghost and its gifts—reaches its supreme proportions, rightly fatherly and episcopal, in the wisdom of these great spiritual shepherds. The science of theology, not yet set apart in its condition as a specialised discipline (that was the great work of the Scholastics) is found there contained in its source, in a state of immanence. (The age of technical study had not yet

[1]Cp. John of St. Thomas, *The Gifts of the Holy Ghost* (French trans. by Raissa Maritain, 1930).

[2]John of St. Thomas teaches that the gifts of wisdom and knowledge, for all that they are not discursive in themselves, nevertheless do not always come without discourse: (1) because investigation and reasoning are natural to man and the gifts of the Holy Ghost do not destroy but perfect nature; (2) because even in the infused knowledge of Christ St. Thomas admits the possibility of discussion and the comparison of terms (iii, q. 11, a. 5); (3) because we do not ordinarily know within us a light which teaches us truths without words and without comparisons.' *Ibid., loc. cit., supra.*

begun, and theology is the first and greatest technical process of the christian world.) The supreme wisdom conquered all things, appropriated all, drew them all into its universal current: all the spoils of Egypt, all the treasures of philosophy. Let it be said, in order to draw a clear boundary about these things, that these treasures are here the instrument, not precisely of theology in so far as it is distinguished from philosophical science (which were neither of them as yet explicit in their essential natures), but of infused wisdom, of the wisdom of the Holy Ghost, which dominates and absorbs them, and which is bound up with faith and charity.

Thus we can see in its plenitude the mission of the Fathers of the Church. 'The Fathers and the theologians', the phrase which recurs constantly in manuals of sacred doctrine, denotes two offices which are entirely distinct. Theology is found among the theologians in its rightful nature as a specialised science, having for its light that of reason elevated by faith. Theology as it is found in the Fathers is in a higher condition; its light is the light of the gift of wisdom making use of reasons; it proceeds like doctrine from the light of sanctifying grace. It is *holy* learning. There will always be new Doctors in the Church. The age of the Fathers is definitely closed, the age of that outpouring of the gifts of the Spirit which was necessary for the birthpangs, the *education* of the Church. And what is most relevant in the Fathers is the purity of the waters of this impetuous flood of the Spirit, certainly more so than the actual texture of each of the stones, broken from the old rock of philosophy, which that torrent sweeps along with it in its tide.

THE PLATONIC REASON AND THE GIFTS OF THE SPIRIT

The philosophy of which St. Augustine made use (one of the greatest religious philosophies of the world) is incontestably deficient, torn by force from the ultimate defences and spiritual fructification of dying paganism, the system of neo-Platonism. (He took it as he found it. And who is there who can read Plotinus without gratitude?[1]). But with Augustine this philosophy is an instrument in the hands of the gift of

[1] 'Plotinus inter philosophiae professores cum Platone princeps', St. Thomas quotes the phrase of Macrobius (*Sum. theol.*, i-ii, 61, 5, *sed contra*).

wisdom; and no one has a clearer sense of the superiority, the heavenly transcendence of that gift, of the divine mastery with which it makes use of whatsoever instruments it will, than the great Doctor of Grace himself. What has an absolute primacy ,what illuminates, discerns, commands, rules, measures, what gives a right of jurisdiction over all things, *spiritualis judicat omnia*, what exults in the breast of the christian like the waters of paradise which spring up to nourish and renew all the earth and all knowledge, is the gift of the Spirit in the power of love. A human instrument, which is certainly not mediocre, but which is imperfect, awkward and dangerous, and to direct it the most perfectly endowed hand, sensitive and holy, intelligent and wise, powerful, prudent and sagacious, the irresistible light of the superhuman Spirit—this is the admirable paradox of the wisdom of the christian Plato.

Can we not see (and who is there perceived it better than St.Thomas?) the living *sense* of this wisdom, the end for which such an instrument is used by such a mind? It is the pure universe of the christian truths, the eternal depths which are shown to us, those mountain-tops where theology has its rise. To consider such an instrument in any material fashion, separated from the spirit which moves through it, is to mix ourselves up in an endless quarrel, in a vain effort to reduce St. Augustine to neo-Platonism, or in a literal-minded search for the discords between him and St. Thomas.

What is truly remarkable and should be regarded as a sign of genius, of the *holy genius* of Augustine, is the instinctive sureness, the supernatural tact with which, while all the time remaining in close dependence on Plotinus in philosophy, he himself evades (one cannot say so much for all his disciples) the most dangerous pitfalls of Platonism, sometimes by a magnificent rectification of his Greek masters (as when he makes the world of divine ideas out of the platonic exemplars), sometimes by leaving unresolved those questions for which the platonic equipment provides no key (as in the questions of the soul and its origin), sometimes leaving unachieved, in an indeterminate state which is pathetic, because it is full of expectation, full at once of promise and of reserve, those great doctrines (such as his doctrine of illumination) which he could not with the equipment at his disposal, without falling into grave error, have brought to the highest point of exactitude.

But what is most important, and is the central point of this brief study, is not the platonic instrument of which St. Augustine made use, but his wisdom in itself, in as much as it is, as I have said, the gift of wisdom making use of discourse. This notion allows us to comprehend how it is that St. Augustine makes constant use of philosophy, and yet is in no way the inventor of a philosophical system; how so many defects in no way affect his light; how he is set above philosophy, above even theological science in the exact sense of the word, and how he covers the whole field of theology, of philosophy, and the science of practical morals. It accords, I believe, with the admirable doctrine of wisdom which St. Augustine himself has left to us, and which has been completely incorporated—with the requisite explications and differentiations—in the thomist synthesis.

When he shows how science, in as much as it is distinguished from wisdom (the supreme science), is the work of the lower reason and of knowledge in the twilight of created things, is always first of all directed towards the labour of action, while wisdom is the work of the higher reason and of knowledge in the light of divine things, directed first of all towards the repose of contemplation;[1] when he formulates the great law, which dominates over all civilisations, of the inevitable choice between wisdom and science, for all the riches of the latter, good as they are in themselves and necessary, are as such balanced by the poverty of wisdom, so that to choose them as an end is the crime of covetousness and avarice, a deadly turning towards perishable goods; when, with an incomparable power of psychological analysis, he describes the economy of science and wisdom in holy souls, it is clear that St. Augustine (without certainly

[1] I know that in enumerating the gifts of the Holy Ghost, St. Thomas had at first characterised (*Sum. theol.*, i-ii, 68, 4) the gift of science as the perfecting of the practical intellect, and the gift of wisdom as perfecting the speculative intellect: he so adheres in the most literal fashion to the opinion of St. Augustine. Later (ii-ii, 8, 6), he recognised that the gifts of science and wisdom are both speculative and practical, as is faith itself: the gift of wisdom in particular judging experimentally the truths of faith from the side of the divine realities; the gift of science, from the side of created things. But these two positions are not incompatible. As John of St. Thomas has pointed out (*loc. cit.* a. 7, n. 8), although the wisdom of the saints may well be at once speculative and practical, yet it predominates in speculation, while the gift of science, because it proceeds by lower causes, predominates in practical knowledge, though it may also be speculative.

excluding the distinction of the three forms of wisdom, metaphysical, theological and infused, which St. Thomas was later to establish, but entirely ignoring it, for he only thought of opposing christian wisdom to the false wisdom of the pagan philosophers), it is clear that St. Augustine in fact centres his whole idea of wisdom on the wisdom *par excellence*, which is that which is infused. It is towards it, deriving from it, that the whole flood of his thought returns and gathers in all his thoughts. It is in this that he sees profane and sacred science (in so much as in sacred science the aspect of science is found) receive participation: they are subordinate to it as they should be in the christian soul.

THE PHYSIOGNOMY OF AUGUSTINE'S TEACHING

The essential difference between the teaching of St. Augustine and that of St. Thomas is one of point of view and of perspective. In the one case, the standpoint of theological wisdom in the strict sense of the word, in the other, that of infused wisdom. One seeks for essences, the other is drawn on to the experience of Him who is loved. I have said that the wisdom of St. Augustine is the gift of wisdom making use of discourse. When we recall the particular qualities of the gift of wisdom recognised by the theologians,[1] we shall understand the true point of view of St. Augustine, and the character of his doctrine, without speaking of the marvellous savour of his style, or that supra-technical spontaneity of which I spoke, thanks to which that instinctive baptismal wisdom[2] of the common run of christians is reflected in him. We shall comprehend that to him true philosophy—meaning a growth in wisdom—is a way towards eternal beatitude, and the true philosopher is a lover of God, *verus philosophus amator Dei:*[3] it is the wisdom of the Holy Ghost. We shall comprehend how, while perfectly knowing the essential difference between purely rational knowledge and the conclusions drawn from the principles of faith, he never dreamed of systematically distinguishing philosophical from theological discipline: he drew out no chart of intellectual arrangement; he spurred on towards its fruition in God the reason

[1]Cp. John of St. Thomas, *op. cit.* (French trans. chap. iv).

[2]John of St. Thomas, *op. cit.* [3]*De Civ. Dei*, viii, 1.

illuminated by faith. We shall understand how, while more sensitive than any other man to the true values and dignity of speculation, while rejecting with all his being (and truly without the capacity to conceive of any such thing) what fifteen centuries later a disgraceful period was to know as philosophical pragmatism, this ardent lover of the intelligence was able to play with entire liberty with a sort of pragmatism in living fact—that of eternal salvation, which is integral in his wisdom—because infused wisdom proceeds from charity—the movement of the will towards its final end.

In the doctrine of St. Augustine faith precedes and universally prepares the intelligence. *Crede ut intelligas.* Why should it be astonishing that the intelligence in question is the knowledge of infused wisdom extended over all the possible field of human exploration? This knowledge presupposes theological faith as well as theological charity. It is absolutely essential to the wisdom of St. Augustine to proceed from faith, because it tends from its source towards the experimental union with God. Equally St. Augustine knows from experience that in order to recover the integrity of its natural vigour, even in the region of those truths which are accessible by the demonstrations of reason, the wounded reason of the sinner needs to be healed by *gratia sanans.*[1] And it is in our actual movement towards the primal Truth that he seeks to guide and to instruct us.

He inculcates into us the fact that the soul can only find God by a return and a progress *ad intus*, in withdrawing from all things and from the senses, in preparation for an ascension within. He wishes to be united in the profoundest depths of the heart with Him who dwells there as in a temple and in whom alone the heart can find rest, not the God of the philosophers and the wise men, who may be attained without faith, not even the God of the theologians, who may be attained without charity, but the God of the saints, the Life of our life who gives himself to us through grace and in love.

In mystically experiencing God the soul experiences also, in the most hidden point of its sanctified activity, its own nature as a spirit. This double experience, produced by the special inspiration of the Holy

[1] 'Quamvis enim nisi aliquid intelligat, nemo possit credere in Deum: tamen ipsa fide qua credit sanatur, ut intelligat ampliora.' *Enar. in Psalm. cxviii*, 18, n. 3.

Ghost and by its gifts, is like the supernatural achievement of that movement of introversion which is proper to all spirits. It is this point, in all that concerns God and the soul, which is the centre of gravity for St. Augustine's doctrine. If we lose sight of it, the profound meaning of his teaching escapes us. This is the principle and origin of all his teaching, and even when it is far away from this centre and circles in its own natural atmosphere, it is characterised by an indescribable flavour of the experimental, at once delicious and living: a far-off participation in, hope for, promise of the supreme joy. That is why all metaphysical objects and their purely intelligible constraints, while he guards himself from denying them or in the least reducing their value, while he knows and reveres, even more than Pascal, their efficacy, only present themselves to him in the degree to which they are filled with the resonance, the vibrations of the soul; why the rational proof of the existence of God, without ever ceasing with him to proceed *per ea quae facta sunt* and by the way of causality, also for him starts from experience, this time a purely natural one, the experience of those immutable truths of the reason which light up our changing minds.[1]

As to the soul's knowledge of itself, if, in the philosophical formulation of his thought upon this point, and in certain psychological theories connected with it (in particular his theory of sensation) St. Augustine clearly yields to platonic forms which are only defended with difficulty, the fact remains that what he saw before all, and that infallibly, and always in a certain more or less remote participation with, in reflection of, an experience of an order of things which is divine, is the nature and privileges of spirit in the human soul, by which the soul is radically (but not in the state of union with the body) intelligible to itself by its substance, and may only know material things by immersing them in its own light. It will be sufficient for St. Thomas to specify that here on earth the soul only knows itself through its acts to bring, here as every-

[1]Just as the proof of the existence of God from the sensible world has in Augustine (from whom Pascal greatly deviated on this point) its full value: 'Ecce sunt caelum et terra, clamant quod facta sunt; mutantur enim atque variantur. . . . Clamant etiam quod se ipse non fecerint. . . . Et vox dicentium est ipsa evidentia. Tu ergo, Domine, fecisti ea qui pulcher es, pulchra sunt enim; qui bonus es, bona sunt enim; qui es, sunt enim. Nec ita pulchra sunt, nec ita bona sunt, nec ita sunt, sicut tu conditor eorum, quo comparato nec pulchra sunt, nec bona sunt, nec sunt.' (*Confessions*, xi, chap. 9.)

where else, the doctrine to its final point. Indubitably, in order to constrain men to see the things that are indeed above them, St. Augustine at first flew too high: but when fully acquired the substance of his psychology enters completely and easily, as Père Gardeil has admirably demonstrated,[1] into the system of aristotelian notions revivified and, if I may dare to say so, *augustinianised* by the Angel of the Schools. Mystical wisdom may be called in some sort the activating agent, the catalysing instrument of augustinian introspection, thanks to which it appears as the most marvellous instrument of spiritual observation. In the exact degree to which St. Augustine's psychology never leaves sight of the concrete, and his moral science even less so perhaps than his psychology, it progresses in an entirely other manner than that of the analytical psychology of St. Thomas.

In all this we are in a region very different from that of metaphysical knowledge: a region which would be inferior to metaphysics if it were only that of practical knowledge or psychology, but which it is entirely erroneous to characterise as such; a region which in reality transcends metaphysics, for it is rightly the royal domain of infused wisdom, the prelude to the beatific vision, the return of man to the loving contemplation of the three Persons of the uncreated Trinity dwelling in us by grace. It is so possible to say with Windelband that the philosophical doctrine of St. Augustine is a metaphysic of the inward life, or with M. Gilson that it is a metaphysic of conversion, on condition that we add that this doctrine is no metaphysic in the proper sense of the word. The phrases of Windelband and M. Gilson are alike all the more illuminating in the degree to which one grasps the fundamental impropriety, in this case, of the term 'metaphysic'.

St. Augustine's doctrine is then, definitely, essentially, and in its very method *religious*. He does not despise, he in no way lessens the value of scientific research into the nature of things (whether it is a question of metaphysics or the sciences of observation); he is too great a lover of Plato not to see the universe as a great family of essences, not to make use at every moment of metaphysical concepts. But he only uses them obliquely and for quite other ends. If he studies the nature of primary matter, it is under the action of grace. On no occasion does he consider the

[1] A. Gardeil, *La Structure de l'âme et l'expérience mystique*, 1927.

object of his researches in the specific light of purely rational speculation. It is a higher wisdom which has given birth to those metaphysical intuitions in which his teaching is so rich.

Let us finally recall that such wisdom contains in itself, in its source and *eminenter*, what among the scholastics is divided and separately defined as theological and philosophical discipline; or, more precisely and to delimit things with the greatest possible accuracy, let us recall that such a wisdom contains philosophy in a virtually-eminent manner and theology in a formally-eminent manner (for in using a *lumen* higher than that of the theologians, in being more than theologians, the Fathers did truly and rightly theological work); we shall so understand that the teaching of St. Augustine differs from that of St. Thomas not only in *point of view* and the *habitus* of knowledge; it differs also by its *condition*. Here, a condition of formation and specific actualisation, the condition of sciences and technique in their proper nature: there, a condition of transcendent fecundity, of a supra-technical wisdom obscuring these sciences in its pre-eminence: a condition which, in comparison with the sciences of philosophy and theology, is a condition of virtuality. In all ways, to transfer the teaching of St. Augustine, with all its proper and exclusively augustinian characteristics, on to the plane of philosophical systems, in order to make it one among them, is to distort and to destroy it. It is shattered and scattered as the animals which live in the uttermost depths of the sea, when they are dragged out into the open air, are shattered by the pressure of the air which terrestrial animals naturally breathe.

It is wise to observe also the equivocal nature of the word *Augustinianism*, which when used to describe the thought of St. Augustine inevitably suggests by its impersonality the idea of a system. In this sense it is not a paradox to maintain that St. Augustine never professed Augustinianism. One might add, Which Augustinianism? There have been, indeed, as many different and sometimes hostile forms of Augustinianism as there have been augustinian philosophers.

AUGUSTINIANISM AND THE TECHNICAL DIFFERENTIATIONS OF CHRISTIAN THOUGHT

The foregoing considerations make clear what it is renders contestable the position of all those philosophers whom the historians of

philosophy classify as Augustinian. Indeed this contention implies on the part of philosophy a remarkable ignorance of its own limits: to demand a philosophical system from St. Augustine is to claim for philosophy, and as if it were seen by its light, what proceeds in reality from the light of the highest christian wisdom, from faith and from charity. (Thus philosophical Augustinianism seems naturally linked up with an immoderate philosophising, which is patent in the Cartesian school, and concealed in certain of our contemporaries who contemn abstract knowledge, but only in order to overestimate to an equal measure the modes of apprehension which they would substitute for it.) Whatever reverence one may have for St. Augustine, whatever new or old truths we can gather from his treasure, whatever sense of inward reality we may owe to him, such treatment is a complete betrayal of his spirit and of his thought. The *Méditations touchant la philosophie première* resemble the *De Trinitate* as much as a photographer's dark-room resembles the eye of a poet. The 'engaging and hardy' spiritualism of Descartes, the cartesian *cogito* (which is something entirely different from the *si fallor sum*), the ontological argument, the theory of picture-ideas and thought-substance; the theophilosophy of Malebranche, the ontologism, occasionalism, the idea of vision in God, far from being in the least even authentic forms of the world of augustinian spirituality, are only the remains left by its rationalistic disintegration.

An analogous process of materialisation has already been known in theology, when a Jansen transposed into the thin substance of his theological pessimism and hedonism the diaphanous but difficult letter of St. Augustine, his too vivid, too divinely human language concerning grace and liberty, adamic innocence and fallen nature, the delectations of sense and those of grace.[1] I do not ignore the fact that a theological augustinianism is possible which will fall neither into the excesses of Jansen nor of Luther, nor of those anti-thomist disputants from whom Luther drew his inspiration. But I hazard that it will be the christian instinct of the theologian which will keep him in the right line of truth rather than any virtue inherent in his principles of theological conceptualisation in themselves.

Indeed, mediaeval scholasticism endeavoured in vain to draw from

[1]Cp. N. Del Prado, *De Gratia et libero arbitrio* (Fribourg), 1907.

Augustine, with only the weapons of Augustine, a complete systematisation of philosophy and theology. A St. Bonaventure was able to recover the high inspiration of St. Augustine, a ray from his wisdom, he failed to articulate any scientific work (if indeed he ever tried to do so!). It needed the weapons of Aristotle, it needed St. Thomas Aquinas. In St. Thomas's time scholastic Augustinianism was blocked in an impasse (and the efforts which it made after St. Thomas only make the fact more apparent); the means whereby it might become a science and, in consequence, for any progress, were visibly lacking. St. Thomas alone was able to rightly establish theological wisdom in its own right and specific order, to establish theology as a science, in defining by the same stroke the proper domain of philosophy. He alone was able to draw from Augustine, but with the weapons of Aristotle, not of Augustine, scientific theology and the science of christian philosophy—and is it not with the weapons of philosophy that theology is elaborated as a science? He alone was able to systematise theologically and philosophically the wisdom of Augustine, precisely because he placed this wisdom in the perspective of other less lofty but more technically perfect forms of wisdom, which have their irreplacable part in the economy of the christian intellect, because he had the courage to submit it to the conceptual re-differentiation necessary to *change it into itself* on the plane of a new intelligibility.

It is only the ungrateful zeal of archaism which can be astonished that the natural progress of thought and of culture implied the necessary division of philosophical and theological knowledge from one another, into two special disciplines each with a special technique, not certainly separated, but distinct, exactly as subsequently happened in the natural sciences. Spiritual organisms grow like living bodies. And how can heterogeneous functions, each vitally articulate, which respond to the diverse specific objects of spiritual activity, not become progressively explicit in the course of history? The explication achieved by St. Thomas Aquinas at the end of the Middle Ages was absolutely necessary.[1] In the face of the universe of truths which are naturally accessible

[1]Cp. the remarkable study by R. P. M.-D. Chenu, 'La Théologie comme science au XIII[e] siècle', *Archives d'hist. doct. et litt. du moyen âge*, t. ii, pp. 31 et seq. There is for all that no 'rationalism' in the work thus accomplished by St. Thomas. To recognise the proper value of the reason or of nature is neither *rationalism* nor *naturalism*.

by the reason and of truths rationally detachable from the principles of faith, the christian reason must be armed with equal qualities of discernment and knowledge. It must be able to judge by demonstration, by the pure light of objects and intelligible necessities, that is to say, as a science. With St. Augustine, by the very degree to which it is absorbed in the discursive movement of a higher wisdom which is not in itself discursive, theology is still, in relation to its own proper and human mode as a science, in a state of imperfection. With St. Thomas it is fully established in its own mode ,which is the human mode of the reason; it has attained its human state of perfection. A scientific man faced with the doctrines of St. Augustine is faced by a world of religious wisdom in which his own intelligible universe cannot be made articulate. If he adheres to that doctrine in so far as he is a believer his thought is cut in two: progressing in the world of his own speculative development according to the exigencies of a purely objective analysis, there according to the movement of love towards the experience which should absorb it. The marvel of thomist wisdom, of the metaphysic of being and of causes, is that such a knowledge, placed on the summit of human reason, and which knows that it is inferior to the knowledge of infused wisdom and superior to all else, which only divides in order to unite, establishes in the human soul, without any diminution or alteration and with the rigour of a universal objectivity, a stable coherence and a vital solidarity between the spiritual activities which reach up into heaven and those which extend over and grow upon earth.

THOMAS AQUINAS THE HEIR OF AUGUSTINE

There is a story that at Cologne Master Albert instructed his great disciple to always follow Augustine in theology and Aristotle in philosophy. We must see this division less in regard to the particular subjects than their formal aspects. In so far as philosophy and theology themselves contain the aspects at once of *science* and of *wisdom*, one might say that to treat of divine and human things Thomas Aquinas asked Aristotle for his scientific equipment and received from Augustine, and from the other Fathers and the Bible, the substance of his wisdom. And his fidelity to the wisdom of Augustine is even more perfect than his mastery

of the technique of Aristotle. He corrects Aristotle, he honours Augustine as a son honours his father, and it is with the same piety with which he offers at difficult points (very frequently certainly) the assistance of his youthful energy. Let it be added that the more we exhibit the importance of St. Thomas's relation to Aristotle and to the Greek and Arabic philosophy on the one hand, and on the other to St. Augustine and the whole christian tradition, the more and with the same stroke we light up the astonishing originality of his genius.

When he treats of beatitude or of the Trinity, of eternal law, of the virtues and the gifts, of contemplation,[1] of evil, of providence and the divine foreknowledge, of predestination, and generally of all the matters of sacred theology, nothing is more apparent than this perfect fidelity of St. Thomas to St. Augustine in his theological synthesis. Everyone knows that the capital doctrine of their agreement is the doctrine of grace. It is in St. Thomas that we see, come to their perfect scientific formulation, those essential truths which affirm the distinction and union of the natural and supernatural orders, the sovereign liberty of creative love, the intrinsic reality and vital character within us of the infused gifts, truths which the wisdom of Augustine never ceased to proclaim against Pelagius, but in a language which was still uncertain. When St. Thomas teaches the motion of the human free will by grace and divine causality, in such a way that the free mode itself of our voluntary acts is caused by God, and that all their goodness derives at once from God as prime cause and from us as secondary cause, and that it is only for evil that we are the (deficient) prime cause, when he teaches how liberty (in the sense of autonomy) is the work of the grace of the Holy Ghost, it is the very voice of St. Augustine, of St. Paul, that we hear.

It has been pointed out (and we can see the motive for this difference) that in the 'at times too literally scriptural'[2] theology of St. Augustine the notion of nature has a much more concrete and historical meaning than that of St. Thomas. 'While the nature explored by St. Thomas is a metaphysically indestructible essence, whose intrinsic necessity resists even the corruption of original sin, St. Augustine, in order to leave only those graces of which he strips it and the powers which it diminishes or

[1]Cp. the beautiful book by R. P. F. Cayré, *La Contemplation augustinienne*, 1927.

[2]A. Gardeil, *La Structure de l'âme et l'expérience mystique*, vol. i.

perverts, describes by the name of nature the state in fact resulting from original sin and what in that state may authorise man's hope of escaping from it. That, in the last analysis, these two attitudes are not dogmatically contradictory there is in my eyes not a shadow of doubt: St. Augustine does not exclude St. Thomas in this central point of all christian philosophy, rather he prepares for him and invokes him; but that the plan of these two expositions is the same I think it is equally impossible to sustain.'[1] I share myself this opinion of M. Gilson's. Nevertheless, it is necessary to add that this difference is purely modal, and that St. Augustine also taught as clearly as possible the ontological value of the distinction between nature and grace,[2] and that he clearly affirmed this distinction *even in the state of innocence*: for to him grace is the root of the supernatural privileges of Adam, such as corporeal immortality, which is therefore supernatural also;[3] it is positively and intrinsically ordained for the beatific vision,[4] which is not due to any created intelligence, even that of the angels;[5] it is distinct from nature even in the angels (*simul condens et naturam et largiens gratiam*).[6] Here again thomist theology only

[1]E. Gilson, *Introduction à l'étude de Saint Augustin*, 1929, p. 298.

[2]Cp. *De gratia et libero arbitrio*, chap. xiii, n. 25: 'Numquam natura erit gratia? Nam et hoc Pelagiani ausi sunt dicere, gratiam esse naturam, in qua sic creati sumus, ut habeamus mentem rationalem, qua intelligere valeamus, facti as imaginem Dei, ut dominemur piscibus maris et volucribus caeli et omnibus pecoribus quae repunt super terram. Sed non haec est gratia, quam commendat apostolus per fidem Jesu Christi. Hanc enim naturam etiam cum impiis et infidelibus certum est nobis esse communem; gratia vero per fidem Jesu Christi eorum tantummodum est, quorum est ipsa fides.' *De praedest. sanctorum*, chap. v, n. 10: 'Posse habere autem fidem, sicut posse habere caritatem, naturae est hominum; habere autem fidem, quemadmodum habere caritatem, gratiae fidelium. Illa atque natura, in qua nobis data est possibilitas habendi fidem, non discernit ab homine hominem; ipsa vero fides discernit ab infideli fidelem.' *Enarrat. in Ps. xlix*: 'Manifestum est ergo, quia homines dixit deos, ex gratia sua deificatos, non de substantia sua natos. . . . Qui autem justificat, ipse deificat, quia justificando filios Dei facit. *Dedit* enim *potestatem filios Dei fieri* (Ioan. i, 12). Si filii Dei facti sumus, et dii facti sumus; sed hoc gratiae adoptantis, non naturae generantis.'

[3]Cp. Garrigou-Lagrange, Communication at 'La Semaine augustinienne de Rome,' 24th Apr. 1930.

[4]Cp. *De correptione et gratia*, chap. xi, n. 29: 'Quid ergo? Adam non habuit Dei gratiam? Immo vero habuit magnam, sed disparem.'

[5]*De Trinit.*, books xiv and xv (notably chap. 3).

[6]*De Civ. Dei*, book xii, chap. 9.

makes more explicit in its own mode and according to its own proper perspective the thought of Augustine.

But St. Thomas has also included in his philosophical synthesis, and to a much greater degree than is often recognised, if not the conceptualist method, at least the essential elements of augustinian thought.

It is this that we may recognise, made precise, developed, brought to its perfect point, in that metaphysical masterpiece, the thomist doctrine of analogy and the divine names. For St. Augustine there only makes use of Plotinian terms for the adjustment of Plotinus to the explicit theology demanded by revelation, and he not only teaches that God is immutable, immense, eternal, infinitely simple, that he is all that he has,[1] Truth, Life, Beauty, Wisdom, he knows also that he is personal, 'conscious of himself and of his work',[2] *Deus non aliquid nesciens fecit*,[3] that he has made all things by his will, *causa omnium quae fecit, voluntas ejus est*,[4] and that he is very Being, *Ipsum esse subsistens*, as St. Thomas will say: *Deum nihil aliud dicam esse, nisi idipsum esse*.[5] The augustinian proof of the existence of God is rediscovered equivalently in the *quarta via* of St. Thomas,[6] sometimes even St. Thomas appears to evoke it in its own particular form,[7] despite the fact that the formulation cannot remain the

[1] 'Quae habet haec et est, et ea omnia unus est' (*De Civ. Dei*, book xi, chap. 10). As M. Gilson truly points out, this formula contains the germ of the whole mediaeval doctrine of the non-distinction in God alone of essence and existence (cp. *De Trin.*, book xv, chap. 13).

[2] Charles Boyer, *L'Idée de Vérité dans la philosophie de St. Augustin* (1921), p. 108.

[3] *De Civ. Dei*, book xi, chap. 10.

[4] *Enarr. in Psalm. cxxxiv.*

[5] *De moribus Ecclesiae*, xiv, 24. Cp. *De Trinit.*, book i, c. 1, n. 2: 'Quae vero proprie de Deo dicuntur, quaeque in nulla creatura inveniuntur, raro ponit scriptura divina; sicut illud quod dictum est ad Moysen: Ego sum qui sum, et: Qui est, misit me ad vos.' Such texts, together with *De Trinit.*, book v, c. 2, n. 2, and *Confess.*, book xi, chap. 4 (v. *supra*), virtually contain the whole thomist doctrine of the divine names and of analogy.

[6] Cp. R. Garrigou-Lagrange, *Dieu, son existence et sa nature*, 5th edit., p. 296.

[7] In the passage in the *Summa contra Gentiles* whose importance M. J. Sestili has rightly underlined: 'Veritates intellectae fundantur in aliquo aeterno. Fundantur enim in ipsa prima Veritate, sicut in causa universali contentiva omnis veritatis.' (ii, 84.)

same in his hands (which probably explains why instead of developing it *ex professo*, he contents himself with making allusion to it). In effect, by reason of the prime difference between St. Augustine and St. Thomas—*i.e.*, as Père Gardeil has so well exhibited,[1] the substitution of the aristotelico-thomist dominant of *efficient causality* for the augustinian dominant of *participation*—the eternal truths which St. Augustine indistinctly recognised, not only of the value of ideal necessity, but also its illuminating virtue, made him directly pass on to God the first Truth and subsistent Light; while in order to find their supreme truth in this same first Truth, and so to refer the truth in our mind to a first basis of a real order, St. Thomas, who recognised in the acting intellect the active light of our intelligence, would have needed, I believe (if he had wished to develop the augustinian proof itself), to pass through this illuminating created cause which we bear with us, in order to trace it back to the first Cause in whose virtue it participates.

Despite the fundamental difference of philosophical *key* of which we have spoken, one can say, in accord with the admirable studies of Père Boyer, that by means of a general transposition and the multitudinous light variations required in consequence, the whole substance of Augustine's doctrine of truth has passed over into St. Thomas. Finally, it is visible that the edifice of aristotelian metaphysics and natural philosophy itself could only find its achievement in the thomist synthesis thanks to the augustinian cornerstone, that is, thanks to the doctrine of creative Ideas. For it is in God himself, in the creative Ideas which illuminate the Angels before causing things, that the created world has the supreme principle of its order and of its movement. Augustine not only traced the great lines of a theory of creation, his exemplarism brings to the conception of the world which St. Thomas developed a full consistency, a supreme metaphysical hardihood, which the analytical circumspection of Aristotle had never known.

[1] A. Gardeil, *La Structure de l'âme et l'expérience mystique*, book ii, append. 2. Père Gardeil there comments on and generalises the thesis set out in the study by M. Gilson, 'Pourquoi saint Thomas a critiqué saint Augustin', *Archiv. d'Hist. doctr. et litt. du moyen âge*, vol. i, 1926–27. In everything particularly concerned with the notions of *creation* and *formation* full space must be granted to the comments of M. Gilson (*Introduction à l'étude de Saint Augustin*, p. 258).

I have only mentioned a few characteristic points. An infinity of examples would be needed to signalise all the augustinian riches which were assimilated by the thought of St. Thomas, all the signs of the veneration—down to the most minute details[1]—with which the Angelic Doctor regarded the authority of St. Augustine. The more one studies either Doctor the more one verifies the phrase of Père Gardeil:' One can count the points in which they differ; it is impossible to count those in which they agree.... The Dumb Ox had devoured all the spiritual substance of the Eagle of Hippo, made him, as much as Aristotle, the very substance of his mind.'[2] If we consider the essential values of the thought of St. Augustine in their integrity, it is necessary to say, as I have tried here to explain, that the sole metaphysical systematisation of that thought in which it remains *essentially* augustinian is exactly the synthesis of St. Thomas.

THOMISM AND AUGUSTINIANISM

How absurd it is to compare the systems of Thomism and Augustinianism (I mean the augustinianism of St. Augustine hismelf)! The one is a system, the other is not. Thomism is the scientific condition of christian wisdom; with the Fathers and with St. Augustine that wisdom is still in its spring. Between the head-waters and the river in the plain there is no opposition. It is not *by the side of* thomist wisdom, and as if the spring overflowed the river, that the perpetual fountain of augustinian wisdom reaches us in its purity. This inspiration presided over the formation of the thomist synthesis, it passed into that synthesis, and it should continue to enter into it, to rouse it to fresh growth, for the doctrine of St. Thomas is destined to grow forever. Doubtless, after invisible journeys, tributaries of the spring may spring up beside the river; they are destined to increase its waters. Doubtless 'augustinian' systems will continue to be elaborated in opposition to thomism; frankly they are only a testimony to the laziness of thomists, their backwardness in pur-

[1]It is on the sole authority of St. Augustine that St. Thomas admits that Moses was transitorily raised to the beatific vision. Cp. B. Lavaud, 'La vision de Dieu ici-bas,' *Revue thomiste*, Jan.-Feb., 1929; May-June, 1930.

[2]A. Gardeil, *op. cit.*

suing the work of universal assimilation and elucidation so potently begun by their master. Despite these delays and obstacles that work should normally continue. Those 'augustinian' philosophers who, in spite of the inconsistency of their systematic position, rediscover anything of the intuitive vigour of St. Augustine, who throw light on the value of neglected truths, who extend our knowledge of inward realities, work without knowing it for the philosophy of St. Thomas.

The inventive hardihood of St. Augustine, more disposed than was the theological prudence of St. Thomas to hazard itself in the zone of the probable, sought to gain some knowledge of the actual succession of the events of human history; basing himself on the Bible, St. Augustine created the philosophy of history, or let us say more exactly (for the illuminations of faith are here necessary) the *wisdom of history*; and the feeling of irreversible historical becoming, of the movement and development of the world in the sense of time, is in my opinion one of the most precious jewels in the augustinian heritage. There is a whole domain here, to be regained from Hegel and to claim for christian wisdom. Stimulated by the spirit of St. Augustine, will thomist thought one day be enriched by those conjectures in the matter of the exegesis of history which reflections on culture always strive to become? The *Discours sur l'histoire universelle* might be re-written, and a more modern sequel to *The City of God* would render great services.

It is important also to comprehend that the state of incompleteness in which, despite multiple efforts, the school or rather the tentative plans for a school of so-called augustinian philosophy is seen to remain is not in itself a promise of renewal or of progress. In itself such incompleteness is much more a sign of imperfectibility. How can an organism which cannot even consolidate itself hope to grow? It is precisely because of its consitution as a science, with a clearly defined systematic equipment, that thomism, also itself, but in another sense, incomplete, is capable of progress and an endless increase. Far from saying that St Thomas has done everything, it declares that while history endures and continues to bring to light new problems there will always remain by so much more to do as has already been done.

Let me recall what was said on an earlier page of the wisdom of the Fathers and that of the theologians. It is possible to think that it was

exactly because of the high level of their spiritual achievement that the Middle Ages were able to accomplish their universal work under the headship of the Fathers and particularly of St. Augustine. Our own epoch knows a less liberal spiritual uprush, but has more perfect instruments, surer means of verification and technical development. It has another work to accomplish. And it is under the headship of the Theologian *par excellence* that christian thought should set its hand and its energies to work.

If we like—we are at liberty in our use of names—we may call the wisdom of St. Augustine, or more generally, christian wisdom, which is infused wisdom making use of reasons and of discourse, 'christian philosophy'. This 'philosophy', which essentially presupposes faith, charity and the gifts of the Holy Ghost, the whole supernatural order, is not that work of the exploration of the nature of things to which the men to whom we are accustomed to give the name of philosophers are devoted, neither has it the means, since it is raised above the spontaneous certitudes of ordinary reason, above judgments by demonstration, and in the assigning of reasons of beings those truths which are accessible by the single voice of our mind alone. The proper instrument of philosophy is lacking to it. And when that instrument serves our minds it has its specific object, which is the intelligibility of things, it has its own rules and its own proper light, which are those of the natural reason, not of the infused gifts.

In order that the names we apply to things may have some correspondence with reality, we ought to call *christian philosophy* something which is rightly a philosophy, a wisdom which may define itself as the perfect work of the reason, *perfectum opus rationis*,[1] and which finds itself, on the side of the object, in accord with revealed truth—on the side of the subject, in vital connection with those supernatural energies whose philosophical habitat is distinct, but not detached, in the christian soul. In order that it should be in accordance with revealed truth, it suffices that this philosophy should be true in its own order: then, while all the time exhibiting 'the integral rigour of its rational exigencies', while all the time following, not a theological, but a strictly and purely philosophical method, it will display 'a conception of nature and reason

[1]St. Thomas, *Sum. theol.*, ii-ii, 45, 2.

open to the supernatural',[1] confirmed by its own natural gifts, and which is not repugnant to the supernatural substance contained in the deposit of revelation. But, by the very fact that the human subject cannot achieve in their integrity those supreme truths which are naturally knowable without aid from on high, this philosophy demands that it should be developed, in the subject, in vital connection with faith, which, without entering into its immediate texture or serving it as a positive criterion, performs in regard to it the part of an extrinsic regularising principle, *veluti stella rectrix*; together with theology which, by making use of it as an instrument, corroborates it; with the wisdom of the Holy Spirit, which supernaturally comforts it also in the soul of the christian.

St. Augustine recalls to us what thomists, when they allow their thomism to weaken within them, are tempted to forget: that christian philosophy demands, for its very conditions of existence, that it should live and spiritualise itself in contact with the living faith and experience of the christian soul; that it also must enter in its own way into the anguish and the peace of the work of redemption, and that it be fortified from on high by contemplation. St. Thomas recalls to us what the Augustinians seem to forget from the very beginning: that christian philosophy, in itself and in its intrinsic structure a form of rational knowledge, is rigorously independent of all the dispositions of the subject, and must only be ruled by objective necessities and intelligible constraints.

What has been said of the wisdom of St. Augustine it is equally necessary to say, as I have pointed out, of the wisdom of the other Fathers.

[1]M. D. Chenu, *Bulletin thomiste*, Jan., 1928, p. 244. In thus distinguishing what the notion of christian philosophy implies *ex parte objecti* and *ex parte subjecti*, it appears to me that the truth in the remarks of P. Chenu (*loc. cit.*) and of M. Gilson (*op. cit.*) can be reconciled. In what concerns the order followed by St. Thomas, it was in so far as he was a theologian, not in so far as he was a christian philosopher, that he followed the theological order. Moreover, in his commentaries on Aristotle, he discovered, in so far as he was a philosopher (and a christian philosopher) the very order of philosophy itself. (For the notion of christian philosophy, see E. Gilson's lecture to the Société française de Philosophie (21st Mar., 1931), his two volumes on *The Spirit of Mediaeval Philosophy*, the books by Regis Jolivet, *Essai sur les rapports entre la pensée grecque et la pensée chrétienne* (1931) and *La Philosophie chrétienne et la pensée contemporaine* (1932), and my own little book, *De la philosophie chrétienne*. On Augustinianism and its most authentic significance see F. Cayré, *Les Sources d'amour divin d'après S. Augustin* (1933), particularly the author's introduction.)

If one wished to enter into no doubt presumptuous precisions and seek out what distinguishes him among them all, one might add that his individual note is a no less prodigious blaze of the gift of knowledge[1] than of the gift of wisdom, whence comes his privilege of such profound supernatural penetration, not only of those things which are divine, but of the human heart and the inmost psychological recesses of the creature.

[1]What is in question is *mystical knowledge*, which penetrates the creature with a loving light due to the connaturality with divine things produced by charity, and which corresponds to the beatitude of tears. Cp. St. Thomas, *Sum. theol.*, ii-ii, q. 9; John of St. Thomas, *Les Dons du Saint-Esprit*, chap. iv.

CHAPTER VII

SAINT JOHN OF THE CROSS, THE PRACTICIAN OF THE CONTEMPLATIVE LIFE

I. COMMUNICABLE AND INCOMMUNICABLE KNOWLEDGE

WHEN WE see God face to face we shall have an intellectual knowledge of the divine essence which will be sovereignly clear and limpid; this knowledge will be nevertheless incommunicable, because the divine essence will be the immediate actuation of our intelligence, without any intermediary *species* or idea (for no idea, angelic or human, can adequately represent the divine essence), and it is by means of ideas and concepts that our knowledge is communicable.

Apart from this absolute and divinely privileged case of the beatific vision, which is at once strictly intellectual and strictly experimental, intellectual knowledge, in heaven or on earth, is in itself communicable. Its mystery is precisely this communicability. It is not communicated like a material thing, like a piece of money which circulates from hand to hand. It evidently requires a vital, personal, irreplaceable act, an immanent work of thought on the part of him who receives as of him who gives; but this is regulated and made specific by those objects which are precisely transmitted thanks to ideas, and which mean the same to both parties.

But side by side with this communicable knowledge, which takes place by means of ideas, there is another form of knowledge which bears on the concrete as such, and which exists by way of experience: an incommunicable knowledge, in which doubtless we can have masters and guides, but they do not transmit to us the objects themselves of their thought; what they transmit to us are a multitude of opinions, counsels and the rules which we need for obtaining a knowledge which is in itself indescribable. Such knowledge when it bears on God is in-

fused contemplation. And it continues in heaven, where an affective experience, a sort of taste or touch of God through the gifts of the Holy Ghost accompanies, says John of St. Thomas, and responds again to the beatific vision: so that faith will come to an end, but not the mystical experience, which like charity remains forever—proceeding here from faith and in the world to come from the beatific vision.

I hold St. John of the Cross the great Doctor of this supreme incommunicable knowledge as St. Thomas Aquinas is the great Doctor of supreme communicable knowledge. And it is in regard to the delicate and so admirably instructive relations between the great Doctor of the Light and the great Doctor of the Night that I wish to examine in this chapter some of the aspects of the spiritual teaching of St. John of the Cross.

For this it is not necessary to consider the historical facts of the influences which affected the reading or the quotations of St. John of the Cross. Such studies, when they are conducted with intelligence and sobriety, have an incontestable utility: but in themselves they do not contribute greatly. Above all, if, however sagaciously analysed and catalogued under the appropriate headings, the intellectual ingredients which enter into the composition of the Saint's thought and its synthesis are merely exhibited *in vitrio*, bottled in a historical retort, they primarily result in waste labour. History can give us precious evidence as to the material conditions in which a man's thought has developed, it can never operate the synthesis of that thought. St. John of the Cross, like St. Thomas, fed his mind from the most diverse sources; he had read St. Gregory and St. Bonaventure,[1] Baconthorp and Michael of Bologna as much or even more than St. Thomas himself—it may be so: but the question at issue is not whether he had read St. Thomas. The question is to know whether the testimony which he brings us, taken in its objective significance, accords, and to what degree it accords, with that of St. Thomas, taken also in its objective significance. From this point of view it would perhaps almost be better to know that he had read St. Thomas much less than we know he did, best of all if he had never even read a line of him! Then the results of such a confrontation of their two

[1]We know that he recommended the writings of these great masters of the spiritual life to his novices.

doctrines would be even more significant. It is the differences of point of view and of situation, a knowledge of which is an essential prerequisite to such a confrontation, which I wish first of all to try and indicate here.

II. THE SPECULATIVE AND THE PRACTICAL ORDER

For this it is first of all necessary to place in evidence a notion which, in my opinion, affects the whole field of consideration—the notion of practical knowledge.

In the *speculative order* the mind, when it considers the universe of existence, rouses from this universe worlds of greater and greater pureness of intelligibility, each more and more detached from matter: the world of natural science and of the philosophy of nature, the world of the mathematical sciences, the world of metaphysics. Then, when it returns to the world of existence considered as such, and finds its end in the human action which is accomplished in that world,[1] the mind, philosophising this time in *the practical order*, applies itself to know, not only in order to know but in order to act, and to acquire an *object* which is something practical (an act to be accomplished); a *knowledge* which, proceeding in a practical manner in regard to its proper finalities and in the conditions of the object, remains nevertheless, in regard to the general and fundamental equipment of knowledge, in a *speculative or explicative mode*, and which envisages the universe itself of action and operative values from the point of view of reasons of being and the intelligible structures which are immanent in it.

This is what Aristotle calls practical philosophy: ethics, economics, politics, etc. One could make many important observations on this practical philosophy, which the modern world so misunderstands: it could be pointed out that, although it has nothing to do with the degrees of abstraction which are characteristic of the speculative sciences, it traverses the whole range of knowledge, from the sky of metaphysics, from which it depends, to the earth of experience, on which indispensably it must be based. It could also be pointed out that in this order *ends* play

[1]Speculativum 'solum importat et attingit objectum secundum rationem quidditatis suae, et eorum quae quidditatem consequuntur, ideoque respicit veritatem abstrahendo ab exercitio existendi. . . .' (John of St. Thomas, *Curs. theol.*, i, P. q. 1, disp. 2, a. 10, n. 5.

the part of *principles*, and that practical philosophy is not limited, as Kant wished to limit it, to ordering, it is a knowledge, it knows: but it does not know its object veritably and completely, for its object is something to be done of which it knows how it ought to be done;[1] it

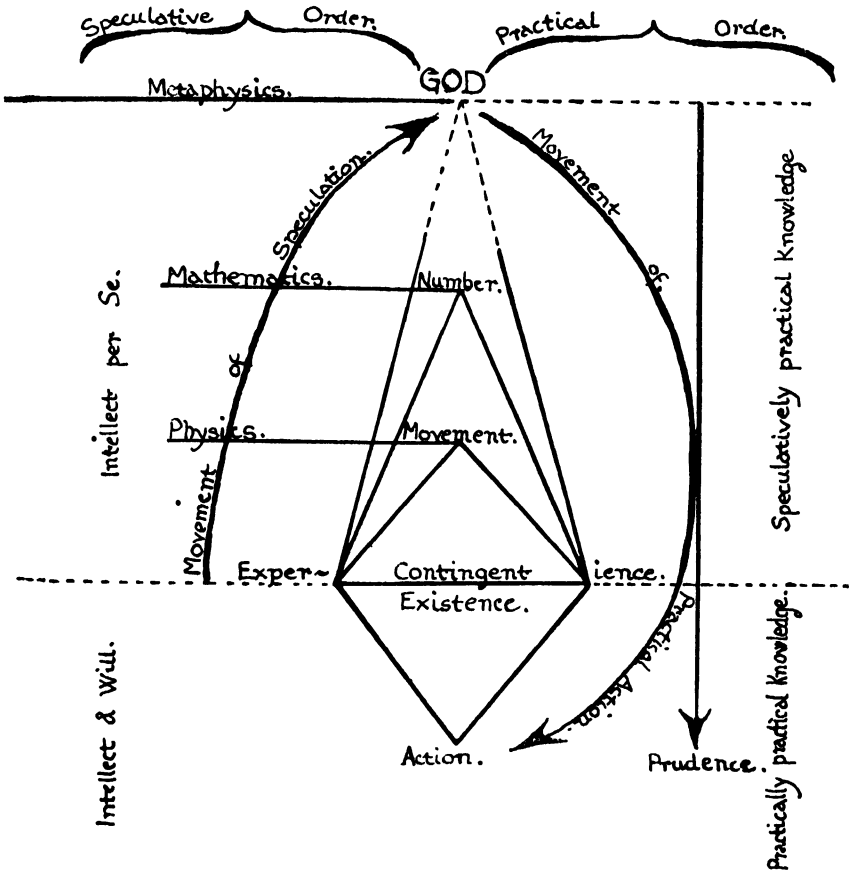


FIG. 8.

constitutes a knowledge which, however great a part in it is played by experience, is not only a simple knowledge of verification, but which is also and by its essence a regulative, a normative knowledge.[2]

[1]'De operabilibus perfecta scientia non habetur nisi scientur inquantum operabilia sunt.' St. Thomas, *Sum. theol.*, i, 14, 16 et seq.

[2]On this point of capital importance, see pages 130-6 and 173-82 of the collective volume, *Clairvoyance de Rome* (Edition Spes).

The only point which I wish to emphasise here is that this practical philosophy does not suffice to regulate action. It knows in a manner which is still only explicatory, speculative and theoretic, things which have not only to be elucidated but to be done. It assembles into a scientific system all the knowledge which is necessary to regulate action *at a distance*, that is to say, all the rules of action which are discovered by the intellect as it adapts for practical usage an equipment, a mode of discernment, which is still in fact typically speculative. The philosopher who is most aware, most competent in discussion of theoretical ethics, may find himself disconcerted before the minutest practical act, and may even himself lead an immoral life.

Let it be added that if there are two perfectly distinct types of philosophical knowledge corresponding to the speculative and practical orders, theological knowledge, on the other hand, because of its elevation, embraces at the same time in its unity both orders; there is only one theology, which is at once speculative and practical.[1] For in fact man as he acts here on earth, not being that abstract subject, that pure and simple subject of human nature seen by philosophy, but finding himself in concrete conditions which determine and universally affect his nature, I mean the concrete status of a world fallen and redeemed, it is not any practical philosophy (at least in the degree to which this is not in itself illuminated by theology), but the practical side of theology which holds the right and position to regulate our actions. The demonstration which has been made of the still speculative and theoretical manner in which practical philosophy studies its practical object (human acts) remains equally true with regard to the practical functioning of theology. It is still in a speculative manner, and with the pure intelligence, that theology considers and regulates human actions. It is, we may say, a *speculatively practical science*. When St. Thomas treats of morality and of human activity, when he treats of that supreme activity which is mysti-

[1]Cp. *Sum. theol.*, i, 1, a. 3 and 4. As Cajetan has forcibly pointed out, it is not 'in a manner of aggregation', it is by the very indivisibility of its essence that theology is at once and completely formally and eminently speculative and practical. (Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 1, disp. 2, a. 10.) It is, for all that, primarily speculative 'since it treats principally more of divine things than of human acts. For it treats these in the degree to which man is ordained by them for a perfect knowledge of God, in which eternal beatitude consists.' (St. Thomas, *loc. cit.* a. 4.)

cal contemplation, it is from the point of view of this science. His teaching is enshrined in doctrinal theology, in knowledge in the speculative and explicative mode. And if we are seeking for a sure speculative elucidation of mystical theology, as of other supernatural mysteries, it is to him first and before all that we must address ourselves.

THE PRACTICALLY PRACTICAL SCIENCE

But in what concerns the exigencies of actual practice practical knowledge cannot abide at that point. It is like a great flood of intelligibility which descends as it particularises, as it clasps closer and closer, to the point of very contact with the concrete and particular act to be accomplished *hic et nunc*, the indefinite variety of contingent circumstances. In immediate contact with action, as the immediate regulator of actions, the true practical knowledge is no longer what is called a form of knowledge, a science: for at this point its object is not only a practical object to be accomplished, but still more a practical object in its very singularity, in its relations with the end wished for by my incommunicable personality, and this is not the object of any *science*. The true practical knowledge as the immediate regulator of action is the virtue of prudence. Prudence judges, it commands what is to be done *hic et nunc*. And, as we know, this virtue is at once intellectual and moral: it is bound up with the moral virtues and necessarily presupposes the rectitude of the will. In this region the intellect does not work alone, but in dependence on the will and on the dispositions of the will. It is with regard to the direction of the *action* and the rightness of the will that its judgment is true or false.[1]

A question presents itself. Is there not an intermediate zone of knowledge between speculatively practical knowledge and prudence? Following the principles of St. Thomas, I affirm that there is—a practical science in the clearest meaning of the term, what we may call *practically practical* knowledge. It is still a science because, although much more particularised than moral theology or ethics, though it considers its

[1]Cp. St. Thomas, *Sum. theol.*, i-ii, 58, 5: 'Utrum intellectualis virtus possit esse sine morali,' and 57, 5, ad. 3: 'Verum intellectus practici (in prudentia) accipitur per conformitatem ad appetitum rectum.' Cajetan writes in a particularly important commentary, apropos of this article, 'Veritas intellectus speculativi consistit in cognoscere, veritas autem intellectus practici in dirigere.' See also J. Maritain, *Art and Scholasticism*, iv, 3.

cases in detail, it is nevertheless compounded of, has as its proper object, the universal and reasons of being. But it proceeds in its fundamental equipment of knowledge, in the very structure of its notions and definitions, according to a quite other *mode* than that of ethics or theology. The very method of knowledge is here reversed: for the entire mode of knowledge is practical. What does this mean? It implies that what is significant here is no longer to explain, to resolve a truth, even a practical one, into its reasons and principles. What signifies is to prepare an action and assign its immediate rules. And the action is a concrete thing, which must be thought of in its very concretion before being posited as being, knowledge here, instead of analysing, joins together, *i.e.* in regard to the fashion in which it establishes between itself and its object a relation of truth. It gathers together all that is already known, all explications, all principles and reasons of being, but in order to organise all these from new points of view, which correspond to the exigencies of the position of the concrete act, and which are furnished directly by experience, whose part is here primordial. It is in this fully characterised sense that thomists teach that the practical (practically practical) sciences proceed *modo compositivo*[1] like art or prudence. And as art and prudence each suppose a rectification of the appetite (in the one case only in the order of working ends, in the other, of human ends as such),[2] the practical sciences also (because in the line of *doing* they are identified with art itself, and in the line of *action* they are bound up with prudential experience and take on in some measure its conditions), also imply and presuppose,[3] in order that they may judge truly, right dispositions of the will and a certain purification of the appetite in regard to those ends for which they are concerned.

[1]In the practically practical sciences the compositive or 'realising' mode invades the intimate structure of knowledge, although in much less fundamental manner than it does in prudence: the notional instruments, the means of apprehension and judgment, have themselves become fundamentally practical (cp. *infra*, pp. 400–1), and the relations of truth, on which the fundamental regimentation of knowledge depends, are no longer of a purely intellectual order: we may say that truth is taken according to the *dirigere*—as if founded on the *cognoscere*.

[2]Cp. Cajetan in *Sum. theol.*, i-ii, 57, 5, ad. 3. (Also *Art and Scholasticism*.)

[3]In a lesser degree than prudence however, for it does not belong to them, as it does to prudence, to determine the final practical judgment *hic et nunc*, and to lead up to the *imperium*.

I am inclined to think that philosophers have often, and particularly in the present time, gravely neglected the importance of these sciences, which constitute a register of knowledge quite different from their own. There is a science of the practician as such, which is not reducible to knowledge in the speculative mode, and whose dignity and importance are both great in regard to culture: I am not only thinking of those vast universes of knowledge which belong to the various crafts, such as those of the engineer or the doctor, the banker or the architect, the artisan or the military commander, in all of which a practical science is incorporated as well as an art in the rightful meaning of the term: I have also in mind that which concerns the moral order, the knowledge of men. In many of the great moralists, in Confucius for example, it is much rather a science of the practician than that of the philosopher that we encounter. And it is the same with the great politicians.

We return here to one of the fundamental themes of this book: that there are in the very world of the mind itself structural differentiations and a diversity of dimensions which it is above all necessary to recognise, and, if we are to escape the gravest errors of interpretation, the greatest care must be taken to assign to each type of thought its exact situation in this form of transcendental topography. The differences which are in question here concern that 'fourth dimension' according to which the mind diversifies its values of knowledge according to their proper ends. From this point of view it seems to me that we are mistaken when we seek to classify as psychology, as part of the speculative science of human nature, the profound researches and discoveries pursued by so many great sons of intuition, by Montaigne, Pascal or Nietzsche, by Shakespeare or Racine or Baudelaire, by Swift and Meredith, Balzac or Dostoievsky. These potent observers of mankind are not pure observers, neither are they 'psychologists': they are much more truly moralists, not philosophers, but practicians of the science of manners. Without doubt it is not to a science in the integral sense of the word, the formulation of its rules and precepts, but to its experimental material that they have above all devoted their energies (and sometimes with very great deficiencies on the side of its regulative truths). It is the dynamism of human beings which they have studied, the actual usage of free-will, and the position of man with regard to his last end, so that the

exactitude of their views does not only depend on the acuteness of their vision but also on their ideas of good and evil, on the disposition of their own hearts with regard to the Supreme Good. They bring back an admirable treasure-trove of great psychological richness, but it is by means of a practically practical knowledge of human actions, not technical psychology. And it is precisely because they are not psychologists but moralists that their psychological observation penetrates so infinitely deeper than all the psychological technique of the laboratories and the colleges.

THE PRACTICAL SCIENCE OF CONTEMPLATION

It is important to comprehend that in regard to that action *par excellence* which is the passion of divine things and the contemplative union with God, there is also not only a speculatively practical science which is that of theology: there is also a practically practical science, which is not so much occupied with telling us what perfection is but with directing us thither, the science of the practician of souls, of the masters of spirituality, of the artisans of sanctity, the science which broods over our miserable hearts and would bring them at any cost to the possession of their supreme joy. It is in this practical science of contemplation that St. John of the Cross is a master.

Two elements must be distinguished in the works of St. John of the Cross: his inspired poems and the commentaries which he wrote upon them for our instruction. In his poems, written under divine inspiration, through limpid, lyrical symbols, he recounts, in so far as human language may express the inexpressible, which is, truth to say, very inadequately, the mystical experience which he has livingly known. There he dreams of nothing but of singing.[1] In his commentaries, written at the

[1]Yet, perhaps, the very fact that he had received the grace and the divine impulsion to sing of his experience already contained in itself the virtual intention (of which he himself was ignorant) of teaching the ways of spirituality. *Contemplationem aliis tradere* is, in the words of Fr. Jerome of the Mother of God, the Carmelite vocation, and eminently that of St. John of the Cross, These *charisma* are given *ad utilitatem aliorum*. Thus the distinction which I have remarked on must not be overstressed, nor made too fixed a basis. Lyrical expression, in the very fact of its own being, contains in itself, implicitly and undefined, the first instant of expansion towards others.

It should be remembered that while writing his *Elucidations* for Anne of Jesus, in 1584, St. John added at first four, then five, strophes to the original canticle of twenty

request of his spiritual daughters, he is expounding a doctrine, he teaches. This doctrine is practical[1], it is formulated as a practical science, which proceeds by creating immediate notions for the regulation of concrete actions. In the writings of St. Theresa, who always refused to be made a doctor of, but whose doctrine the Church has glorified, there are a number of the descriptive and experimental elements of such a science. In the writings of St. John of the Cross this science is there, in all its dimensions, to such a degree that the theorist of sciences could find no more perfect example of a practical science. For, just as practically practical knowledge depends on speculatively practical knowledge, the practical science of contemplation depends on moral theology. And St. John of the Cross is not only a supreme contemplative, he is also a very good theologian: which is the reason why this practical science in his hands reaches its perfection.

This then is the place to ask what are the relations between this practical science and theology. If we take the word theology in the widest meaning of the term, sacred doctrine,[2] as embracing the whole organism of our knowledge of the mysteries, faith itself, theological discourse, the gifts of knowledge, counsel and wisdom, then certainly this practical science of which we have been speaking is a part of theology so defined. But if we take theology in the strict sense of the word, as I have done heretofore, as meaning a virtually revealed science proceeding in the speculative mode, it is equally clear that this practical science must

strophes written in 1578, in the prison of Toledo: and that he said to Madeleine of the Holy Spirit, when she admired the vivid and subtle expressions in his poem, 'My daughter, sometimes God gave me them, sometimes I myself found them out.' (Siv., *Obras de S. Juan de la Cruz*, vol. i, p. 325: cp. Louis de Trinité, *Etudes carmélitaines*, Oct., 1931.) Which does not at all prevent the poem from proceeding first of all, as the Saint witnesses in his prologue to Anne of Jesus, from 'the fervour of the love of God', and from those inspirations, superior to all human explanations, of the Holy Spirit 'which aids our weakness'.

[1]He himself was perfectly aware of this. He taught 'the right way which leads to union', *el puro y cierto camino de la unión* (*Ascent of Mount Carmel*, Prologue, Siv., vol. ii, p. 7). He only spoke 'in order to say something which would be profitable' to souls. (*Obscure Night*, book i, chap. 7. Silv., ii, p. 386.)

[2]Cp. St. Thomas, *Sum. theol.*, i, 1, 1. It is in thus giving to the word theology a very general meaning that infused contemplation is itself called 'mystical theology' by some.

be distinguished from theology. A man may lose charity and remain a theologian (if not eminently yet sufficiently),[1] even in the case of mystical theology, if he has theological faith and can reason well. But—although St. Theresa preferred a learned and not very holy confessor to a very holy confessor with little learning (because she was directed less by a confessor than by the Holy Ghost)—how could anyone be expert in this way of the Holy Ghost, and recognise practically, concretely, the paths which lead the soul to infused contemplation, if he had himself no knowledge of this experience, which in itself presupposes charity?

This science, which is practical not only in its object but in its mode, which is founded on faith and presupposes the experience of divine things, while it uses the principles of theology to guide souls on the inward way, is yet distinct from theology in the strict sense of the term: nevertheless it is bound up with it in the closest fashion; for theology, even though, when it treats of human acts and of man's journey to his final end, it does so in a speculative manner, seeking for reasons and explanatory structures, is for all that eminently practical in a formal sense, and has a like continuity with the sciences which have a more close rule over action.

We may therefore definitely conclude that, just as the practical intellect is an extension of the speculative intellect, but where new principles (the dispositions of the appetite) necessarily intervene, in the same way the practical science of the inward way is a practical extension of theology, into which mystical experience and the gifts of the Holy Ghost intervene. And the clear distinction which must be drawn be-

[1]In itself the theological habit necessarily presupposes theological faith; but, different from the gift of wisdom, it does not necessarily presuppose charity, for it can be substantially present in a sinner. Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 1, disp. 2, a. 2 and 8. But that a theologian could be eminent without being comforted by the gift of wisdom and having some experience of the realities about which he reasons would seem to be impossible. 'Etenim sive docendo sive scribendo hic divina pertractat, praeclarissimum dat theologis documentum illius quae inter sensus animi et studia intercedere debet necessitudo maxima. Nam, quemadmodum regionem aliquam longinquam bene habere cognitionem non dicitur qui ejus descriptionem quamvis subtilem cognoverit, sed qui aliquamdiu ibidem vixerit, sic intimam Dei notitiam sola scientiae pervestigatione nullus assequitur, nisi etiam cum Deo conjunctissime vivat.' (Pius IX, encycl. *Studiorum ducem*. (Cp. R. Garrigou-Lagrange, *De Revelatione*, chap. i, p. 21.)

tween the two must not go so far as to give to them two specifically different habitats, for the practical science which is in question should be regarded as a particular development of theological habitude.[1]

Enough of this digression. I wished only and primarily to make clear the grounds for that juxtaposition, which it is now possible to make, of St. Thomas and St. John of the Cross, in order that we may rightly observe their relations one with the other. St. Thomas, as I have said, is the supreme Doctor of dogmatic and moral theology, he is in particular the supreme doctor of the *speculatively* practical science of contemplation and union with God. St. John of the Cross is the supreme Doctor of the *practically* practical science of contemplation and union with God. The one explains and enables us to see, the other guides and leads; the one throws intelligible light over all being, the other leads our liberty through all the nights of denudation; on his teaching mission one is a demonstrator, the other a practician, of wisdom. It is from the point of view of this practical science that it is essential to observe to comprehend the teaching of St. John of the Cross.

III. THE SENSE OF HUMAN LIFE

This practically practical knowledge presupposes speculatively practical knowledge. Before examining in its actual *practicality* the spiritual doctrine of St. John of the Cross, it is necessary first of all to consider the theological presuppositions of that doctrine. At this point it is impossible to avoid the realisation of the profound, essential concordance between the thought of St. John of the Cross and that of St. Thomas—even though, and it is this that makes it all the more striking, the language of St. John of the Cross is in no way dependent on that of thomism. I will only indicate here two particularly important points, the first concerning the end and the meaning of human life, the second, with regard to theological faith.[2]

[1]Cp. John of St. Thomas, *Curs. theol.*, i, P. q. 1, disp. 2, a. 10, n. 17.

[2]Many other points could be signalised: for example, the dependence of human understanding and discourse in regard to the senses (this notion, which is of aristotelian origin, is fundamental with St. John of the Cross; it elucidates how far his position with regard to the natural activities of our mind and meditation is from any possible neo-Platonism): the efficiency of grace and the liberty of creative and sanctifying love:

For St. John of the Cross, as for St. Thomas and the whole tradition of Christianity, the final aim of human life is transformation into God, 'to become God by participation[1]', which is achieved in heaven by the

the relation of charity to the gifts of the Holy Ghost and the virtues : the distinction between that presence by immensity, by which God is in all things, and the presence by grace, in which he inhabits the souls of the just, etc. On this last point (see *supra*, chap. v) the capital text is in *The Ascent of Mount Carmel*, book ii, chap. v.

Some have endeavoured to make a difficulty between this text and book ii, chap. xv: where St. John speaks of 'this light which is never absent from the soul', and again when he writes, 'For then when the natural has failed in the soul which is already given over to love, the Divine *naturally* and supernaturally flows into it, for God leaves nothing empty that he does not fill.' This passage, where the word 'naturally' was omitted by the Saint's first editors, must obviously be understood in close relation to his general doctrine, and finds its natural commentary in the explanations which he has previously given in chap. v. There he explains that this 'divine light is never absent from the soul' because of God's presence by his immensity, and 'the transformation of the soul into God by love' can only take place when grace makes God present in the soul by the union of resemblance (or as St. Thomas says (i, 8, 3), when the known and the loved is in him who knows and loves), and it is only because the soul has already 'received from God this rebirth and this sonship which surpass all understanding (chap. v)', that it can break through the veils and the entanglements of created things and establish itself in the nudity of the spirit. This is the essential presupposed condition for everything that he writes in chap. xv, and this is why, when the soul supernaturalised by grace and 'already given to love' empties itself of 'the natural', the Divine fills it immediately, *naturally* (by 'the substantial union common to all created things' by which it already occupies the soul) and *supernaturally*, in the union of grace and love.

This doctrine is again considered and expounded in *The Spiritual Canticle*, second redaction, str. 11.

[1] *Ascent*, book ii, chap. v: *Obscure Night*, book ii, chap. 20, *Living Flame*, str. 1, ver. 1, str. 2, ver. 6. *Canticle*, str. 27, 38. Cp. 'What God desires is to transform us into gods, and to give us by participation what He is by nature. He is like a fire which would convert all things into fire.' [*Translator's Note.*—This sentence, quoted from Gerardo's edition of the *Spiritual Sentences and Maxims* by M. Maritain, is not included in the critical English trans. of the works of St. John of the Cross. See the 'Introduction to the Spiritual Maxims' in *Works of St. John of the Cross*, vol. iii.]

It is for textual criticism to decide the question between the two redactions of the *Spiritual Canticle*. The internal arguments hitherto deduced do not, in my opinion, however impressive they may be, carry as yet the weight of certain demonstration. The liberty of the wise man must also be taken into account; the son of man is master even of the sabbath, and St. John of the Cross is the master of his own text, and is free to rewrite it in order to make certain truths clearer, or to disengage new meanings, even at the price of a certain change of perspective. This is only a possibility, but the rules of logic demand that it should not be neglected. If, however, the apocryphal

beatific vision and the love of beatitude, and here on earth by faith and by love. The love of supernatural charity, by which we love God and his creatures with a love that is rightly divine, makes us one with God and makes us one with him in one spirit. *Qui adhaeret Deo, unus spiritus est.* 'The end of all human actions and affections', writes St. Thomas,[1] 'is the love of God, and that is why there is no measure which may rule this love, but it is the measure and the rule for all the rest, and can never be too great. . . . The interior act of charity has final reason, for it is the supreme good of man, which consists in the adherence of the soul to God, as the Psalmist says, 'It is good for me to adhere to God. . . .' And St. John of the Cross: 'As love is the union of the Father and the Son, so is the union of the soul with God.'[2]

character of *Canticle B* has not yet been demonstrated, it certainly appears, in the present state of research, to be highly probable.

But there is another question, which is no less important: that of the source of the *materials* from which it was constructed. The hypothesis in question, that with the shamelessness which was characteristic of the period, the compilers rearranged and corrected, glozed or altered passages which they considered dangerous, and added, sometimes to enlarge, sometimes to justify in small details their own alterations, is easily probable. But the problem affects other materials, which do not come under the category of these rearrangements, and which, present in the second Canticle but not in the first, show a full agreement with the thought of the Saint as it is displayed in other writings which we know are his, and with so direct an impress of his style that it seems impossible that they could have been fabricated or set in imitation, 'in the manner of' St. John of the Cross, an author in any case not at all easy to imitate. The only psychologically satisfying explanation is that the passages in question consist of fragments from St. John's correspondence and notes of possibly oral instructions on the *Canticle*. The compilers of Canticle B would thus have saved for us precious material, while enclosing it in a work whose production was due to the intemperance of devotion. Dom P. Chevalier (in *Vie Spirituelle*, 1926) has given a typical example of a similar method of procedure with regard to St. Francis of Sales. 'Three of the *Vrays Entretiens* (published posthumously by St. Jane-Frances de Chantal, in 1629) were not preached, but are taken from sermon manuscripts.' There are no additions 'in the manner of. . . .' Such would be, if together with Dom Chevalier, Baruzi, Fr. Louis of the Trinity, we regard *Canticle B* as apocryphal, the case for *Canticle B*. This is why I do not think it necessary, even if we regard it as a posthumous compilation, to simply throw it aside and disregard it. What is necessary, and I think is sufficient, is when one cites an instance from it to take care to mention whence it comes, so that the reader may know the only probable nature of its attribution to St. John of the Cross.

The work of P. Gabriel de Ste.-Marie (*Etudes carmélitaines*, Apr. 1936) seriously militates against the negative theory advanced by Dom Philippe Chevalier.

[1] *Sum. theol.*, ii-ii, 27, 6, also ad. 3. [2] *Cant.* str. 12.

It is in charity, St. Thomas says again,[1] that perfection consists: the perfection of divine love is commanded to all, doubtless not as an end to be immediately attained, but at least as the end to which all should be directed according to their conditions. *Estote perfecti:* the search for the perfection of charity, which is the perfection of heaven, is the *raison d'être* of our life. The meaning of life is to be oriented towards the perfection of Love. 'In the evening of this life,' St. John of the Cross will write, 'it is by our love that we shall be judged.'[2] And again: 'Truly we have only been created for this love.'[3] It is our sovereign recompense here on earth, for 'love is only *repaid* by love',[4] and 'the soul which loves God does not wish or hope or ask for anything other than the perfection of love'.[5] Before we see God in heaven as we are seen by him, the supreme accomplishment of our life on earth is to love God 'as much as he loves us'. Despite human infirmity that is the condition of those souls who have come to the spiritual marriage; who attain in this mortal life—in a state of ever accelerating motion and progress—that *equality of love* with God which is found in the blessed in a state of consummation, with whom heaven and earth are indeed at one. *Le amara tanto como es amada.* No more potent words have ever been spoken, words which illuminate and cut through the darkness of our minds like a sudden lightning or searchlight, for they reveal in the concrete, in the way of St. John of the Cross, the supreme aim which is accessible here below, before the dissolution of our pitiable flesh: if I may dare so to speak, our penultimate end, our reason here on earth and in this perishable and fleeting existence itself.[6]

[1] *Sum. theol.*, ii-ii, 184, 3.

[2] *Spiritual Maxims*, No. 57 (Eng. trans.).

[3] *Canticle* (second redaction), str. 28.

[4] *Cant.*, str. 9.

[5] *Ibid.*

[6] *Ibid.* str. 37. I would point out here that the *Second Canticle* itself, even if it removes to the future life the strophes in which this equality of love is described in all its force and fullness, nevertheless affirms its possibility here on earth; though it may imply the equality of love which begins with spiritual betrothal. And these passages are the same as in the authentic first *Canticle*.

Whether one takes the second redaction as apocryphal or not, the doctrine of an equality of love which begins here on earth and which is the supreme aim of the aspirations of the soul, is essential in St. John of the Cross, as is attested, among other confirmations, by texts in *The Living Flame*, chap. ix, 12-6.

In the state of beatitude it is by intellection that we shall be deified, but that vision will itself be the supreme effect of love, the grasp by which love lays hold on its supreme good, and it is from the delights of love that that vision will flower.[1] Moreover, here on earth, where we cannot know God in his essence, but only by his effects, no pure knowledge is able to unite us with God immediately and not at a distance. But love is able so to do. 'God who cannot in this life be known in himself may be loved in himself' and 'immediately', are the profound words of the Angelic Doctor.[2] And again, 'The love of charity bears on an end which is already possessed,'[3] *i.e.* which already, primarily, has been given by grace. And what is the witness of the Catholic faith? That God is love, as St. John has announced, ὅτι ὁ θεὸς ἀγάπη ἔστιν. So we may understand that if God has many rightful names, if he named himself to Moses as '*I that Am*', and if the wisdom of the Greeks knew him as *The Thought of Thought*, the Gospel tells us his yet more secret name, showing him to us as *subsistent Love*. It is in the degree to which he is Love that he transforms us into himself, it is this name which contains all his secrets for us. These truths over which we stammer are the breath

[1]St. John of the Cross is in full accord with St. Thomas when he regards beatitude as consummated by love. (Cp. *Canticle*, second redaction).

According to St. Thomas (and St. John holds the same doctrine, see *Obscure Night*, book ii, chap. 20, and many other passages), it is the vision which formally and essentially constitutes beatitude (cp. *Sum. theol.*, i-ii, q. 3, a. 4 and 8); the act of intellection is thus that by which the creature possesses God as its sovereign good. But it is in the will that the immensity of joy which is created by such an act is accomplished, and beatitude consummated, 'quia scilicet ipsum gaudium est consummatio beatitudinis.' (a. 4.)

In the *Canticle*, str. 13, St. John speaks of those greatest delights of the soul which are 'en el entendimiento en que consiste la *fruición*, como dicen los teologos, que es ver a Dios'. If any one proposes these words 'en que consiste la fruición', in which fruition consists, in suggestion that it is not thomism to place fruition in the intelligence and not in the will, one can reply that it is by reason of the mutual inclusion of the spiritual faculties, 'quod est in voluntate, est etiam quodammodo in intellectu', so that 'affectus animae. . . .sunt in intellectu . . . sicut principiatum in principio, in quo habetur notio principiati'; 'unde et Philosophus hoc modo loquendi utitur in iii *De Anima*, quod *voluntas in ratione est*'. (St. Thomas, *Sum. theol.*, i, 87, 4.) In reality St. John of the Cross wished simply to recall, as R. Garrigou-Lagrange has with reason pointed out (*Vie Spirituelle*, 1930), that the intelligence, the seat of beatitude, which consists in seeing God, is in heaven the principle of fruition.

[2]*Sum. theol.*, i-ii, 27, 2; ii-ii, 27, a.

[3]Ditto. i-ii, 66, 6. 'Amor charitatis est de eo quod jam habetur.'

of his nostrils for St. John of the Cross. That is why he says, 'There is no work which is better or more necessary than this of love,'[1] and 'God makes use of nothing except love'.[2] That is why the idea that any pure knowledge or pure intelligence may be the proportionate means of union with God seems to him the height of absurdity. That is why he is persuaded, together with all Christianity, that contemplation is not an end in itself, but a means (a superexcellent means and already in union with its end), and that it exists for the union of love with God; and that it is itself a form of knowledge by love, a 'loving attention to God'.[3]

We are here at the antipodes from any neo-platonic intellectualism. And we are in the heart of the theology of St. Thomas.[4] We are also, it must be added, exceedingly far from certain modern interpreters of St. John of the Cross. If his doctrine is written as a commentary on a canticle it is because it elucidates the moments of a dialogue of love, where in the end the lover and the beloved speak with only one voice—truly made one in a unity, not of substance but of love: 'Two natures in one spirit and one love.'[5]

THEOLOGICAL FAITH

The second theological postulate on which I wish to insist is concerned with the nature of theological faith. A famous stanza of the *Spiritual Canticle* bears precisely on this subject, and John of the Cross explains it in his commentary in the clearest fashion.

O fountain crystalline,
If among thy silver waters
Suddenly thou wouldst let flash forth
Those eyes so long desired
Whose image I have written on my heart!

The 'crystal fountain' is faith, from whence 'the soul derives all the waters of spiritual good', and which the Holy Ghost, the source of all living waters, causes to spring up in us: it is like crystal in that it offers

[1] *Cant.* second redaction, str. 28. [2] *Ibid.*

[3] 'Advertencia amorosa a Dios, sin especificar actos'. *Living Flame*, str. 3. Cp. *Ascent*, book ii, chap. 13.

[4] Cp. *Sum. theol.*, ii-ii, 180, 1; i-ii, 68; ii-ii, 45, 2.

[5] Consumado este espiritual matrimonio entre Dios y el alma, son dos naturalezas en un espiritu y amor de Dios.' *Cant.*, str. 27. Cp. *infra*, Conclusion, pp. 447 and 451.

us 'truths in all their purity and their force' and that it is 'clear and void of errors and natural forms'.[1]

The 'silver waters' are the propositions or articles of faith. 'In order to understand these words,' explains the Saint, 'we must know that faith is compared to silver because of the propositions which it teaches us, the truth and substance it involves being compared to gold. This very substance which we now believe behind the silver veil of faith, we shall clearly behold and enjoy hereafter; the gold of faith shall be made manifest. . . . But when faith shall have been consummated in the clear vision of God, then the substance of faith, the silver veil being removed, will shine like gold.'[2]

Finally 'eyes so much desired' are the very substance of faith, the divine eyes, the divine truths considered in themselves, those living truths which the soul carries in itself, but only in 'an image', because of the veil of faith (and which, we may remark, will be in eternal life not only the reality which is seen, but still more rightly eyes by which one sees, because it is *in themselves* that they will be known).

This is exactly the doctrine which St. Thomas on his side propounds in the *Summa theologica*,[3] when he distinguishes in faith the *reality* in its ends: God himself in the inwardness of his essence, the same God who is seen by the blessed—and the *mode of knowledge*, which is proportionate to our nature, and which only offers us this divine reality in the shape of objects which have already been attained by concepts and the names which are our natural means of knowledge, and of which God makes use, by the ministry of his Church, to speak of himself in human language.

The capital importance of this doctrine for mystical theology is at once apparent. The whole uprush and desire of mysticism, in freeing itself from the imperfect human mode of multiple ideas, is to seize hold of this object, this same reality to which we are joined by the light of faith, which makes use of those ideas in a manner proportionate to our nature. Contemplation here on earth will thus essentially be knowledge *by faith*, since supernatural faith is alone capable of attaining to the true life of the divine reality; and it will be knowledge *in a superhuman*

[1] *Cant.* str. 11. [2] *Ibid.*

[3] *Sum. theol.*, ii-ii, 1, 26 and ad. 3. Cp. *supra*, chap. v, pp. 308–9.

manner, where faith will surpass its natural manner of knowing, will progress, on the other side of distinct ideas, to the experience of its object. And how could this be, except by love, which enracinates us in those things which are divine, and which, in that form of pure and ineffably spiritual consciousness which is given by the Holy Ghost in the action of its gifts, becomes itself the illuminant of knowledge?

Such certainly, as I shall stress further at the end of this chapter, is the thought of St. John of the Cross, which is in full accord with thomist theology. How does he continue his commentary on this stanza of the *Canticle*, where the soul aspires to see suddenly appearing those eyes so much desired, whose image it carries written on its heart? Before the beatific vision to which it aspires, there is an anticipation, where already those eyes begin to appear. In fact, *another* joins itself to this *first image* of divine reality which faith has imprinted on the heart, *an another which is the work of love*, and in virtue of 'the union of love' it retraces 'so intimately and livingly' the face of the Beloved in the soul that in fact it is in the soul like its very soul, so that 'each lives in the other, and each is the other, and the two are made one in a transformation of love', according to the words of St. Paul, 'I live not, but Christ lives in me.'[1] As he has explained at length elsewhere, it is in and by this union of love—and always in and by faith—that for St. John of the Cross contemplation touches and feels those things which are divine.

'PRACTICALITY' IN THE VOCABULARY OF ST. JOHN OF THE CROSS

We now come to that properly and essentially practical character of the doctrine of St. John of the Cross to which I have called attention from the first. Here again, rather than proceeding by an endless series of examples, we will content ourselves with two which are particularly significant, in the one case, the vocabulary of which St. John of the Cross makes use, in the other, his doctrine of emptiness.

It is important to notice first of all that those sciences which I have called *practically practical* make a wholly different use of concepts than do the *speculative* or *speculatively practical* sciences, not only in regard to their determining ends and their manner of procedure, but in the very manner

[1] *Cant.*, str. 11.

in which the concepts themselves are elaborated and remodelled, signify the real and take hold of it, in the way in which, if I may say so, the mind makes intelligible cuts into things. We may say that in the speculative sciences concepts have their bare value of abstraction and intelligibility, occupied in an analysis of the real into its ontological (or empiriological) elements; in the practical sciences, on the contrary, they are incorporated into concrete harmonies, occupied in composing the means, the dynamic moments, by which action should come into existence. From which it follows that concepts which bear the same name in these two orders of sciences, and of which one is like the projection of the other into another noetic space, will relate to the real in entirely differing fashion.

Thus it is necessary to mark the different sources of the conceptual vocabulary of St. John of the Cross and that of scholastic theology: the language of St. John of the Cross relates to *mystical experience*, and to a *practical science*. This language of practical science I have just now endeavoured to characterise. Mystical language, as has been very well shown,[1] is necessarily different from that of philosophy; there hyperbole is not an ornament of rhetoric but a means of expression which is rigorously required for exactitudes of meaning: for in fact it is an effort to render intelligible experience itself—and what an experience, the most ineffable of all! Philosophical language wishes above all to define reality without feeling it, mystical language to define it, as though by feeling what it cannot see.[2] How many errors are avoided by a right

[1]Cp. R. Garrigou-Lagrange, *L'Amour de Dieu et la Croix de Jésus*, Introduction; and also the *Postulatory Letter* addressed in the name of the Angelico College by the Rev. Frs. Hugon and Garrigou-Lagrange to the Sovereign Pontiff, 14th June, 1926, in view of obtaining the title of Doctor of the Universal Church for St. John of the Cross (*Analecta O.D.C.* 1926): 'St. Thomas points out (*In Isaiam*, c. 5, 15) that hyperbole is found in Scripture. Mystical style is not scholastic style; the only error would be to maintain . . . as scholastically true propositions which are only true in mystical language where hyperbole is allowed.'

[2]The mystic says, for example, in endeavouring to express his experience of that which is created before God that the creature is *nothing*, nothing at all. Yes. But these expressions have a mystical, not an ontological, significance. If we look for their ontological basis we will find it formulated by St. Thomas, in a passage whose metaphysical import is immense: 'Prius enim inest unicuique naturaliter quod convenit sibi in se, quam quod solum ex alio habet. Esse autem not habet creatura nisi ab alio, sibi autem relicta in se considerata nihil est: unde prius naturaliter inest sibi nihil quam esse.' (*De Aeternitate mundi.*)

distinction between these two vocabularies! The misfortune of certain mystics, like Echkart, is to have confounded the two together.

Yet again, these differences are not accidental, they belong to the exigencies of the specific objects of the conceptual vocabularies in question. I do not say that the passage from the one to the other is impossible; I do not say that the formulas of a mystical writer, of a practical doctor, are not pregnant with speculative values, and cannot be judged from that point of view as ontologically true or false. The intellect can pass from one vocabulary to the other, as it can pass from Latin to Chinese or Arabic. But it may not apply the syntax of the one to the other; it can only judge the ontological value of a mystical formula or a practically practical enunciation by keeping in mind the modifications to which they must be subjected when translated into the ontological order.

St. John of the Cross describes contemplation as an *absence of all action*,[1] whereas St. Thomas defines it as *the highest activity*.[2] For all that, they are in entire accord: the one is speaking from an ontological point of view, and from this standpoint there is no higher activity than a vital adherence to God, by infused love and contemplation, under the influence of operating grace. The other is speaking from the point of view of the mystical experience itself, and from this standpoint the suspension of all activity *of a human kind* must appear to the soul like an absence of all activity. Not to move oneself, to cease every particular operation, to be in a state of sovereign immobility and loving attention, which is itself received from God, is not this to *do nothing*, not in the ontological, but in the psychological and practical sense of the word?

St. John of the Cross also speaks of certain divine feelings, where the soul *tastes the savour of eternal life*, as experienced in the very substance of the soul, in opposition to its powers and its faculties;[3] and again, that it is into the substance of the soul, which is inaccessible by the senses and by demons, that the joy of the Holy Ghost penetrates.[4] But the context clearly shows that it is in no philosophical sense that he so opposes sub-

[1] *Living Flame*, str. 3.

[2] *Sum. theol.*, ii-ii, 179-80. See also R. and J. Maritain, *Prayer and Intelligence*.

[3] *Living Flame*, str. 2. [4] *Ibid.*

stance and potencies:[1] the question is for him one of the degrees of inwardness of the divine working. And when divine action, reaching first of all the substance,[2] touches the faculties in their root and their depth, and these are so spiritualised that under such a supernatural contact they let, so to speak, the depth of the soul shine through, then it is not the bare substance which acts or knows by itself, it is certainly by its potencies that it acts and it knows,[3] by the gifts and by infused love, but in a centre so intimate—at the secret point where its potencies are rooted—that no particular action is emitted by them, since they are actuated in their basis and their roots, *in darkness and in secret*,[4] so that abso-

[1]It is sufficient to recall, for example, that he writes, 'God purifies the soul in its *sensitive and spiritual substance* and in its external and internal powers' (*Obscure Night*, book ii, chap. 6), to comprehend that the word 'substance' has for him a wholly concrete and experimental meaning which does not necessarily or always include the sense which it holds in the ontological analysis practised by philosophers. For Saint John this word expresses what is most radical, most profound, most hidden. Cp. St. Theresa, *Interior Castle*, Fourth Mansion, chap. ii.

[2]In the Madrid (1630) edition of the *Canticle*, it is by means of the will that the divine attains the substance of the soul ('Asi tambien el toque de las virtudes del Amado se sienten y gozan en el tacto de esta alma, que es en la sustancia de *el mediante voluntad*'). Is this a gloss of the editors? In any case, he writes later on, 'Porque este toque de Dios satisface grandemente y regala la sustancia del alma, *cumpliendo suavemente su apetito*. . . .'; then it is from there that the divine action passes into the understanding ('una subidisima y sabrosisima inteligencia de Dios y de sus virtudes, *la cual redunda en el entendimiento del toque que hacen estas virtudes de Dios en la sustancia del alma*').

[3]Cp. *Cant.*, str. 13. '. . . this most subtle and delicate knowledge enters with marvellous sweetness and delight *into the intimate substance* of the soul'. That is to say, as the Saint almost immediately explains, 'substance stripped of all accidents and images', and this knowledge is communicated to '*the intellect called by philosophers* passive or passable, because it receives passively, without work on its part. . . .' This last phrase (and many others could be quoted) exhibits the fact that St. John of the Cross sufficiently outsoared philosophy, and that he was not excessively troubled by any need for strict technical exactitude in these regions.

[4]*Obscure Night*, book ii, chap. 23. See the whole last page of this chapter. Cp. also *Cant.*, str. 32. St. John of the Cross speaks there of a 'meeting of naked substances, that is to say, the soul and the Divinity'. The context shows that here again the word 'substance' has rather an experimental than a speculative sense; on the one hand it is a question of a union which completely escapes the senses, and of graces 'so elevated and substantial, so much *from beyond*' that the senses can know nothing: on the other, the soul no longer knows God 'by his effects and his works' (St. John means that it does not know God by his effects as by things that have already been known, and which therefore make the mind pass on to the knowledge of their cause; he is manifestly not intending to treat

lutely no sign could be divined even by the angels of what is happening in the deepest, most secret places of the heart.

Is a further instance needed? What St. John of the Cross calls pure faith[1] in the nudity of the spirit is truly theological faith, certainly dogmatic faith, but it is not theological faith isolated, by an ontological analysis, in its own species from the other energies of our supernatural organism, it is living faith[2] which is at one with the charity that informs it and the gifts which enlighten it,[3] loving faith, the wise and fruitful faith which concretely acts in the life of the holy soul: it is in contrast to the mixture of natural and sensible things that it is called pure faith. Thus St. John of the Cross will say that by faith we *love* God without seeing him;[4] and while a speculative theologian like John of St. Thomas rightly affirms that faith in itself, that is to say, without the gifts, does not know how to contemplate,[5] the mystical Doctor will affirm with no less truth that faith alone, that is to say faith concretely taken as I have here described it, absorbing into itself both love and the gifts of the Holy Ghost, is the immediate and proportionate means of contemplation.[6]

the question here whether in knowledge of God 'face to face', not by his works, a certain effect produced by God in the soul itself—infused love—does not serve as a *means* (*quo*) of knowledge. See *supra*, chap. v, p. 322); it knows God 'without any other means than a certain contact with Divinity' (*in virtue of the union itself*, John of St. Thomas will say). And that this contact of substance with substance is itself only suffered by means of the actuation of the potencies the Saint has himself pointed out a few lines earlier. The whole of the opening of this passage should be read. The whole question deals with a substantial contact between the soul and the Divinity which takes place because the latter has fully invaded the potencies, is directly attained, not through an inference from effects to their Cause, but in virtue of the union itself, the union of love which perceived and possessed the presence of the divine essence in the substance of the soul.

[1]Cp. *Ascent of Mount Carmel*, book ii, chap. 1; chap. 23; *Obscure Night*, book i, chap. 11.

[2]Cp. *Sentences and Maxims*: 'Todas las aprehensiones y noticias de cosas sobrenaturales no pueden ayudar al amor de Dios tanto cuanto el memor acto de Fe viva y Esperanza, que se hace en desnudez de toto eso.'

[3]'En la otra vida es por medio de la lumbre de gloria, y en esta por medio *de la fe ilustradísima*' (*Living Flame*, str. 3).

[4]'. . . la Fe, en la cual amamos a Dios sin entenderle.' *Cant.* Prologue.

[5]Cp. John of St. Thomas, *Les Dons du Saint-Esprit*, French trans. by Raissa Maritain, chap. 1. Cp. *supra*, chap. v, p. 311.

[6]For this capital point which St. John of the Cross never ceased from inculcating, see R. Garrigou-Lagrange, *Perfection chrétienne et contemplation*, vol. i; Crisógono de Jesús Sacramentado, *San Juan de la Cruz, su obra científica*, 1929.

Finally we know that St. John of the Cross, like the Franciscan authors who were the habitual reading of Carmelite houses of the Reform, makes constant use of the Augustinian division of the higher faculties into *understanding, memory* and *will*. Indeed, if from the point of view of speculative and ontological analysis the bipartite division into *intelligence* and *will* is alone conformable to reality—from the standpoint of a practical analysis, which must distinguish the potencies not by their essential ontological articulations, but according to the principal concrete modes of the activity of the subject in view of its ends, the Augustinian division is better; it is this which conforms with reality, with the reality in question.

From this standpoint he is admirably placed for distinguishing the three principal functions of the subject taken in its living totality, now as it turns towards objects in order to know them in themselves, which will be the understanding (which implies, in the concrete lexicon of St. John of the Cross, the senses and the imagination, whence the intelligence draws all its ideas); now as the subject turns towards things in the degree to which it has lived by them and will live, as they have interested it, as they have touched its personal experience, as they compose the mass of the past which grows unceasingly, which, as M. Bergson says, presses constantly in on the present in the desire to possess it, which will be the memory (which implies, from this point of view, not only knowledge, but affection and the appetites). Now the subject turns towards things in desire and in love, and in this motion towards them it becomes its interior weight, which is the will. This is why almost all mystical authors have good reason to adopt the augustinian division, which is traditional with them: this is why St. John of the Cross makes a correspondence between the three terms of this division and the three theological virtues, linking Hope with the memory, Faith with the understanding, and Charity with the will. He is thus able to make the most profound observations on the relations of the virtue of hope with the memory and on the purification of the latter by the former.

But all this implies not the least incompatibility with the views developed by St. Thomas in the ontological order, on the number of the faculties in the soul and their specification. Fr. Crisogono justly remarks that Baconthorp, like St. Thomas Aquinas, made hope dwell in the will,

and he adds that he knows of no scholastic who has departed from this doctrine; so that St. John of the Cross in his method of exposition on this point 'has broken with the whole tradition of the Schools.'[1] Certainly, from the standpoint of both ontological analysis and scholastic theology, the idea of situating theological hope in the memory is manifestly indefensible. Are we to believe that St. John of the Cross did not perceive so patent a point of doctrine, or that he wished to invent on this point a new theological theory, he who was never occupied with a speculative treatment of such matters? He is not speaking as a scholastic theologian, but as a practician of the things of the spirit. It is from the point of view of the 'practically practical' science of human acts that he has made so large (and so potently original) a part of his work deal with his teaching on memory;[2] and it is there that he shows himself, together with St. Augustine, as one of those who have penetrated farthest into the mysterious psychology of the memory.

THE DOCTRINE OF EMPTINESS

Since all human means, whatsoever they may be, are inadequate to the possession of God in the fullness of his life, the best thing the creature can do is to abandon itself, exhaust itself, renounce all its rightful operations, to make itself void. This central thesis of St. John of the Cross would be absurd if God was not there, supernaturally present in the soul (and the question is that of a soul already directly called to contemplation), if God was not there on the threshold, desirous of filling the whole soul, to replace all that it has lost with a richer life, the life of God himself, the torrent of his peace. A mad courage, a heroic confidence which responds, in the order of the spirit itself, to the 'mad' love of the most holy God—such is the basic character of the spirituality of St. John of the Cross. 'Nothing, nothing, nothing,' as he said to Ana de Peñalosa, 'till one's very skin and all the rest is lost for Christ.'

[1]Crisogono de Jesus Sacramentado, *op. cit.*, p. 122. Later (pp. 330-1) Fr. Crisogono rightly notes the practical importance of St. John of the Cross's teaching on Hope—as against the quietism which would later develop in France and Spain, and whose errors the Saint (like Ruysbroeck before him) had already denounced among the false mystics and illuminati of his time.

[2]The modern reader will find many remarks which the reading of contemporary literature will make singularly apt. See particularly *Ascent of Mount Carmel*, book iii, chap. 4.

But does he not forget that grace achieves nature, not destroys it? No, he knew that far better than we. This is the crucial point of apparent antinomy between the *ontological* language of theology and the *practical* and *mystical* tongue of a St. John of the Cross and the *Imitation*. St. John of the Cross lifts not a finger against the ontological order, and the perfection, the enrichment, the super-elevation which nature receives from grace; he *presupposes* this order and all its truths. He preaches neither mutilation nor suicide, nor the slightest ontological destruction of the most fragmentary filament of the wing of the smallest gnat. His standpoint is not that of the structure of our substance and its faculties, but a point of view on our *proprietorship of ourselves*, the free use and moral exercise which we make of our activity. There he asks for everything. There he wants us to give everything. He preaches a very real death, a death much more subtle and delicate than that of material destruction, a death which is vitally active and efficacious, fully tasted and free, which passes through the heart of our most immanent activity, which is made in and by that activity, which grows with it, which coheres to its most profound intimacy; that death which is called—*expropriation of oneself*. This death does not obliterate sensitivity, it refines it and renders it more exquisite; it does not harden the fibres of the soul, it renders them supple and spiritualises them: it transforms us into love.

Let us remember that grace is not added to nature like a roof or a pediment to a monument: it engrafts into it a divine life, it penetrates and raises the soul in its very essence as in its faculties, to operate in it those divine works, from which proceed the whole world of grace and all our natural faculties as they are elevated by grace. What is the meaning of this if it is not that the aim of all our growth, the initial principle of all our acts, the principal agent, the head of our interior government should not be ourselves but the Spirit of Christ within us?[1] That is not possible without a radical dispossession. In as much as we are the pro-

[1]Cp. *Ascent of Mount Carmel*, book iii, chap. 2. 'God being in possession of the faculties and being their sovereign master by their transformation into him, it is he himself who moves and divinely commands them according to the Holy Spirit and his will, so that the operations (of God and the soul) are not distinct, but what is produced in the soul is from God himself. There are divine operations, according to the words of St. Paul, 'He who is joined to the Lord is one spirit (I Cor. vi, 17). From this it comes that in union the operations of the soul are of the Holy Ghost and are divine; and such souls

prietors of ourselves we shall then be eclipsed. Nothing is more desired by love, since it is the seal of our union with the God who loves us and of our transformation into him. Nothing is more desired by our spiritual nature, since in this perfect spiritual poverty the soul becomes perfectly free, the more profoundly the 'cause of itself' in the degree to which it has more fully renounced being the principal cause. But there is nothing which more strips humanity and empties it of itself, which demands more radical purifications and suffering.

This is why the practical realisation of the axiom: 'grace perfects nature and does not destroy it,' is only accomplished by means of the agony and death, not ontologically but mystically, of that same nature. 'Let us die the death of the angels', says St. Bernard. In human nature—which is not only wounded since the first sin, but gnawed to the heart by concupiscence—this death cannot be accomplished without the great tearing up by the roots of the night of the senses and the night of the spirit, without which the grain will perish in the earth. Then we shall not remain alone, then we shall bring forth much fruit. 'In order that God should bring the soul to this union in his own way, the sole worthy action is that which unloads and empties the faculties, which makes them renounce *their natural jurisdiction* and operations, in order that they may receive the infusion and the illumination of the supernatural.' . . .[1]

But the law of suffering goes deeper than this. For the soul which has been already elevated to the transforming union, and which therefore, on the testimony of all the saints, can no more suffer than God Himself, is more than ever, St. John of the Cross tells us, thirsty for suffering.[2]

never do works which are not just and reasonable, but their works alone are always just and reasonable: the Holy Ghost makes them know what they ought to know, ignore what they ought to ignore, recall what they ought to remember, with or without forms, forget what they ought to forget, love what they ought to love, and love nothing which is not in God. And so all the first movements of the faculties of such souls are divine, and it should not be astonishing that the movements and the workings of such faculties should be divine, since they are transformed into the divine being'. 'All the first movements of the faculties *in such souls* are divine', says St. John of the Cross. 'All the first movements *of nature* are good and right', Jean-Jacques Rousseau will write (*First Dialogue*). The similarity of these two sentences gives the measure of that great chaos which separates christian wisdom from its naturalist counterfeit.

[1] *Ascent*, book iii, chap. 2. Cp. *Living Flame*, str. 2.

[2] Cp. *Cant.*, str. 35. See *infra*, Conclusion, pp. 447-51.

In fact and in truth the grace itself which transforms us is the grace of our crucified Lord, and it is in order that we may share in the work that is his own, that is, to die for the world, that we are transfigured from brightness into brightness.

Oh, very truly, in the whole of this supernatural work, and from the very first stammerings in us of the grace of conversion, they are very real, terribly, if I may put it so, ontologically real, the goods which we must renounce: is not the most meagre pleasure, in the words of Aristotle, the metaphysical flower of an act? Certainly they are not meagre the joys which we must leave for Christ; we should love him little if for his sake we did not quit things which are rightly beautiful and good. And this is a form of universal destruction, for it is almost as hard, sometimes even more hard, to detach ourselves from what we might have had or would have been able to have than from what we have (that, at least, it will remain always true that we have had). This expropriation of ourselves, of which I spoke a moment ago, is not done without proofs. The torn and twisted limbs of the martyrs, the bloodstained destruction of the great Victim on the cross, show us the way.

Meanwhile, what is needed first of all and before all, as I have underlined, is that interior stripping, which is itself bound up with charity, the dispossession of oneself: the rest, so to speak, follows naturally. And given all the reality of this rest, the ontological whole which God, by his law or his inspiration or his providence, gives us space to renounce, is definitely only the ontology of a certain *usage* of our liberty and our faculties, which gives place to a use which is better and more divine. What we are so deprived of matters greatly to our liking, it belongs to our flesh. There is not the least mutilation, on the contrary there is an incomparable enrichment, in its sacrifice for love, which is worth more than all, and whose ontological perfection is incomparably higher.[1] The perfection, not only the moral but the metaphysical perfection of the human creature would never have been accomplished,

[1]Charity, which has an immediate proportion to eternal life, is, not only in the line of merit and virtue, but in the line of being itself, speaking absolutely, ontologically, the most perfect thing in man: it is metaphysically more perfect than the highest intellectual virtues here below, it is only inferior in a metaphysical degree to the light of glory which reigns in heaven. Cp. John of St. Thomas, *Curs. theol.*, i-ii, p. 67, disp. 17, a. 3, nn. 25-29.

could never have accomplished, if the fairest of the sons of men had not been immolated on the wood of the cross.

This then is the concrete significance of the theological axiom, Nature is not destroyed, but made perfect by grace. For anyone who has heard the words 'Be perfect' nature has no right to count on any more comfortable 'perfecting'. In the measure in which it does so count, etiolating its desires in order to cultivate them in peace, it only achieves diminishing itself in order to suffer less. What is there to complain of? What do we want more than the Beatitudes? Really what we want is not more, but *less*. This is why St. John of the Cross so ardently reproaches those who are afraid to suffer for their lack of ambition and magnanimity. It is when annihilation and suffering have their fullest scope, as in the great Doctor of the Night himself, that love and perfection have also theirs. And a hundredfold reward is promised already here on earth. But on the conditions which have been stated. 'Since I have established myself in nothingness, I find that nothing is lacking to me.'

So we see by an outstanding example how completely the speculative and practical sciences of christian reality are in accord, though they speak in differing and sometimes apparently opposed languages. We can comprehend in the same stroke the error which lies in vitiating the one by transposing into it the terms of the other, which either produces, on the one hand, a form of jansenist or lutheran theology, which teaches the essential corruption of nature and that grace is its enemy, or, on the other, the theory that perfection is a simple athletic development of the natural faculties which are so crowned by grace, as though Christ had chosen the thorns in order to leave us the roses.

Analogous observations could be made on the theme of that 'contempt of creatures' professed by the saints. The saint sees practically that they are nothing by the side of Him whom he loves and the End which he has chosen; they can do nothing for him, they are not worth the price of his love. It is the contempt of the lover for all that is not his beloved, in this case, Love itself. It is nothing for him to give 'all the riches of his house'.[1] 'For whom I have suffered the loss of all things and count them but as dung, that I may gain Christ . . . that I may know him and the

[1] *Cant. of Cant.* viii, 7.

power of his resurrection, and the fellowship of his sufferings. . . .'[1] And by a marvellous reflux, the more he despises creatures in the degree to which they are rivals to God, or objects of a possible choice against God, the more he cherishes them in and for Him whom he loves, in the degree to which they are loved by Him, and truly made, by the love which creates all things and infuses them with goodness, good and worthy to be loved[2]. For to love a being in God and for God—I am speaking here of the love of friendship, not the love of covetousness—is not to treat them as a pure means or occasion for loving God, that is to say, excusing oneself from loving them in themselves (and in the same moment ceasing to truly love God, who is only truly loved if we also love his visible images); it is to love this being and treat it as an end, and wish for its good because in itself and for itself it merits to be loved, yes, *as this very merit and this final dignity* come from the sovereign love and sovereign lovableness of God. In one stroke they are both at rest in God, safe from all quarrel and all vicissitude. Not to be detained by the creature is the creature's guarantee of a love which will not fail, planted in the roots of its lovableness by the arrow which pierces it. This is the understanding of the paradox whereby in the end the saint surrounds with a universal love of friendship and of piety—incomparably more liberal, but also more tender and more happy than the possessive love of the voluptuary or the miser—everything which passes with time, all the weakness and the beauty of things, all that he has abandoned.

He has the right to despise creatures. The philosopher and the theologian have not that right. Here again there will be a total misunderstanding if we give a speculative sense to the formulas of a John of the Cross. There is no worse philosopher than a philosopher who despises nature. A form of knowledge which despises what is is itself nothing; one cherry between one's lips holds more mystery than the whole idealist metaphysic. A philosophical misappropriation of the maxims of the saints, which has abstracted out of them the love which gives them all their meaning, leads to the idea that creatures are nothing in order to have the right not to love them, and their humiliation before God

[1] St. Paul, *Phil.* iii, 8-10.

[2] 'Amor Dei est infundens et creans bonitatem in rebus' (St. Thomas, *Sum. theol.*, i, 20, 2.

so that we need have no need to render them the honour which is their due.

Finally, in returning to our semantic considerations, we should observe the power which the spirit has of varying the actual meaning of its signs according to their proper ends: while speculative language, since it is directed to the pure object of the intellect, is essentially ontological, practical and mystical language, because it considers things in relation to the acting subject, sees them as incorporated in it, has by necessity, and as the very condition of its exactitude, dominants which are psychological and affective.[1] Certain mystical formulas, for instance, concerned with the union of the soul with God, which are daring beyond the point of danger when understood theologically, receive their rightful meaning when we acknowledge that love has also a language of its own.[2]

[1]'The dictionary of the mystics is not ontological but affective, individual more than personal.' Louis Massignon, 'L'Expérience mystique et les modes de stylisation littéraire,' (*Chroniques*, 4th no. of *Roseau d'Or*, 1927).

'It would be foolishness', St. John of the Cross writes himself, 'to think that the language of love and the mystical intelligence—and that is what these stanzas are—can be at all explained in words of any kind, for the Spirit of our Lord who helps our weakness—as St. Paul saith—dwelling in us makes petition for us with groanings unutterable for that which we cannot well understand or grasp so as to be able to make it known. For who can describe what He shows to loving souls in whom He dwells? Who can set forth in words what He makes them feel? and lastly, who can explain that for which they long? Assuredly no one: not even they themselves. That is why they use figures and special comparisons and similitudes: they hide somewhat of that which they feel and in the abundance of the Spirit utter secret mysteries rather than express themselves in clear words. And if these similitudes are not received in the simplicity of the loving mind, and in the sense in which they are uttered, they will seem to be effusions of folly rather than the language of reason. . . .' *Cant.* Prologue.

[2]To consider at once the case most difficult to defend (supposing indeed that it can be defended), a problem of particularly thorny interpretation is presented by Angelus Silesius, when he says, for example:

> Ich weiss dass ohne mich Gott nicht ein Ny kann leben:
> Werd ich zunicht, er muss von Not den Geist aufgeben.

(I know that without me God could not live for an instant: were I annihilated he would necessarily give up the ghost.)
Qr again:

> Dass Gott so selig ist und lebet ohne Verlangen
> Hat er sowohl von mir als ich von ihm empfangen;

V. MYSTICAL CONTEMPLATION

There is one question which is obviously of quite particular importance in this double interrogatory of St. Thomas and St. John of the

Or again:

Gott ist so viel an mir, als mir an ihm gelegen.
Sein Wesen helf ich ihm, wie er das meine hegen, etc.

All formulas which are manifestly scandalous if we take them as any kind of philosophical, theological or doctrinal enunciations. God cannot annihilate the possibility of an ant without beginning by destroying its essence, for the possibility of things is only in their multiform ability to participate in the divine essence, which is eternally seen by the divine intellection. But he could without a shadow of change in himself have neither created the universe nor the humanity of Christ, for the effective production of creatures out of nothingness depends on his sovereign liberty. It is the very basis of Spinozism to fail to distinguish the possible from the existing creature.

It is possible for all that that, in speaking in this pantheist style, Angelus Silesius was thinking of something very different from pantheism. He assures us so himself in his preface to *The Cherubinical Wanderer*. It is not necessary to believe him, but it is interesting to know under what conditions it would be possible so to do. If one takes these distichs as phrases not put forward in any order of being or of intelligibility for the explanation of objects, but in the order of love and in order to express the experience of the subject, they can seem like the delirium of human words unable to express otherwise that unity of spirit which is known livingly by love. Translated into ontological language and understood in the light of the eternal predestination which they presuppose, they would signify in this case that the soul loved by God and chosen for always is the wealth of God and this wealth cannot be lost; and the truth which would correspond to them in the ontological order and which would be their foundation (in the sense in which a real being is the basis of a rational being), is that the love wherewith God freely loves the creature is the love with which he necessarily loves himself, contingence being only on the side of the created end, not on the side of the divine act, which is identical with the divine essence; so that *supposing the choice* from all eternity of such a creature it is entirely true that it could no more lose its election than God could his existence.

In fact, the language of Johannes Scheffler is that of Boehme; if the foregoing comments have a value, it is necessary to admit (which is not at all impossible) that the same vocabulary can have different values in two different cases, in the one case a value which is entirely speculative, in the other, wholly affective. A consideration which makes judgment manifestly difficult; but we know that the discernment of spirits is a difficult thing; and to judge in these things is not always necessary, at least for a philosopher, who has quite enough on his hands with doctrines.

The fact remains that if Angelus Silesius is orthodox as Dr. Seltmann wishes to prove (*Angelus Silesius und seine Mystik*, Breslau, 1896), it is while expressing himself by the help of paradoxical enunciations which are sometimes in themselves heretical in their literal meaning; and he so appears as an extreme case, on the very limit of that kingdom of which St. John of the Cross occupies the centre. Everything which is didac-

Cross: the question of the nature of mystical contemplation in itself. Their teaching on this point is strictly in accord. For the one as for the other contemplation is an experimental knowledge of love and union. And it is the principles which have been developed by thomist theologians, such as John of St. Thomas and Père Chardon, which give us the fullest understanding of the incomparable teaching of St. John of the Cross.

The doctrine of St. Thomas, to which St. John of the Cross himself directly refers,[1] briefly put, is that charity as it grows greater transforms us into God, whom it attains to immediately in himself,[2] and that this

tic or conceptually constructed in *The Cherubinical Wanderer* makes of this astonishing poem (which the author published in 1756, four years after his conversion, but which —one can truly suppose—he had written before that, and which had been for him, while he was still a Protestant, like the anticipated avowal of the Catholicism of his heart—the more so as he already read St. Gertrude, St. Mechtild, St. Bridget and Tauler by predilection) a type of expression or stylisation of mystical experience or its retrospection, where the profound remodelling due to literary elaboration is carried to the maximum. And if the manner of this expression belongs essentially to the order of affection and of love, it nevertheless exhibits the fact that the mystical experience has at the same time undergone to the last limit a translation by speculative preoccupations.

The most beautiful verses of Angelus Silesius remain cold poetic and didactic jewels; they are not the pure witness plucked from the living heart of the fire. The versification of St. John of the Cross is more technical, but for all that his witness is absolutely pure and direct and flaming. Which shows that it is not the simplicity of the instrument which matters, but that of the spirit which uses it. It was in making use of the technique prepared by a Garcilaso de la Vega that divine inspiration produced in the greatest of all mystical writers the work where words alter least the substance, ineffable in itself, which they enclose.

The case of Angelus Silesius, which has only been cited here in order to bring into greater prominence a whole series of problems of spiritual semantics (signalised and studied by Louis Massignon in a most remarkable fashion. Cp. *Essai sur les origines du lexique technique de la mystique musulmane*, 1922; *Le Folklore chez les mystiques musulmanes, Mélanges René Basset*, 1923; *op. cit.*, note 1, *supra*), verifies, in its very opposition to the case of St. John of the Cross, the general law of how much more a mystic hazards than regains (it may be only in his mode of expression, it may be in his thought itself), when he allows the taste for human knowledge or discursive speculation to insinuate itself either into his incommunicable experience or into the retrospective synthesis of his efforts to express it. Mystical experience stimulates speculation; it has the freedom of its very substance.

[1] Cp. *Obscure Night*, book ii, chap. 17.

[2] See *supra*, pp. 396–98. St. John of the Cross says the same: 'Porque solo el amor es el que una y junta al alma con Dios', *Obscure Night*, book ii, chap 18.

more and more perfected spiritualisation not being possible without an awareness in the consciousness, because the spirit is in its heart, the Holy Ghost makes use of this loving transformation in God, of this supernatural connaturality, as the proper means of a rich and penetrating knowledge, which in its turn makes the love of charity as fully possessive and fruitful as is possible here on earth. This is the exact doctrine of St. John of the Cross himself, and it is on this doctrine that he bases himself in the divinely profound, rich, delicately shaded and precise expositions which he gives of the practical science and the whole life of contemplation. For him as for St. Thomas contemplation is the experience of that union towards which all else is directed. It is not only love, it is still more *by love*. 'The mystical knowledge of God can never be without love, for it is itself infused by love.'[1] 'This science full of sweetness is mystical theology, which is the secret science of God, and which spiritual men call contemplation. It is most full of sweetness because it is knowledge by love, love is the master of it, and it is love which renders it all so sweet.'[2] It is produced by love itself, by the supernatural love of charity which causes us to enter into the intimacy of the Three Divine Persons, and which, searching under the movement of the Holy Spirit the deep things of God, *τὰ βάθη τοῦ θεοῦ*,[3] makes faith both penetrating and rich, and at the same time delivers it from the limitation of the human mode of our reason.

And because this love derives from faith, which alone, in its superhuman obscurity, joins our intelligence to the abyss of deity, to the subsistent supernatural, it is necessary to affirm that faith—that is to say, as we have seen, living faith which is 'formed' by charity and illustrated by the gifts of the Holy Ghost,[4] is the essential principle of mystical experience, the unique 'immediate and proportion-

[1] *Obscure Night*, book ii, chap. 12. Cp. book ii, chap. 17: 'La contemplación . . . se infunde en el alma por amor.'

[2] *Cant.* str. 18. Cp. the Prologue, '. . . mystical theology which knows by love and by which truths are not only learned, but relished also.' St. John of the Cross here notes with an exquisite delicacy that the mystical wisdom to which Anne de Jésus had had the grace to be raised 'and led inwards to the bosom of the divine love' itself disposes the mind, in the absence of all technical preparation, to understand explanations which belong to the purely intellectual order of scholastic theology.

[3] St. Paul. I Cor. ii, 10.

[4] Cp. *supra*, p. 404, n. 3.

ate' way, as St. John of the Cross never tires of reiterating, to the divine union.[1]

This is why contemplation itself is a night, wherein the soul renounces the actual use of distinct ideas and of all formulated knowledge, overpasses the whole mode of concepts, in order to feel the things which are divine in the infused light of faith, by means of love and of all those effects which God produces in the soul which is united to him by love. Thus it is, in the words of pseudo-Dionysus, 'a ray of darkness for the intelligence'.[2] 'The soldiers of Gideon carried lamps in their hands, which they saw not, because they were "within the pitchers". . . . But when they broke the pitchers the lamps gave light. . . . So faith, of which these pitchers were a figure, contains the divine light; and at the end of this mortal life, when the work of faith is over, and the pitchers are broken, the light and glory of God will then shine forth. It is therefore plain that the soul, which would in this life be united with God and commune immediately with him, must unite itself to him in the cloud where, according to Solomon, he has promised to dwell: and in that obscure air, wherein he was pleased to reveal His secrets to Job; and take up the pitchers of Gideon, that it may hold in its hands—that is in the acts of the will—that light which is the union of love, though in the obscurity of faith: so that, as soon as the pitcher of life is broken, it may see God face to face in glory.'[3]

'Say not, therefore: "Oh the soul is making no progress, for it is doing nothing!" For if it is true that it is doing nothing, then, by this very fact that it is doing nothing, I will now prove to you that it is doing a great deal. For if the understanding is voiding itself of particular kinds of knowledge,[4] both natural and spiritual, it is making progress, and the

[1] *Ascent*, book ii, chap. 9.

[2] '. . . contemplación, la cual es en esta vida, como dice San Dionisio, rayo de tiniebla.' *Cant.* str. 13.

[3] *Ascent*, book ii, chap. 9.

[4] 'á los actos de entender.' 'Entender' corresponds to the latin *intelligere*. It is with the following texts from St. Thomas: 'Secundum statum praesentis vitae . . . non possumus intelligere substantias separatas immateriales secundum seipsum' (i, 88, 1) and 'Per substantias materiales non possumus perfecte substantias immateriales intelligere' (i, 88, 2) that one is able to commentate this passage of St. John of the Cross. Cp. *Sum. c. G.* iii, 44.

more it empties itself of particular knowledge and of the acts of the understanding, the greater is the progress of the understanding in its journey to the highest spiritual good. You say that if it understands nothing distinctly it cannot be advancing. On the contrary, I reply, if it did understand anything distinctly then it would rather be making no progress. The reason is that God, towards whom the understanding is journeying, transcends the understanding and is therefore incomprehensible and inaccessible to it; and thus when it is understanding, it is not approaching God, it is rather withdrawing. Therefore the understanding must withdraw from itself[1] and walk in faith, believing and not understanding. And in this way the understanding will reach perfection, for by faith and by no other means comes union with God. . . . Wherefore since the understanding knows not what God is,[2] it must of necessity walk towards him in submission, and not by understanding. . . . In the contemplation of which we are speaking, wherein God, as we have said, infuses into the soul, there is no necessity for distinct knowledge, nor for the soul to make any acts of understanding: God in one act communicates light and love together, with a loving and supernatural knowledge, and which may be called a heat-giving light, which gives out heat, for that light also enkindles the soul in love; and this is confused and obscure to the understanding, since it is knowledge of contemplation, which, as St. Dionysus says, is a ray of darkness for the understanding.'[3]

[1]One could also comment on this passage from those articles where St. Thomas explains how the intellect is as it were captivated by faith ('et inde est quod intellectus credentis dicitur esse captivus, quia tenetur terminis alienis et non propriis, II Cor. x, 5: *In captivitatem redigentes omnem intellectum*,' *De Veritate*, 14, 1)—a captivity which is its deliverance ('Bonum intellectus est ut subdatur voluntati adhaerendo Deo: unde fides dicitur intellectum expedire in quantum sub tali voluntate ipsum captivitat.' *Ibid.* 14, 3, ad. 8).

[2]'No puede saber como es Dios'. Cp. St. Thomas, *Sum. theol.*, i, 2, 1: 'Nos non scimus de Deo quid est,' we cannot know what God is in himself. 'Quidquid intellectus noster apprehendit minus quam Dei essentia, et quidquid lingua nostra loquitur minus quam esse divinum,' writes St. Thomas in his commentary of *The Divine Names* (chap. v, lect. 1); which is the same as what St. John will say of the necessity of voiding oneself of every distinct idea in order to unite with God in faith.

[3]*Living Flame*, str. 3, redaction ii. He explains further on that 'although the soul can perform natural acts without understanding, it cannot love without understanding: but

Let us re-read the description of contemplation which he gives in *The Obscure Night:*[1] 'This obscure contemplation is called secret, because it is, as I have said before, that "mystical theology" which theologians call a secret wisdom, and which, says St. Thomas, is infused into the soul by love. This is done in a secret, hidden way in which the natural operations of the intellect and the faculties have no share. And because the faculties of the soul cannot compass it, it being infused by the Holy Ghost, as the bride says in the Canticles, in an unknown way, we call it secret. In truth, it is not the soul only that does not understand how this happens, so is it with everyone else, even the devil. For the Master who teaches the soul dwells substantially within it, where neither the devil nor the senses nor the natural understanding may come.

'It is secret also in the effects which it produces in the soul. For it is not only secret during the darkness and sharpness of purgation, when this secret wisdom purifies the soul, but afterwards also, in the illumination, when that wisdom is most clearly communicated, it is so secret that it cannot be discerned or described: the soul has no wish to speak of it, and besides, it can discover no way or similitude to describe it by, so as to make known so profound an intelligence, so delicate an infused spiritual impression. Yea, and if it could have the wish to speak of it, however great were the desire and however many the expressions of which it made use, it would remain secret still and all to say. . . . Jeremias, when God had spoken with him, knew not what to say, except "Ah, ah, ah". . . . Because it cannot be described by words pure contemplation is thus called secret.

'There is yet another reason, which is because this mystical wisdom has the property of hiding the soul within itself. For beyond the usual in the action of the divine infusion which we are speaking of here it is different, because God can communicate himself to one faculty and not to another. And so he can inflame the will by the touch of the ardour of his love, although the understanding understands not: in the same way a man can warm himself at a fire which he does not see.' This and similar passages are not in the slightest opposition to the doctrine of St. Thomas that love universally follows on knowledge. For, on the one hand, St. Thomas teaches at the same time that the degree of love is not necessarily proportionate to that of knowledge; on the other, that when God, as St. John of the Cross says, supernaturally inflames the will without illuminating the understanding, there is always a presupposed knowledge which is that of faith.

[1] *Obscure Night*, book ii, chaps. 17 and 18.

degree of hiding, it sometimes so absorbs the soul and carries it away, so that the soul sees distinctly that it is entirely distant from and separated from all creatures: so that it seems to it that it is set in a vast and profound desert, whither no human creature can come, an immense desert extending illimitably. . . . It not only comprehends how mean are all created things in comparison to the supreme wisdom and the sense of God, it sees also how low and curt, in a certain sense how improper, are all the words and phrases with which in this life we talk of divine things, and how utterly impossible it is by any natural way or means, however profoundly or learnedly, to understand and see these things as they are, were it not for the illumination of this mystical theology. . . . The way to God is as secret and hidden from the senses of the soul as the way of one who walks upon the water is from the senses of the body, and whose footsteps cannot be known. The footsteps of God in those souls which he is drawing to himself, making them great in the union of his wisdom, are alike unknown. . . . This secret wisdom is also called a ladder. . . . The principal reason for which it is called so is that contemplation is a science of love, that it is a loving knowledge of God which is infused in the soul, and which enlightens the soul and at the same time kindles it with love in order to raise it step by step unto God its Creator. For it is love alone which unites the soul with God and joins it to Him.'[1]

It would be madness to endeavour to attain such a knowledge of God by our own powers and their 'rampant procedure'.[2] For such knowledge is not only supernatural in regard to the virtues which it brings into action and its object, but also in its mode.[3] The soul acts in a way above its own capacity, even that of its perfecting in the supernatural order of the three theological virtues. God, in other words, is here the principal Agent. 'God alone is the craftsman, the soul does nothing

[1] *Obscure Night*, chap. xviii. The passages are innumerable in which St. John of the Cross so describes contemplation as a *loving infused knowledge*.

[2] 'modos rateros.' (*Living Flame*, str. 3, v. 3.)

[3] 'This loving knowledge . . . is received passively in the soul in the supernatural manner of God, and not by the natural way of the soul' (*Living Flame*, str. 3, v. 3). This is the exact doctrine of the 'superhuman mode' of the gifts of the Holy Ghost which is expounded by St. Thomas in his *Commentary* on the *Sentences*.

by itself.[1] 'The spiritual directors of such souls must take great care, and realise that the principal agent, the guide, the mover of such souls is not themselves, but the Holy Spirit, which ceaselessly cares for them; they are only the instruments which it uses to bring them to perfection by faith and the law of God, as the spirit of God has been given to each.'[2] 'I therefore point out to the soul that God is in this affair the principal agent; he is the guide who leads the blind man by the hand whither he knows not how to go, that is to say to those spiritual things which neither the understanding nor the will nor the memory can know as they rightly are. The principal care of the soul should be to put nothing in the way. . . . And that will happen if the soul allows itself to be led and guided by another blind man, and the blind who may lead it from the right way are three: the spiritual director (who 'batters away like a blacksmith'[3] and is ignorant of spiritual things), the devil and the soul itself.'[4]

What other formal reason is there for the 'passivity' of mystic states than the fact that God is thus (and St. John of the Cross uses the word in the precise sense that it holds in the theory of instrumental causality) the cause or principal agent in such a work? 'In this state on no account must the soul be supposed to meditate or exercise itself in acts, or told to seek savour or fervour: this would be to raise up obstacles in the way of the principal agent who, as I said, is God: secretly and tranquilly he pours into the soul wisdom and loving knowledge, without the specification of acts, although often he allows them in the soul for a certain duration. Nevertheless the soul should be only occupied in loving attention to God, without willing any specific acts. It should hold itself, as I said, passive, without having any urge to act, in determination and loving attention, simple and ingenuous, like one who has his eyes wide open in the attention of love.'[5]

If God is the principal agent in the work of contemplation, which is nevertheless an eminently vital and immanent operation, the essential

[1] *Living Flame*, str. 1, v. 3. [2] *Ibid.*, str. 3, v. 3. [3] *Ibid.*

[4] *Ibid.* All these pages witness to the ardent pity with which the Saint was inspired by a long experience of the havoc and obstruction caused to souls by ignorant and presumptuous directors.

[5] *Ibid.*

part attributed by St. John of the Cross to the special impulse of the Holy Spirit is immediately understood.[1] It is this which marks for him the passage from the natural to the supernatural mode: 'Blow across my garden that the perfumes may flow forth.' And St. John points out that the soul does not say 'blow *in* my garden', but '*across* my garden'. 'There is a great difference between these two expressions. The first refers to the infusion of grace, of the gifts and the virtues in the soul; the second, to a touch of God received by the virtues and the perfections already given to the soul, and which renews them and stirs them in order that they may send forth an admirable fragrance and sweetness.'[2] *The divine south wind which reanimates the soul,* which loosens as it stirs the perfume of the virtues in bud. 'By this breath of the Holy Spirit through the soul, which is the visitation of the love of the Son of God, He communicates himself to it in a high manner. . . . This is why every soul should desire with a great desire this breath of the Holy Spirit to pass through its garden, and that its divine perfumes may flow forth.'[3]

A few pages earlier, after having—in an echo of St. Thomas—insisted on the connection of the virtues in charity (their garland is 'bound in such a manner by the thread of love that if it is broken for one all the others are scattered'), 'in the same way', he writes, 'as the wind stirs and lifts the air on the neck, so the breath of the Holy Ghost stirs and lifts the strong love so that it may fly upward to God: without this divine breath, which stirs the faculties to the exercise of divine love, the virtues could neither operate nor have effects, although the soul possesses them in itself.'[4] The soul in question here has already come to the spiritual betrothal, and its virtues are instrumentally moved by the Holy Ghost. When it comes to the spiritual marriage, it will have 'implored and obtained the breath of the Holy Ghost which is the disposition and the instrument proper to the perfection of this state'.[5] It is when 'it has in perfection the seven gifts of the Holy Ghost, as fully as it is able to receive them', that the soul 'will possess the seven degrees or cellars of

[1]The soul cannot receive interior communications 'if the Spirit and the Bride do not produce in it this motion of love'. *Cant.* second redaction, str. 17.

[2]*Cant.*, str. 26. [3]*Ibid.*

[4]*Ibid.*, str. 22. [5]*Ibid.*, str. 27.

love'. In the end, 'when it holds in perfection the spirit of fear' which is 'the last of the seven gifts'—by which it began its ascension to wisdom—'it has in fact the spirit of love in perfection.'[1] St. Thomas says the same when he teaches that the gifts grow together, and that 'the gift of fear is only perfect in a soul if charity and the gift of wisdom are perfect in it'.[2] In all this, as in each time that he speaks of knowledge and of wisdom, when he takes up and renders classic Tauler's doctrine of the three signs which are characteristic of the passage to 'the mystic state', St. John of the Cross is in full accord with the teaching of thomist theology on the gifts of the Holy Ghost and the passage of contemplative souls into the habitual regimen of the gifts.

In his concrete and vivid language, nourished on Scripture, it is as '*the unction of the Holy Spirit*' that he most frequently describes the action of the gifts.[3] Here again we can observe the rigorous manner in which his work exemplifies the proper laws of the vocabulary of a practical science. It is not the ontological analysis of the organism of the virtues and the infused gifts which above all interests him, it is their concrete interplay and the experience of their sweetness; and what words could

[1] *Cant.*, str. 17. An effort has been made to prove from this passage that St. John of the Cross regarded the gift of fear as the highest of the gifts (*Bulletin thomiste*, May-July, 1930). Fr. Garrigou-Lagrange had no difficulty in pointing out (as has subsequently been recognised, *ibid.*, May, 1931) that this was a gratuitous attribution to the Saint of an inadvertence diametrically contrary to all his teaching on wisdom, *juge convivium*.

Some have wished to find a disagreement between St. John of the Cross and St. Thomas in the fact that St. John of the Cross reduces the passions to four, and not to the eleven principals of St. Thomas. This is to forget the article of the *Prima Secundae*, 25, 4, where St. Thomas says that the four enumerated by Boethius—joy, sorrow, hope and fear—are the principals *ut completivae aliarum*.

[2] R. Garrigou-Lagrange, 'Saint Thomas et Saint Jean de la Croix', *Vie spirituelle*, 1st Oct., 1930.

[3] It is thus possible, on a hasty reading which stays on the words without passing on to their content, to believe that St. John of the Cross refers very little to the gifts. In fact he speaks of them constantly, but not with the other words of a speculative theologian. Need we be surprised that with the great Doctor of 'hidden wisdom' science also should be in disguise? Once again, if we seek to discover in him speculative science using its own particular language we shall condemn ourselves from the outset to misunderstanding. It would be no less naive to be astonished that St. Thomas does not talk the language of practical science and that the 'nights' do not figure in his vocabulary.

show better than the ones he has chosen that the motions whereby the Holy Spirit directs the soul as principal agent and lifts it in a *manner* which is itself supernatural to live a supernaturalised life, are the motions of love? 'But the interior blessings which this silent communication and contemplation impresses upon the soul without its perception of them are, as I say, inestimable: for they are in fact the most secret and delicate anointings of the Holy Spirit, whereby he secretly fills the soul with riches and gifts and graces; for it is God who does these things and he does them like God.'[1] The fiery criticism with which St. John of the Cross attacks directors who forcibly insist on discursive meditation hinges precisely on the fact that these directors trespass on the domain of the Holy Spirit and rear obstacles to its action upon the souls who have already entered into the habitual regimen of its gifts.[2]

An attentive consideration of these things proves that the basic features, the prime character of the spiritual doctrine of St. John of the Cross, belong more than all else to the practical explication of the theology of the gifts of the Holy Ghost. This is the supernatural essential to which from the beginning to the end St. John of the Cross remains obstinately attached. The whole of his doctrine is a mighty demand for the preservation from the usurpation of *charisma* of a domain which is essentially that of the grace of the virtues and the gifts. And if he leads souls to the sovereign degree of love and mystical union, it is not by any shortened, but less certain way[3] of extraordinary favours and gratui-

[1] *Living Flame*, str. 3, v. 3.

[2] For beginners (that is to say, in thomist phraseology, for souls which have not yet entered into the habitual regimen of the gifts) 'it is necessary to meditate and to make acts and discursive exercises with the imagination'. (*Ibid.*)

But souls which the Holy Spirit has brought into the contemplative life have thereby exactly surmounted meditation, and it is possible to gravely injure them in insisting on forcibly bringing them back to it. See *Living Flame*, str. 3, v. 3 (second redaction).

[3] I agree with R. P. Garate, followed by M. l'Abbé Saudreau and R. P. Garrigou-Lagrange, that the *shortened way* of which St. Theresa speaks in *The Interior Castle*, Fifth House, chap. iii, describes the beginning of ecstasy (and more generally the gratuitously given graces) which sometimes, but not necessarily, accompany infused contemplation. Cp. J. Maritain, 'Question sur la vie mystique et la contemplation,' *Vie Spirituelle*, Mar. 1923.

The doctrine that all souls, by the very fact that they are called to the beatitude of heaven, have also a general and common call to enter here on earth by infused contem-

tously given gifts, it is by the normal way of the virtues and the gifts of the Holy Ghost, those gifts which are infused in every soul in a state of grace,[1] because, as St. Thomas expressly teaches in the *Summa*, they are

plation into the first fruits of this beatitude, a doctrine which nowadays unites the best theologians, is in entire conformity with the teaching of St. John of the Cross. (Cp. *Living Flame*, str. 2, v. 5.) This call is not addressed in a special way to those who are assisted by extraordinary graces to advance more rapidly (but not without danger) in the way of the spirit; the sole means required are living faith and that organism of the gifts which belongs to every soul in a state of grace, and that ascetic travail of the virtues described in *The Ascent of Mount Carmel*, in the particular character which they take on in the contemplative life, and which endures for the whole course of spiritual progress. From this point of view it ought to be said that he addresses himself to all those who seek christian perfection, in whatever particular way: 'To one and all, provided that they seek this detachment of the spirit' (Prologue to *The Ascent*). But it is at a certain point in this path that he addresses them, at a certain stage of advancement. He has underlined this himself on several occasions. Cp. *Ascent*, book i, chap. 1: 'This first night (that of the senses) concerns beginners, *in the time when God begins to bring them into a state of contemplation*. . . .'; *Ibid.*, book ii, chap. 6; chap. 7: 'I am speaking now to the intelligence of the spiritual man, and particularly to those to whom God has given the grace of placing them in the state of contemplation (because, as I have said, it is to them in particular that I now wish to speak), and I will say how it is necessary to direct oneself to God by faith and purify oneself of contrary things, and by making oneself little, in order to enter the narrow path of obscure contemplation'; *Ibid.*, book iii, chap. 2: 'This objection would have foundation if my teaching was only addressed to beginners. . . . But the doctrine which I am teaching is in order to advance further, into contemplation and union with God. . . .' 'It is needful to say that I am only speaking of those souls which the divine life has already worked upon, which have already been exercised by meditation (which they have one day laid aside) and by asceticism (which they never lay aside), who have been called by their name, in immediate fashion, to contemplation.' (And few arrive at this end, for the union which he preaches is 'heroic and rare': 'como esta alma habia de salir á hacer un hecho tan heroico y tan raro, que era unirse con su Amado divino. . . .' *Obscure Night*, book ii, chap. 14). It has been very justly pointed out (C. H. *Abrégés de toute la doctrine mystique de Saint Jean de la Croix*, Preface, p. vi), 'It would be an extremely dangerous error to apply to all souls, indifferently, from their first steps in the interior life, the rules which are drawn out by the mystic Doctor.' To counsel heroic passivity, which is the highest renunciation of the soul, to those who need to work themselves, and who have not been deprived *by God* of a 'human mode' of action, would mean the total ruin of the spiritual life. It is the very nature of quietism to place oneself, in a usurpation of divine action, in such a state of passivity. St. John of the Cross, like Ruysbroeck, was the merciless enemy of quietism, and it is to strengthen the defence against it (particularly against the quietism of the *alumbrados*) that he insists so much on the authentic signs which mark the dawn of mystical life.

[1] *Sum. theol.*, i-ii, 68, 2.

necessary for salvation. Sanctity is the aim of this growth, this development, this rich flowering of the organism of supernatural energies required for the salvation of the soul.[1] It is on this basis that St. John of the Cross founds all his doctrine; he never ceases inculcating and explaining it: his teaching is *par excellence* a practical theology of the contemplative gifts.

CONTEMPLATIVE PURITY AND NAKEDNESS OF SPIRIT

I should like further to point out how the very purity with which St. John of the Cross, more rigorously than any other mystic, maintains the transcendence of the sacred and 'hidden wisdom' of infused contemplation over all metaphysical and theological speculations is a signal testimony to his fundamental accord with St. Thomas. We know what severity he shows towards all desires for particular knowledge or the taste for revelations. Witness the admirable pages of *The Ascent of Mount Carmel* where he explains why, since the coming of Christ himself, all partial revelations have become useless.

'The principal cause why, under the law of the old dispensation, it was lawful to address these questions to God and why it was rightful for the prophets and the priests to seek for visions and revelations of God, was that the faith was not yet complete nor the law of the Gospel established. And thus there was need that God should be interrogated and that he should speak, it might be by parables, or by visions and revelations, or by figures and similitudes, or by other means of communication. . . .

[1]It is in this sense (quite a different one from that suggested by Baruzi, *op. cit.*, p. 652, which is totally alien from the doctrine and the spirit of the Saint, for the latter never, even when 'he strains mystical thought to its limit', could have regarded 'the theopathic state—which nevertheless remains infinitely rare—as the unique condition of the veritable love of the soul for God and God for the soul') that the doctrine of St. John of the Cross unites with the doctrine of salvation. It is not a doctrine of *salvation, but of perfection* (and he very well knew that the perfect co-operate in the salvation of the others, *adimplentes quae desunt passionum Christi*). But if it is not necessary to come to perfection in order to be saved, it is nevertheless necessary to be turned or *orientated* towards it, if it is true that the perfection of charity falls on the precept, not as a matter or thing to be immediately realised, but as the end towards which each should tend according to his conditions. (Cp. R. Garrigou-Lagrange, *Perfection chrétienne et contemplation*, book 1, chap. 3.)

'But now the faith is founded on Christ and the law of the gospel is manifest in this era of grace, and there is no need to seek God in this manner, neither to ask nor that he should speak as heretofore. For in giving us as he hath done his Son, who is his unique Word, he hath spoken all things and at once on this one Work, and there is nothing can be added. This is the meaning of those words of St. Paul to the Hebrews, where he seeks to turn them from the ancient way which served under the law of Moses, and exhorts them to fix their eyes on Christ alone: "*Multifarium multisque modis olim Deus loquens patribus in prophetis: novissime diebus istis locutus est nobis in Filio*" (Heb. i, 1). God hath now so spoken that nothing remains unspoken; for that which he partially revealed to the Prophets he hath now revealed in its wholeness, in giving us the whole, which is his Son. So he who should seek to question God, or wish for any vision or revelation, does not only a foolish thing, but offends against God, not having his eyes fixed solely on Christ, without searching for some other thing or some novelty. To such a one God could say: I have spoken all by my Word, my Son; fix thine eyes upon him, for in him have I spoken and revealed all, and thou wilt find in him more than all thou desirest or askest. For if thou desirest partial visions, revelations or words, fix thine eyes upon him and thou shalt find all. He is my Voice and my Answer, my Vision and Revelation, which I spoke, answered, made and revealed, when I gave him to be thy Brother, thy Master, thy Companion, thy Ransom, thy Reward. Since the day when I descended on him, with my Spirit, on Mount Tabor, saying, "This is my beloved Son in whom I am well pleased: hear ye him" (Math. xviii, 5), I have laid aside all other kinds of teaching and answers, and given him all: harken to him; for there is no more faith for me to reveal, nor other thing to be made manifest. If I spoke before, it was to promise Christ; and if any asked of me, they were questions which asked or hoped for Christ, in whom are all things, as saith the witness of the Gospels and the Apostles. But now if one asks of me as heretofore, and asks that I should speak to him or reveal particular things, it is in some way as if he asked me for a new Christ, to add something as if it were lacking to the faith which has been already given in Christ: and this is to do great injury to my beloved Son; because it is not only lack of faith, it is to ask him to be incarnate once again

and to pass anew through life and through death. Thou shalt not find what thou seekest in asking revelations and visions from me. Comprehend it well, thou wilt find all and more than all that thou seekest already realised and given and known in him. . . .'

In this condemnation of any desire for particular revelations and for everything which is *extra-ordinary* in the spiritual life, of any reflection by the soul on the clear and distinct events which may impress it on the spiritual way, in this proscription of any appropriation of them, this renunciation of all charismatic communications however lofty, this turning from all sensible and particular things to the pure substance of faith, this insistence that the purely spiritual should alone be allowed to work in the soul, St. John of the Cross is only applying his general principles, his obstinate intention of not allowing the soul to be stayed for the briefest instant by anything which is less than God himself. But at the same time and by this very fact he maintains mystical contemplation in its absolute purity, exempt from all parasitic curiosity, from every desire for the purely human exercise of the intellect—absolutely free from all the equipment and paraphernalia of human wisdom. *Quoniam non cognovi literaturam.*

The most sublime of all wisdoms is a wisdom of the poor; in its very order of knowledge it is made up of poverty and spiritual nakedness. It is naked wisdom, divine joy: wisdom and joy which are alike crucified.

If you wish to *know*—and we ought to desire to know—turn to metaphysics and theology.

If you seek the divine union and would come thither, then you will know this even better, it will be in the exact degree to which you seek to pass beyond knowledge—and in a way of such unpossession, such self-expropriation that you can say indeed: *I have been reduced to nothing and there is nothing more that I know.* Beyond knowledge? Yes, into love: into the love which is translucid and transpierced with the light of the Spirit, penetrated, saturated with intelligence and wisdom. *Now my whole exercise is to love.*

If the renunciation of knowledge in any human way is the condition of this supreme knowledge, it follows as a consequence that it is not in it that human knowledge can find its rightful perfection. It is not from St. John of the Cross, it is from Aristotle that we should seek for lessons

in metaphysics; and it is St. John of the Cross himself who commands this course of action. For everything that is not the sole domain of contemplation and the union of love in nakedness of spirit, for any question of regions of thought less lofty than this divine mountain-top, he charges us to return to the reason. In those regions he asks us to see: not to shut our eyes, but to open them: St. John of the Cross wishes us to have wide-open and observant eyes. Faith and the gifts of the Holy Ghost, in making perfect the reason, only clarify the sight. St. John of the Cross respects both the order of nature and its limits. Why is it not good to ask God concerning particular things, why are these indiscreet interrogatories displeasing to God, even when He answers them? Because 'it is not permitted to any creature to leave those boundaries which God has naturally assigned for its action. God has assigned to man a natural and rational space: to seek to transgress these limits is not lawful: and to seek to verify and obtain such things by the spiritual path is to transgress these natural bounds. The thing is unlawful: God is not pleased thereby, for everything which is unlawful offends Him.'[1] Certainly St. John of the Cross wishes to lead us *above* nature and *above* the reason: into the supernatural order, into the supra-rational clearness of divine wisdom and faith. But *beyond* nature or *beyond* reason—certainly not: that is the last thing that he could wish; he has a horror of anything irrational.[2] The order of grace neither abolishes nor violates the limits of nature; it raises nature whither nature has itself aspired to come, without know-

[1] *Ascent*, book ii, chap. 21.

[2] In this he is the good disciple of the great Reformer of Carmel. This horror of the unreasonable, this profound respect for the natural order is one of the most salient traits in the character of St. Theresa. I may be permitted to recall apropos of this theme her exceedingly wise conduct when any work to be done was indicated to her by supernatural communication; 'It was said to me by Our Lord "not to fail to start off" (for the foundation of Pastrana). . . . Despite the very grave reasons which seemed opposed to my departure, I thought, after such words, that nothing was able to acquit me of acting as I do in such circumstances, that is to say, to remit all decision into the hands of my confessor. I went to seek him; but *I said nothing to him of what I had heard in prayer. In this way I am always more tranquil. I beg the Lord to enlighten my confessors with the natural light of understanding*, and when he wishes that the thing should be done he knows how to put it in their hearts. I have seen this many and many a time, and it was the same again on this occasion. My confessor, having examined everything, decided that I ought to set out. . . .' *Foundations*, chap. xvii. (The italics are mine.) The following of this advice would assuredly calm many troubles and scruples.

ing its own desire, where it groaned that it was not, longed for with that longing which springs from that reserve of radical obedience and of potentiality before its Author which is enwound in the very heart of its own being.

Thus the division is perfectly clear, the line of distinction assuredly drawn, between knowledge in the superhuman mode which proceeds under the ruling of the Holy Ghost, and knowledge of a human kind which is regulated by reason: by pure reason if the question is that of philosophy and metaphysics: by reason elevated by faith if the question is that of theology. To ask metaphysics to lead to this supreme contemplation exhibits the mark of a vast ignorance, of metaphysics as of contemplation: to regard reason alone as incapable of metaphysical thought without the assistance of mystical connaturality is a no less violation of the essential order of things. St. John of the Cross no less than St. Thomas protects us from such weakness. And, inversely, whenever mystical authors, forgetting the great discipline of the Apostle, *sapere sed ad sobrietatem*, concede in some measure to the temptation to speculate, *i.e.* in the mystical order itself, seek to interrogate their holy wisdom on particular problems, to make it leave its own repose and incline to philosophical or theological discourse, where reason can only advance haltingly and uncertainly towards clarification, or base themselves on interpretations which are often rash, St. John of the Cross sees only a diminution and a renunciation of the purely divine, and the peril of illusion in this mingling, beautiful as it often is in the order of poetry, of the mystical night with human lights, lights which can only advance for a yet undifferentiated moment the progress of thought, and which is often a confusion, leading in its forms of aberration to illuminism and to theosophy.

This purity which I have tried to describe, this inflexible discipline of the mind, this profound respect for the distinctions, as for the essential connections, of the order established by God, not only in the doctrine taught but in the doctrine lived, if I may speak so, in the very configuration of their sanctity, is the most moving, the most reverential sign of the profound, the fundamental accord which unites together St. John of the Cross and Thomas Aquinas.[1]

[1]As I wrote before this (Preface to *Saint Jean de la Croix* by Père Bruno de Jésus-Marie, pp. xxi-xxii), 'the accidental and *reducible* divergences between witnesses con-

firm the veracity of their testimony, by showing an accord which is unpremeditated. Instructed as they both are in the two forms of wisdom, the acquired and the infused (for the author of *The Spiritual Canticle* had acquired from his masters at Salamanca and by himself a solid knowledge of theology, and the author of the *Summa Theologica* lived in the light of mystical contemplation), but each having an office distinct from that of the other, St. John of the Cross and St. Thomas, the one from the point of view of mystical experience, the other from that of theological science, are both witnesses to the same living Truth. And because St. John of the Cross never troubled himself in any way with the making of a work of scholastic theology, but only with singing what he divinely knew, then of expounding in his commentaries the practical science of the road which had led him to such knowledge (not without reference then, when it was necessary, to scholastic theology); because the movement of his practical, concrete, lyrical thought, with its harvest of psychological intuitions, is opposed to the methods of scholastic exposition; because he never even dreamed, where the differences of standpoint brought in their train apparent contradictions in the manner of description, of explaining these or establishing a correspondence, which for him existed in itself, between his language and that of speculation—his fundamental accord with St. Thomas is only the more significant; a disciple of the best scholastic tradition in theology, but of the Holy Ghost in contemplation, only writing of 'the experimental science which he had lived', his rightful work was not to continue the teaching of St. Thomas like a commentator, but to confirm this teaching livingly as a witness.' This book of Père Bruno's, with M. Maritain's Introduction, has been translated into English by E. I. Watkin (published by Sheed and Ward, 1936).

CONCLUSION

TODO Y NADA

AT A certain degree of depth and of concentration all things, even those which in their authentic substance are farthest from the spirit, appear to take on the aspect of spiritual being. Taking the word 'spiritual' in this analogical and widest sense, we should rather hold that there is a sort of spiritual density, which is independent of whatever particular values may be in question, which implies infinitely more in relation to the vital quality of a soul or a work or a period. For good or evil the immaterial weight which is a function of this density bears each to its appointed spot, and the nearer this is to the central region of human history the greater the gravity in this invisible mass. Thus men who have very little weight in their thought or their actions can fulfil a grave destiny and can weigh heavily in the scales of time.

It is far from a good thing when this inner ferment rises to the surface and there takes on the appearance of inertia. The fundamental disequilibrium of the modern world is marked by the fact that, taking the middle range of culture and the regime of human life, the spiritual density of the truth has for several centuries tended to weigh less than that of the false. And one could say that in our own days the inclination of the balance had effectively changed its significance.

The classical picture of man draped in the outward semblance of his selfishness at the foot of the Cross, an equilibrium, an order, a peace, a beatitude of pure nature, the possession of the earth by the rich and by that *mathesis* which religion confirms and eternal recompenses crown—this is the lie which a robust civilisation and the perfection of an admirable art had brought us to believe in the youth of the modern world. Jansenism endeavoured to redress the balance; but by demanding that the christian soul should honour mystery by the shattering of reason—

and so also measuring with a human measure, however broken (which is quite another thing than the divine measure)—it could only bring oppression instead of glory and bind once again the arms of the Crucified....

With this christian naturalism become normal and conscientiously practicable, legitimate, honest and stable, so that authentic christianity tends to pass for impracticable, in any case as inhuman—this is the state in which our so-called christian civilisation has immobilised itself in the flesh, in which it has lost all its ancient momentum of charity. The love of so many great saints just suffices to prevent the dissolution of the christian world: but as to the message which that world has been charged to deliver, it remains uncarried, and the cry of the poor goes up in vain.

Meanwhile, for one cannot escape from the angels, an inverse phenomenon has taken place, which is to-day become tangible: in the degree to which the christian world has diluted its substance, in that same degree the world, the prince of the powers of this world, has concentrated his. It seems as if all the alembics of the invisible were at work to transmute all human things into the state of quintessence. In art and in poetry, as in the life of the senses, of vice and of sin, of dreams or of finance or of death, everywhere the pure spirit, the essential essence, disengages itself and stinks in our nostrils. The souls of men are subjecting themselves to a spirituality of the flesh, to an asceticism and martyrdom of the perishing moment. We do not want the new wine of the Holy Ghost, but the alcohol which intoxicates and which kills, while the devil distributes to his dear victims the white or black drugs of his other sacraments. Meanwhile many Christians, who judge their unhappy brethren from above, apply themselves to make an honest success of existence, and seek to support the interests of the Most High by considering theology presumptuous, asceticism superfluous, contemplation perilous, and the precept 'Be perfect' a work of supererogation. They are fighting with the bubbles on the surface of the torrent!

This is that disequilibrium of which I spoke at the opening of this book and the consequences are only too easily foreseen. There is no redemption which does not entail the shedding of blood. Alas, every lamb which is led to the slaughterhouse is not the Paschal lamb, and not

every man who is baptized who is put to death is a martyr! Mighty portents however have risen on the far horizon of our most unhappy Europe; atheism become the religion of the State is condemning everything on earth which is not to its satisfaction; and, if it is still making use of pretexts for its death-sentences, in fact it is for the crime of rebellion against this negative religion that many already have been immolated, and the happy hour is coming when a man can die for God; not for the nation nor for humanity, neither for the revolution, nor progress, nor for science, but for God alone. More cynical and more brutal than that education by inanition by which western liberalism asphyxiated childhood, an attentive pedagogical surgery is operating upon souls in order to cut away the image of God; and that image will be reborn for all that: a poor child who believes he is an atheist, if he loves truly that which he holds for the face of goodness, has turned to God without knowing it. . . . It is with deep respect that I write here of the Russian people and of the spiritual tragedy in which they are involved. If such a world of naïveté and violence, of faith and abnegation, is given over to the false miracles of the material grandeurs of the spirit which denies the spirit, this must be in some form of immense spiritual purification. This is not the place to ask whether in the social world, nature, for too long outraged by covetousness and egotism, is not seeking at any price to find an outlet for those claims of justice which are like her indignant soul. Here we are only considering the spiritual aspect of things. Once they have been let loose in history the dark influences are fated to multiply endlessly their effects: but how is it possible not to believe that there will appear at the same time, rising from those depths which have been laid open, when human nature is so ploughed and harrowed, so stripped to the core, reprisals of grace, divine regenerations, which will perhaps justify, in a manner totally unforeseen, the immense religious hope of a Dostoievsky or a Soloviev in the destiny of their nation? Meanwhile the Church prays for them lovingly; but the men of this generation, cold as the dead, indifferent, not certainly to commerce and rapine, but to the soul of this formidable adventure, do they understand what Russia says to them, as flesh and blood strive to do the work which the bearers of the name of Christian have neglected, do they also comprehend what a degree of spiritual density, what an inward ascetic violence Marxism itself, and

the hatred of a world held accursed by history must have had in the invisible universe of the heart of a Lenin for the outward explosion to be of such a quality?

Meanwhile, on all sides, and even where grace is in disguise, where men do not yet know the true name of the divinity which works within them, authentic spirituality aspires to reassemble its forces—and the world itself presses upon souls and turns them towards the spirit. Certainly not in a refusal of temporal work—love itself compels us to put our hands to the works of time—but in order to begin with the first necessity. If a man does not seek first of all for the secret of heroic life, the work he does for the common good will remain of little value.

If we wish to be instructed in the things of the spirit the mystical Doctor will teach us. He knows the paths of the mountain inhabited by God, the mountain which is plenteous in grace, compact of wisdom and of goodness: he traces, for those who have decided 'to pass through this nakedness of the spirit', the plan of the ascent of Mount Carmel.[1]

[1]The symbolic design which I have followed in this exposition is the one that is printed as a frontispiece to the first edition of the *Subida del Monte Carmelo*, Alcala, 1618. It is reproduced in Silverio's edition (*Obras de san Juan de la Cruz*, Burgos, 1929, vol. ii). The first sketch drawn by St. John of the Cross for the Carmelites of Beas, which is reproduced in the book by R. P. Bruno de Jésus-Marie (*op. cit.*), has been later corrected and completed by the Saint himself (evidence of Magdalene of the Holy Spirit. Cp. Silverio, vol. i). It is this final state of the Saint's work which is probably given us by the plate in the first edition, at least with regard to the general arrangement and the text of the legends (which are of primary importance). The neatly arranged steps of the mountain, the trees and the flowers and the coats of arms are evidence of the fact that the drawing has been copied and retouched for the printed edition by a somewhat heavy-handed professional draughtsman, whose signature, *Diego de Astos fecit*, figures in the top left-hand corner. But this is unimportant from the point of view of doctrine. It might be remarked that Chapter xiii of the first book of *The Ascent* tallies with this symbolic representation and agrees best with the second state of the design. (See also book iii, chaps. 2 and 15.) The way in which Hoornaert has translated the legends leaves a good deal to be desired.

Some readers may perhaps be astonished that St. John of the Cross had recourse to a graphic representation of spiritual realities. They forget that, according to Pseudo-Dionysus, that which is above all representation may condescend to use the most simple images, and further that the Saint must have smiled as he drew. Others will find it an instance of a rather naive assistance to the memory. In truth it is something decidedly different, a graphic poem, which has been deplorably mangled by the meticulous academicism of the copyist, but which in its first study (see the drawing in the work of Bruno de Jésus-Marie, *op. cit. supra*) has a very pure and most moving quality.

One fundamental feeling appears to traverse the entire work of St. John of the Cross, the sense of the almost insupportable and double paradox of the condition of man and the works of God; the sense of a resolute disproportion, of the union of extremes, of annihilation as the condition of superabundance, of death as the condition of supreme action: the sense of the Cross, whereon the mystery of the Incarnation is fulfilled.

His sense of life is not tragic, for tragedy as such has no issue and here on the contrary everything hurries and precipitates itself towards a blessed and radiant end—but superhuman, like beatitude itself, the transfixed heart of the living God. But all things take on for him that supernatural distension of the earth towards heaven which the figures of El Greco proffer to our outward eyes. While in the speculative wisdom of a St. Thomas Aquinas, where everything is knitted into the height of the first Truth, it is unity above all which is discovered to us, explaining and reconciling, ordering, justifying all disparity—as Angelico painted the dancing circles of heaven—in the practical wisdom of St. John of the Cross, where everything is knotted up with the greatness of the human heart, it is first of all disparity which is revealed, so that, vanquished by love, it may be led into unity. Christian wisdom can only truly attain one extreme by the other, marrying peace, security, joy, everything which rightly belongs to the state of God, with the agony of desire, the sweat of blood, the death for sin, which are the truth about our human state. 'Who will deliver me from this body of death?' says St. Paul; and also, 'For it is not I that live but Christ liveth in me. I can do all through Him who strengthens me'.

There are two bad roads and they are broad. There the soul loves itself with a proprietary love. *The way of the lost spirit* leads to the good things of this earth. *The more I sought the less have I found. I cannot climb the mountain, for I have chosen an evil road.* It is the road of death.

The road of the imperfect spirit claims to lead to the goodness of heaven, and perhaps it leads thither. But it is seeking there the satisfactions of the creature. *Because I sought for them I have them less than if I had mounted by the path. I have dallied and I have not mounted so high because I did not stick to the path.* It is a road of servitude.

The good road is *the way of perfection*; it passes, almost as if it were nothing, between the two hills of egotism over whose flanks wind the

two roads suitable for cars. It climbs straight ahead. It is narrow. *Quam arcta est via!* It does not broaden out until much later. The soul there loves itself as expropriated of itself, that is to say, with self-hatred, and it has torn itself from everything: it has consented to self-loss, decided to remit its spirit—which is to die—into the hands of him who loves it. This path leads to the land of Carmel, to God perfectly loved in himself and above all things. *The glory and honour of God dwell alone on this mountain. Thou shalt be by so much more as thou hast willed to be less.* This is the way of liberty, the only way of liberty.

The end of the journey is transformation in God, which is done here below by grace, by faith and by love, and which will be achieved in the beatific vision. It seeks to go thither where the Son is (he is in the bosom of the Father, and he is on the cross); it seeks to become one spirit with God. 'God communicates himself to the soul in so far as it is advanced in love, that is to say, the more its will is conformed with God. When it is totally conformed and alike, then it is totally united with and transformed into God in a supernatural way.'[1] This is given to those who 'by grace are reborn', and who have received from God 'that sonship which surpasses all intelligence'.[2]

The soul is like a window, where the light should dwell by nature. Fortified by grace, if it removes every obstacle, every stain, every creaturely veil, it will become light by participation. 'God then communicates his supernatural being in such a way that the soul becomes God himself, and possesses what God himself possesses. . . . What leads to this union is not the intellect, or the taste, nor imagination, nor feeling. . . . It is nothing other than purity and love'.[3] In the end 'the understanding of such a soul is the understanding of God, its will is the will of God, its memory the eternal memory of God, and its delights the delights of God. And the substance of such a soul, while all the while being other than the substance of God, for it cannot be substantially changed into him, nevertheless is united with him, absorbed into him, is God by participation.'[4]

The worth of contemplation is not only, is not so much that it is a life of knowledge, it is above all that it is a life of love, the space in which

[1] *Ascent*, book ii, chap. 5. [2] *Ibid.* [3] *Ibid.*
[4] *Living Flame*, str. 2, v. 6.

spiritual love can unfold to its fullest dimensions. The knowledge it asks is the knowledge of love, by which it shares a common life with the Spirit; and this knowledge proceeds from love, which by the instinct of God gives experience of God. The quality of the mind is its inwardness: how could the unity of the spirit which is formed by the adhesion of love between God and the soul not re-echo in knowledge? Contemplation is the experience of union, it is by the fusion of love that it feels and lays hold on those things which are divine. Taught by love, 'it is rich in savour', for 'all that is done by love is savourous and rich'.[1] Indeed, 'nothing is obtained from God if not by love.'[2] To become God by participation is to become love. 'The perfect soul is nothing but love.'[3]

To ask this of the most complex and feeble of beings, a prating animal, a glutton who incessantly devours the meagre intelligibility of visible things and the delights of the moment, of a nature marred, pierced through with the lust of evil and concupiscence, whose self-conceit debars it from loving! Hurry! Swiftly let him be dug into the earth, that he may die, that the juices of the ground may dissolve him: if not—he will remain alone, a seed flung on the manureheap of his heart, and never be delivered! John of the Cross is pressed for time, he does not want to lose a second. Because he is conscious as no other man has ever been of the scale of the chaos which severs these extremes which are to be united, he throws up with an unparalleled vividness the prodigious dynamism which is implied by the life of a Christian. Those ladders and escalades which mystical authors so often describe make all too feeble an image. It is the whole substance which must be in travail, which must groan, which must liquefy itself, in order to leap up into eternal life. And this invisible momentum must ceaselessly accelerate. Mercy on those sentimental beings who, shedding a tear over the courage which will be required for them to part forever from their sins, think that it may be more *comfortable* to believe in God, and that one turns christian to gain a tranquil berth!

Nothing, nothing, nothing, nothing: this is the path of St. John of the Cross. *Knowledge and Repose—not this, not that. Joy and Honour—not this,*

[1] *Cant.*, str. 18. Cp. *supra*, chap. vii, p. 415.

[2] *Cant.*, second redaction, str. 1. [3] *Ibid.*, str. 27.

nor that. Security and Liberty—not this, not that. Glory and Enjoyment—not this, not that. Nothing.

And upon the Mountain—nothing.

If the question is one of transforming a human being into love, of bringing him up in the manners of God, one cannot be astonished at the destructions which are required. It is only too obvious that a dialectic purification in the manner of Plotinus is radically insufficient: that but cleaves an intellectual space which in relation to the being of the subject itself is only a mere superficial erosion. The purification taught by St. John of the Cross, and which is accomplished by God, cuts infinitely deeper, to the very core and sinews of being itself: it leaves us nothing of our own, not even the empty space. All is surrendered, lost: and Plotinus does not know that the creature so set at naught must re-absorb its nothing, know it, live with and in it. It dies that it may begin to live in God's way—and it dies again to act in God's way, to enter into the work of the Saviour.

Destroying me thou changest death to life.[1]

'Be ye perfect as your Father in Heaven is perfect.' 'He who hateth not himself because of me cannot be my disciple:' these two sentences echo from heaven to earth, and say exactly and rigorously the same thing.

THE MEANS OF ATTAINING ALL

To win that which thou knowest not,
Thou must go where thou knowest not.

To win that which thou tastest not,
Thou must go where thou tastest not.

To win what thou possessest not,
Thou must go where thou possessest not.

To win what thou art not,
Thou must go where thou art not.

THE MEANS FOR KEEPING ALL

To win to the knowledge of all,
Wish not to know anything.

[1] *Living Flame*, str. 2, v. 6. '*Matando, muerte en vida la has trocada.*'

To win to the tasting of all,
Wish not to taste anything.

To come to the possession of all,
Wish not to possess anything.

To win to the being of all,
Wish not to be anything.

THE MEANS OF ESCAPE FROM ALL FETTERS

When any one thing stays thee
Thou ceasest to plunge into the whole.

For to attain to all in all
Thou must leave behind thee all and all.

And when thou winnest a hold of all
Guard thyself and wish for nothing.

For if thou wishest for aught in the whole
Thou keepest not purely in God thy treasure.

Such conduct would be insane, if it were not that God begins it. It is He who, in giving us grace, has planted in us a seed of himself. It is He who directs the travail of our will. It is He who, when we have come under the habitual regime of the gifts of the Holy Ghost, will tend and consummate our purification, raising us to the height of contemplation by the paths of passiveness.

'I would teach the soul that in this affair God is the prime actor. . .'[1] 'This is not possible to the powers of nature alone. In truth it is God who must set the soul in this supernatural state; but the soul, so far as it can, must also be in good dispositions, which it may acquire by the help which God supplies.'[2]

It is the nature of the end in view which makes comprehensible the rigour of the means employed. The love of creatures, though it is much more rarely that it wins to its perfection (even of death and sin) than divine love, strews a myriad deformed efforts about its path. There are also many foiled attempts, broken bits and *disjecta membra* of lovers on

[1] *Living Flame*, str. 3, v. 3. See also *supra*, chap. vii.

[2] *Ascent*, book iii, chap. 1.

the way of divine love: it is one of the sufferings of a Christian, the thought that by his deformities—there is hardly anything less gracious than 'a saint in embryo', limping with egoism and imperfect virtue—he may run the risk of blaspheming divine love among men: unhappy fellow, he knows well enough that only saints are free of the chrysalis, that only they are gracious and sure. St. John of the Cross has no wish for cocoons. He repeats untiringly that the excellence of the love of God, into which the soul must be transformed, is the measure of the stripping to which the senses must be subjected. The imperfect spirituality of profane wisdom asks a certain measure of such detachment: what is surprising in the demand of a divine spiritualisation for one that is so much more radical?

The doctrine of St. John of the Cross is all the more firmly based in the degree to which his conception of human nature is entirely aristotelian. To him man is no pure spirit making use of a body; his natural life, even in the world of the spirit, thrusts its roots down into the senses, and is only exercised in the shaping of images: which is why St. John the practician of human souls links together the senses, the work of the reason and discursive meditation. In regard to the being of God all these are the country of unlikeness.

He does not ask us to destroy the activity of the senses—no more than the Gospel, in speaking of those who have 'made themselves eunuchs for the kingdom of God', prescribes mutilation. He loved the beauty of the countryside which helped his prayer; he had an exquisite sensibility; he was one of the greatest poets of Spain and of the world; he was often depressed; he had a profound tenderness for his brother Francis the poor mason, and a deep delight in his spiritual children. But he wishes that in the use of notions as of sensible attractions our lack of possessiveness should be absolute. It is to use as though not making use. Later, on the mountain, all will be transfigured. Meanwhile it is necessary to begin by losing all; that is the rule of the road. In the order of physical and material being total renunciation is not possible, and the renunciation of particular possession by the vows of chastity, poverty and obedience is the privilege of a few, but in the order of spiritual realisation total renunciation is asked of all who seek after perfection. There is only one way out of the lamentable struggle of a spirit enracinated in the flesh, which com-

municates to it its infinitude of desire. Give everything, poor men: how much easier it is to give all than by halves! Everything that we keep is like a cancer gnawing at our entrails.

The senses bring two forms of impurity in their train: one which is contrary to the life of virtue, and over which the soul triumphs by the direct use of its faculties, of the senses themselves: and the other which is contrary to the contemplative union and over which the soul triumphs in surpassing the senses. For the cure of the former the ascesis of John of the Cross knows two remedies. 'He used to say that a man could conquer the vices and acquire virtue in two ways. There is first of all the ordinary method and it is less perfect. It consists in combating a vice, a sin or a temptation by the direct opposition of acts of the contrary virtue. . . .

'The second method . . . is at once easier, more fruitful and perfect. There the soul fights against and destroys the temptations of the adversary, and raises itself to the most perfect degree of virtue, by the sole use of spiritual acts and motions inspired by love, without any other exercises. How is this possible? He explained it in the following way.

'As soon as the first motion or the first attack of some vice makes itself felt—luxury, anger, impatience or the spirit of vengeance for some injury, etc.—do not oppose to it an act of the contrary virtue, as is done in the first way, but immediately resist it by an act or movement of spiritual love which opposes itself to the assault and lifts the soul to union with God; because in so raising itself the soul absents itself from this life and is present with God and unites itself to him; and by the same fact the vice or temptation and the enemy are defeated of their end and remain frustrate, knowing not where to strike. The soul, in effect, which "is more where it loves than where it lives" divinely abstracts itself from the flesh and from temptation, and the enemy cannot find where to strike or to wound. . . . The soul has escaped. . . . Thus there is born in the soul that heroic and admirable virtue which the Angelic Doctor called the virtue of the perfectly purified soul.'[1]

To defeat the second form of impurity which is produced by the senses and which hinders union and the love of contemplation with a fog of creatures, there is only one remedy: night and emptiness. This

[1] *Testimony of Eliseus of the Martyrs.* (Silverio, iv, pp. 349-50.)

purification, which is the particular interest of mystical theology, St. John of the Cross deals with in the fullest and most complete fashion in his doctrine of the Night of the Senses. It is a double night, at once active and passive,[1] or rather perhaps a twilight, into which those souls penetrate who have received the call to contemplation (the Saint only addresses himself to these). On the one side the soul exercises itself on its own rightful initiative, thinning down the taste of the senses and the force of their attraction, putting the appetites to sleep. On the other side, God acts upon the soul and himself purifies it with an incomparably greater effectiveness. Without this divine decapitation of the passive night the soul would never be delivered from those all too visible blots which are imperceptible to it, from the desire for consolations, from the spiritual presumption, sensuality, impatience, avarice, gluttony, envy and sloth which are the common defects of the apprentices of perfection. In discerning the spiritual realities in the representations of the senses, in rising above phantasms, in beginning to understand and to comprehend that the Divine will fill it just in so far as

[1]It is important to comprehend that the active nights treated of in *The Ascent of Mount Carmel* and the passive nights treated in *The Obscure Night* (just as the two books comment on the same verses) are two concomitant aspects of one life and one progress. 'In the measure to which on its side the soul advances in negation and the lack of forms, God puts it in possession of union, and this he works passively in the soul, as we shall tell, with the help of God, in the passive Night of the soul' (*Ascent,* book iii, chap. 2). *The Ascent* explains what the soul (which has already passed through meditation and has been called in immediate fashion to contemplation) must do on its side in this progress, *The Obscure Night,* what God does on his. Everywhere St. John of the Cross demands 'courage and courageous obstinacy' (*Spiritual Maxims,* Andujar Ms.) of the soul, in the one case, courage to undertake, in the other, courage to endure.

Why did St. John of the Cross not treat at the same time these two aspects of spiritual progress, and choose to study separately the active and the passive series? The reason to my mind is that the correspondence between the various successive moments of these two co-related series is not fixed, the various moments of the second series can anticipate or retard those of the first according to the good pleasure of the free initiative of God.

On the other hand it is my belief that if one wishes to co-relate the two series in a general fashion (*ut in pluribus*), the passive nights need to be placed rather further off in the line of time than the active nights (which prepare and dispose for the passive). (With regard to the *third night of* which he speaks in *The Ascent,* book i, chap. 2, it is described in *The Spiritual Canticle*—betrothal and spiritual marriage—and in *The Living Flame.*)

it empties itself, the soul also begins to catch a glimpse of the peace of God, to enter into the prayer of quiet, that tiny beginning of infused contemplation.

This night of the senses 'serves to accommodate the senses to the spirit rather than to unite the spirit with God'.[1] With those rare souls whom God sees are not too pusillanimous to be called to higher purifications, it is complicated by particular sufferings and temptations: such souls know sometimes the manifestations of the angel of Satan or the spirit of fornication, sometimes the spirit of blasphemy and that of vertigo, which bar the entrance of the Night of the Spirit. This also is double, active and passive. It is as dense, as obscure as the darkness of midnight, before the eternal morning of the vision. In the active night of the spirit, the contemplative soul purifies the understanding by faith, not only by dwelling in obscurity with regard to all creatures, but by the refusal of all distinct light, the rejection, while it seeks for God in prayer, of all representations of God or of spiritual things: this is what it sets itself to do, its particular action, the refusal of everything which is dissimilar to the divine. For no created thing, no graspable thought, no distinct idea, nothing by which the understanding is able to comprehend in this life, can serve as an immediate means of divine union. The unique means which is proper and proportionate to union is pure faith, the faith which is vivified by charity and which the gifts of the Holy Spirit render penetrating and savourous. Let the soul then concentrate itself in a single pure and general act: 'Be still and know that I am God.'[2] The soul purifies itself alike of memory by hope, expropriates itself of all, leaves everything; but God becomes its whole support. It purifies the will by charity, risking for love everything that it loves, detaching itself from all good things which are not God, even spiritual good, lifting the sacrificial knife over the very pledge of all the promises it has received.

But God also acts on his side, in the plenitude of his initiative. This is the passive night of the spirit, the 'horrible night of contemplation', which is infused contemplation itself; like the cross of Jesus, the place at once of supreme torments and the beatitudes of peace. The question is no longer that of accommodating the senses to the spirit, but the created

[1] *Obscure Night*, bk. ii, chap. 1. [2] Ps. xlv, 2.

spirit to the Uncreated. In this agony of its very substance is the consummation of the encounter of those extremes of which the Mystical Doctor had so terrible an intuition. The measures of men cease to apply; in this superhuman atmosphere all perceptions are disconcerted, take on incomprehensible proportions. A light divinely pure pierces the obscure and impure soul, it feels persecuted by God as though by a mortal enemy, it no longer knows the slightest foothold, it longs for death, there is no one left who has for it an instant of pity, 'it feels so and so it is.'[1] The divine pulverises it, dissolves its spiritual substance, and absorbs it in a profound and absolute obscurity, as though some animal had swallowed it alive, devoured it in its sombre belly. To remove the human rust which is the centre of the soul, must not the soul be burned in the fire like an empty kettle, be destroyed and in some manner annihilated, 'since passions and imperfections have become connatural to it'? 'Of such souls one could truly say that they go down to hell alive.'[2] So do the passive purifications of the spirit erase the profound, inveterate stains, old as Adam, which are confounded with our very selves, and that 'natural rudeness which every man contracts by sin', and the actual imperfections which constitute the flaws of the advanced. Like love and by it they liquefy the heart. For love is there, it is all the work of love. Stripped, transformed, transparent, enflamed with love in the darkness; filled with a supernaturally simple light, pure, general, detached from every intelligible particular—the soul has become apt to 'penetrate all things, even the deep things of God.'[3] 'In this is found the proper character of the purified soul, which has annihilated all particular affections and forms of knowledge. Tasting nothing, comprehending nothing in particular, holding itself in emptiness, in the obscurity of the darkness, it finds itself framed to penetrate all, in such a way that it verifies in itself the words of St. Paul: *as having nothing yet having all*; such beatitude is due to such poverty of spirit.'[4]

I realise only too well how rash it is to attempt to synthesize in a few

[1] *Obscure Night*, book ii, chap. 5.

[2] *Et descendant in infernum viventes*, Ps. lv, 15. Cp. Job, xvii, 16; xxi, 13. *Obscure Night*, book ii, chap. 6.

[3] St. Paul, I Cor. ii, 10.

[4] *Obscure Night*, book ii, chap. 8.

pages, and run moreover the risk of distorting and betraying, teaching of an incomparable plenitude and which transcends all philosophy. But it is essential to indicate the principal moments of the spiritual trajectory described by St. John of the Cross. At this point the soul is free; it has the freedom of the country. It has passed through the Door. 'And it goeth in and it goeth out and it hath found rich pastures.' It is inexact to say any longer that the way has broadened out: the narrow way ends in the infinite amplitude of spiritual liberty: *Here there is no more a path. Because for the just there is no law.*

This is the exact doctrine of St. Paul.[1] There is no longer law for the just man, because he has become more than the law, a king. He is like great criminals, who have nothing more to lose; he has lost his very soul, hidden in the light of the Trinity. Love has destroyed and borne him anew, buried and raised him to life with the great Phoenix of the Five Wounds. Moved by the Spirit of God and become the son of God, because in him grace has borne its fruit, because he has renounced his own human personality for God he takes on in a manner the personality of God, 'he goes whither the impulse of the Spirit is to go, thither he goes, and he returns not when he goes.'[2] He announces peace upon the mountain-tops, he is disconcerting and unseizable, a bright cloud moved by a breath; he judges all things, and men may treat him as refuse but him they cannot judge.[3] He magnifies God because God has become in him and by him what God alone can be, and what He wishes to be in us, a supreme liberty moving without obstacle another liberty, occupying it entirely, willing in the man (in effect the man wills only the good) everything that He wishes, all that they wish, for the two wills are no longer practically discernible apart: God and the saint have exchanged hearts. 'Thou knowest not whence it comes nor whither it goes: so is every man that is born of the Spirit.'[4]

[1]Cp. Rom., x, 4: 'Finis enim legis, Christus'; Gal., iii, 24: 'Itaque lex pedagogus noster fuit in Christo;' v, 18: 'Quod si Spiritu ducimini, non estis sub lege'; 23: 'Adversus hujusmodi non est lex;' II Cor., iii, 17: 'Ubi Spiritus Domini, ibi libertas;' Rom. viii, 14: 'Qui Spiritus Domini aguntur, ii sunt filii Dei.'

[2]Ezechiel, i, 12.

[3]'Spiritualis autem judicat omnia; et ipse a nemine judicatur' (St. Paul, I Cor. ii, 15).

[4]John, iii, 8.

Liberty and spirituality are two strictly correlative terms. Liberty, gratuitousness, detachment, the evasion from the dominion of the crowd and of opinion, no more ruled lines, no more bonds, no more laws! The only error is to seek all these things in the flesh. The law is the only way of surpassing the law, on the condition that love passes through it. It was by his obedience that Christ achieved. Liberty is not there where is the spirit of poetry, or of mathematics, or the spirit of nourishment and the earth, but where the Holy Spirit is, who sanctifies and who sacrifices.

'The things that are of God no man knoweth but the Spirit of God.'[1] It is the Spirit of God which illuminates and vivifies on the mountain of perfection. The spirit of filial fear, the spirit of piety, the spirit of knowledge, the spirit of counsel, the spirit of power, the spirit of understanding, the spirit of wisdom, by the seven gifts with which it touches and animates the soul, it is this spirit which bears the soul to mystical union and which loosens in it the sweetness of God:

Blow across my garden
That its perfumes may breathe forth!

The fruits of the Holy Ghost, chastity, continence, modesty, the firmness of faith, meekness, benignity, kindness, patience, longsuffering, peace, joy, the tenderness of charity, these are the final and delectable fruits which abound on the heights. The four cardinal virtues, inferior to the gifts, and which stand before wisdom like his servants before a king, are inscribed on the mountain slopes. On the crest, higher than the gifts, faith, hope and charity, which attain to God, reunite man with his centre. And that security, which the soul has now found at one with liberty, because before he had said to both: nor this, nor that. *Since I rooted myself in nothing I find that nothing is lacking to me.* He who is united in the depth of his being with the life of all life, dwelling within him by grace, thereby possesses all things. *When I wished for nothing for myself, all is given me without my seeking.*

'Mine are the heavens and mine is the earth, mine are mankind and the just and the sinners; the angels are mine and the Mother of God, and all things are mine; and God Himself is mine and for me: for Christ is

[1] St. Paul, I Cor. ii, 11.

mine and all for me. Truly then what seekest thou for, my soul, and what doest thou ask for? All that is is thine and is all for thee.'[1]

Divine Silence. Divine Wisdom. The unity of life, the endless communion of the sweets of love: perpetual festival where the recovered prodigal is drunken with wisdom, where in the Kingdom of the Father, in the inward heaven of the deiform soul, the Son drinks with the sons the new wine of eternal beatitude. *Secura mens quasi juge convivium.*[2]

When the night of the spirit has been sufficiently profound, when the substance of the soul has been sufficiently dissolved, *cupio dissolvi et esse tecum*, that that made its desire, *to be with Thee*, becomes sensible and felt; it is the invasion of peace. In the state which St. John of the Cross calls spiritual betrothal, contemplation becomes luminous. It is the twilight of morning. Without seeing God in his essence, the soul nevertheless experiences that He is all, in transpiercing glances, in a knowledge stripped of all accidentals and images, whose sweetness penetrates to the very marrow of its bones. But the peace is not yet complete, for the visitations of God remain intermittent and the soul remains exposed to the terrors of the Devil.

The perfect peace promised by Jesus is given in the transforming union or spiritual marriage. 'According to Holy Scripture (Gen. ii, 24), in the consummation of marriage the partners become two in one flesh; in the same way, in the consummation of the spiritual union between God and the soul, these two are two natures in one spirit and one love.'[3] The soul then possesses the unlimited rights of a bride, God reveals to it all his secrets. Terrible and tremendous are the powers of this soul which is entirely submissive to the will of God! It participates in some manner in the impassibility of the angels, the waters of grief cannot shake it, even its contrition for its faults, which is perfect, has ceased to be afflicting, the demons dare no longer attack it, it seems identified with peace itself. 'In this state of innocence it is in a certain manner like Adam in the state of innocence, when he knew not what evil was: so innocent in itself that it comprehends not evil and deems nothing evil; it will hear

[1] *Spiritual Maxims and Sentences* (Andujar MS.).

[2] Proverbs, xv, 15.

[3] '. . . son dos naturalezas en un espíritu y amor, según dice San Pablo. . . .' (*Canticle*, second redaction, str. 22. Cp. first redaction, str. 27.)

speech of very evil things, it will see them with its own eyes, and it will not understand the evil that is there; because it has no longer in itself that inclination towards evil by which it would recognise evil in others.'[1] Confirmed in grace, it 'is become, as much as earthly life may permit, God by participation'.[2] And all the time it is annihilated, perfectly empty—of all that is not the truth of God and love. 'Because my heart has been set on fire, my nothing has been changed; and I have been reduced to nothingness, and I have known nothing more. *Et ego ad nihilum redactus sum, et nescivi.*'

These things are set forth in *The Spiritual Canticle* and *The Living Flame*; in recounting them I have made use of the Saint's own words. At no time has the world lacked holy souls who have known these things by experience, and without whom all the goodness of this lower world would long ago have been dissipated. Their experience echoes that of St. John of the Cross. I quote (for such documents do not abound) a particularly instructive passage from some precious notes on the spiritual marriage, written some fifty years ago by a member of the Society of Jesus and recently published. 'The soul in this blessed state', writes Père Rabussier,[3] 'comes to the habitude of total possession of what it may wish in the sight of God, not only for itself, but for the greater good of souls. . . . In this conformity of the will, the being in a state of spiritual marriage experiments in this way: when the thought of a desire traverses his mind, he need only prove it by entering into the heart of this prayer: if the desire springs from there it is a clear proof that God wishes it put into execution; if not, the desire vanishes of itself. The habitude of total possession so engenders little by little a certitude, greater than any other, that what God makes desired it will accomplish. Even this future tense is not wholly exact, for this habitude even leads to the experience and

[1] *Canticle*, second redaction, str. 26. Cp. *Living Flame*, str. 2, v. 6: 'Finally all the movements, all the operations and inclinations which the soul previously held from the principle and the force of its natural life, are changed in this union into a divine movement.' Cp. *supra*, chap. vii, p. 407, note.

[2] *Cant.*, str. 27.

[3] *Revue d'ascétique et de mystique*, July, 1927. Père Rabussier died in 1897. These notes had been written out for Mde. Cécile Bruyère, Abbess of Ste. Cécile de Solesmes, at the time when she was preparing her book, which has since become a classic, on *L'Oraison d'après la Sainte Ecriture et la tradition mystique*.

clear sight that all is accomplished and decided by the very fact of this prayer.

'So . . . when more than one soul has entered into the possession of this prayer, and the Holy Ghost inspires in them an admirable course of unanimous ideas converging on the same goal, the force is irresistible. . . . It is a great misfortune when among a great number of souls at the head of the apostolate there is not one possessed of this prayer; then, the Saints teach us, a country declines and Providence appears to dispose all things against the good and for the advantage of the evil. . . .

'But how can it be that such a domination belongs to the prayer of spiritual marriage when so many millions of saints and angels who are confirmed in grace cannot prevent the devil triumphing over sinners? Let us remember that God does all things in order, and that heaven and the Church on earth are different things. In the same way a single star holds enough fire to melt all the ice upon earth and yet we endure the winter; just as we require a point of contact to move the bar of a lever, so God wills that all the action of Heaven on earth should have a point of contact here on earth; and this point of contact is the saints who are still pursuing their pilgrimage in this life. . . .'

This contemplative later explains that in the state of spiritual marriage suffering (the suffering of prayer, due to divine action, and which henceforward can only exist in communion with the redeeming Passion) can co-exist with the purest and most unshakable peace.[1] Such a soul has 'the sovereign beatitude of suffering only at the hands of God'. 'Then suffering penetrates to the very core of the soul, where the prayer of spiritual marriage resides, to that central point where the pain of damnation is felt by one who is damned. But these great sufferings do not in any way negative the peace. Yes, even then there is always an essential basis of gladness, for the springing up anew of the infinitely profound source of spiritual marriage is always there at will.'

[1]Cp. St. Theresa, *The Interior Castle*, Seventh House, chap. 3. 'The second effect (of the spiritual marriage) is an immense desire to suffer. . . . They find their beatitude in coming to the help of the Crucified. . . .'; and also *ibid.* chap. 4. In the book by Mde. Cécile Bruyère already cited there are some very remarkable pages on the suffering native to the state of perfect union.

GO WE TOGETHER FURTHER INTO THESE DEPTHS,

says St. John of the Cross. Let us enter into that 'concrete density' of wisdom and mysteries and miracles without number, into the immense 'profundity of wisdom and heavenly science'[1] which is the mountain of God of which David spoke: *Mons Dei, mons pinguis; mons coagulatus.* 'This may also be understood of the many sufferings into which the soul desires to penetrate, for suffering is the way into the depths of the delectable wisdom of God. For the most pure suffering leads to the most intimate and purest knowledge, and in consequence to the purest and highest joy, because it is the most inward. This is why the soul cannot be content with a certain measure of suffering, when it says: Let us go together further into the depths. Job, desiring this suffering, said: 'Who will grant that my request may come and that God will give me what I look for? That he that hath begun may destroy me, that he may loose his hand and cut me off? And that this may be my comfort, that afflicting me with sorrow, he spare me not. . . .' Oh, if men would come to comprehend that it is impossible to enter into the profoundness and the wisdom of the riches of God without entering into the profundity of suffering, of manifold suffering, and how the soul setteth in this her consolation and her desire! How the soul which desires all the goodness of wisdom desires first of all to sink all its good in the depth of the wood of the Cross!'[2]

The blessed rest of the transformed soul is not the repose of immobility, for that is not its aim; it is the balance of speed and of triumphant desire, whose force accelerates incessantly. The soul wishes to love God as it is loved by him: *to equal the divine love* is its unique preoccupation. 'So long as it has not come to this, the soul is unsatisfied; and in the next life also it would not be (as St. Thomas affirms *in opusculo de Beatitudine*)

[1] *Cant.* str. 35.

[2] *Cant.*, str. 35. Cp. *The Living Flame*, str. 2, v. 5. 'O souls who dream of a tranquil path and consolations on the spiritual way, if you but knew your need of being proved, to win by suffering this security and this consolation! If you knew how impossible it is, without tribulations, to attain the end to which the soul aspires, and how it falls back without them, you would never seek for consolations, neither from God nor from creatures! You would prefer to carry the Cross, to nail yourselves there, you would ask no other drink than gall and purest vinegar.'

if it did not experience there that it loves God as much even as it is loved by him.'[1] It is able to die of this desire.[2] It is totally changed into love, it can do nothing more, only love:

Now I no longer have an office,
My single occupation is to love.

This equality of love, which can only be made definite and consummate in the future life, has begun already at the time of the 'spiritual betrothal': 'in calling him *brother* the soul makes known that equality of love which creates a betrothal between them. . . .'[3] Then the soul, not letting, in its exchange of love with God, one drop, so to say, of the grace which has been offered be lost (we others, when a flood is offered to us, utilise only a drop), then the bridal soul gives to God measure for measure, as much of love, at each moment of its progress, as it has received in advance and premonition from the eternal Will which wishes the salvation of all. And now, to that kind of equality which is like a condition or prerequisite disposition, another is added, the privilege of consummated union.

The act of love produced by the soul is finite and measured, like its degree of charity; nevertheless, if the love with which God loves it is equally finite and measured in regard to its end (for God does not love all things equally[4]), in itself and in its substance, *ex parte ipsius actus voluntatis*, it is infinite, in effect it is with the same eternal and subsistent love with which God loves himself that his creatures are loved by him,

[1] *Cant.*, second redaction, str. 38. See *supra*, chap. vii, p. 396.

[2] *Living Flame*, str. 1, v. 6.

[3] *Cant.* str. 27. Cp. str. 15: 'This kiss is the union of which I spoke, in which the soul equals itself with God by love. It is this that is meant when the soul says: *Who will give me the Beloved for my brother?* Which signifies and implies equality.'

[4] 'Cum amare sit velle bonum aliqui; *duplici* ratione potest aliquid magis, vel minus amari. *Uno modo* ex parte ipsius actus voluntatis, qui est magis, vel minus intensus. Et sic Deus non magis quaedam aliis amat, quia omnia amat uno et simplici actu voluntatis, et semper eodem modo se habente. *Alio modo* ex parte ipsius boni, quod aliquis vult amato. Et sic dicimur aliquem magis alio amare, cui volumus majus bonum, quamvis non magis intensa voluntate. Et hoc modo necesse est dicere, quod Deus quaedam aliis magis amat. Cum enim amor Dei sit causa bonitatis rerum, ut dictum est, non esset aliquid alio melius, si Deus not vellet uni majus bonum, quam alteri.' (*Sum. theol.*, i, 20, 3.)

as finite and contingent ends (and when they are beatified it is in his own joy in himself in which they will be sharers, *intra in gaudium Domini tui*). How then is it possible to equal this infinity of divine love? 'The soul sees in truth the immensity with which God loves it, she wishes to love him no less perfectly nor highly. . . .'[1] This is the particular mystery of the betrothal; difficult as it may be to understand and to rightly repeat, it is based on the formal doctrine of St. John of the Cross. Let me try to disengage the principles.

'He who adheres to God', says St. Paul, 'is one spirit with him'. *Qui adhaeret Domino, unus spiritus est.*[2] From the point of view of entity there is always a duality, more, an infinite distance between the soul and the uncreated Love. But there is another order than that of entity, that to which St. Paul makes allusion in his words: 'one spirit,' he says, not 'one single being.' It is the order of love in so much as it is love, not considered in its ontological constituents of essence and existence (in that case it is considered as being), but in the absolute and particular reality proper to that inter-susceptibility by which the other in me becomes more me than myself. We say that the formal effect of love is that the beloved may be to me as myself, or as another I.[3] If the immaterial activity of knowledge is to become another in as much as it is an other, the immaterial activity of love is to lose itself in another, in the self of that other, to alienate myself in the reality of another,[4] so that that other becomes more me than myself.[5] This is why love is 'ecstatic'—*in amore*

[1] *Cant.*, str. 37. [2] St. Paul, I Cor., vi, 17.

[3] 'Cum aliquis amat aliquem amore amicitiae (it is only this love which is in question here) vult ei bonum, sicut et sibi vult bonum; unde apprehendit eum alterum se, inquantum scilicet vult ei bonum, sicut et sibi ipsi, et inde est, quod amicus dicitur esse *alter ipse*; et Augustinus dicit in IV *Confess.*: *Bene quidam dixit de amico suo, dimidium animae meae.*' (*Sum. theol.*, i-ii, 28, 1. Cp. *Ibid.* ad. 2: 'Amans se habet ad amatum, in amore amicitiae, ut ad seipsum.')

[4] 'Cognitio perficitur per hoc, quod cognitum unitur cognoscenti secundum suam similitudinem; sed amor fecit, quod ipsa res, quae amatur, amanti aliquo modo uniatur, ut dictum est: unde amor est magis unitivus, quam cognitio.' (*Ibid.* i-ii, 28, 1, ad. 3. Cp. J. Maritain, *Réflexions sur l'intelligence*, pp. 125-7.)

[5] This is what St. Thomas calls 'complacentia amati interius radicata' (*ibid.*, a. 2). And again: 'Amatum continetur in amante inquantum est impressum in affectu ejus per quamdam complacentiam' (*ibid.*, a. 2. ad. 1).

amicitiae affectus alicujus simpliciter exit extra se[1]—and why it liquefies the heart, *ut amatum in ipso subintret*[2]—and why it is the cause of everything that the lover does.[3]

The mystery of the cognitive union, of the truth, obliges philosophy to conceive of a 'being of knowledge', and an *intentional esse* which is not the entitative being or that of nature. The mystery of the union of love equally obliges us to conceive of an *intentional being of love*[4] which, no more than the other, is the entitative being.[5] In the beatific vision the created intelligence and the uncreated essence remain entitatively infinitely distant, and for all that the soul, in its supernatural activity of knowledge, becomes God according to the intentional being of knowledge. In the spiritual marriage the created will and uncreated Love re-

[1]'Quia vult amico bonum, et operatur bonum, quasi gerens curam et providentiam ipsius propter amicum' (*Sum. theol.*, i-ii, 28, 3.)

[2]*Sum. theol.*, i-ii, 28, 5, ad contr. [3]*Ibid.* a. 6.

[4]By analogy with the intentional being which proceeds from the mental word I here describe as 'intentional' the immaterial *esse* which proceeds from the spirit of love. But it is important to understand that because of the proper function of the will, and its immateriality which is certainly not less pure in itself, but less 'separated' from things, and entirely turned towards their concrete state (cp. *Sum. theol.*, i, 82, 3), intentionality here plays an entirely different part. The intentional being of love is not, like the intentional being of knowledge, an *esse* in virtue of which one (the knower) becomes another (the known), it is an *esse* in virtue of which—an immaterial but wholly different process—the other (the beloved), spiritually present in the one (the lover) by right of weight or impulsion, becomes for him another self.

[5]This is what St. Thomas indicates when he says: 'Processio verbi attenditur secundum actionem intelligibilem. Secundum autem operationem voluntatis invenitur in nobis quaedam alia processio, scilicet processio amoris, secundum quam amatum est in amante: sicut per conceptionem verbi res dicta vel intellecta est in intelligente.' (*Sum. theol.*, i, 27, 3.)

There is therefore a certain immaterial being proper to the union of love by which the beloved is in the loving will, as there is a certain immaterial being proper to the cognitive union, by which the known is in the knowing intellect: here a presence by the mode of similitude, and where the knower becomes the known; there a presence by the mode of impulsion and motion, and where the beloved becomes the principle of action, the 'weight' of the lover (*ibid.* a. 4). The great thomists have magnificently deepened and developed the questions concerned with the being of knowledge; fecund principles can also be found in them (cp. John of St. Thomas, *Curs. Phil.*, *Phil. Nat.*, i, P. q. 13 *De Fine*: *Curs. theol.*, i, P. q. 27, disp. 12, ad. 7, and qq. 36–8, disp. 15, a. 3, 4 and 5) for a similar elaboration concerning the intentional being of love and the spiration of love. But this elaboration awaits performance.

main entitatively infinitely distant, and yet the soul, in its supernatural activity of love, loses or alienates itself in God become in the being or actuality of love more it than it itself, the principle and agent of all its operations. All has been said by the Saint himself in that golden sentence which I have already quoted: '*they are two natures in one spirit and love of God.*'[1]

'In this state the soul cannot make acts unless the Holy Spirit move it thereto. And because of this all its acts are divine . . .[2] and the more they proceed from God the more they are its own, for God performs them in it and by it, the soul giving its will and its consent.'[3] But it is not only the moving and efficient action of God on the soul which must be considered here. If the divine action so flowers in the soul with no obstacle arising from the nothingness of the creature, it is in the same time and by the same action, in the order of formal causality, that the soul is *transformed into God*: not—as we have already seen apropos of sanctifying grace and the inhabitation of God in the soul[4]—by any entitative change of its being into the being and substance of deity, and no more in a simply moral sense: this is produced in a 'physical' or ontological manner, but in the order of the soul's relation to God as object, in so much as grace renders the soul capable of God and turned towards God, *to see and to love* as it is seen and loved.[5]

This is the accomplishment in its plenitude of that of which sanctifying grace is the principle and the root. This plenary transformation takes place in two different ways, either in that 'blessed life which consists in the vision of God, and which presupposes the passage through bodily death'—or again in 'the perfect spiritual life, which consists in the pos-

[1] 'Consumado este espiritual matrimonio entre Dios y el alma, son dos naturalezas en un espiritu y amor de Dios,' *Cant.*, str. 27. (Cp. *supra*, p. 447, and chap vii, p. 398). 'All that one can say is that the soul, or rather the spirit of the soul, becomes, as far as one may judge, one thing with God. . . . Here the little butterfly dies, but in indescribable joy, for Jesus Christ has become its life.' St. Theresa, *Interior Castle*, Seventh House, chap. 2.

[2] *Living Flame*, str. 1, v. 1. [3] *Ibid.* v. 3.

[4] See *supra*, chap. v.

[5] The soul lives divinely because God according to his proper essence is the object of its operations. 'Everyone living lives by his acts, as the philosophers say: in having its actions in God, by the union which it has with him, the soul lives the life of God, and its death is changed into life. . . .' *Living Flame*, str. 3, v. 3.

session of God by the union of love.'[1] Thus, following the teaching and the witness of the Saint, it is necessary to recognise, before the ultimate end of human life, fixed for eternity by the beatific vision, a sort of anticipation of that glory in time itself, a possession of God here below which takes place by love. Love outstrips the intellect; *cucurrit Petro citius*. . . . And is it not already here in time as in eternity?[2] The payment which the intellect will only receive in the future life, because it can only transform the soul into God when it sees him, after the separation of the soul and the body—love can receive here and now, because to change the soul into God it only needs to love him, but to love him to the degree that divides the soul from itself.

This transformation then, according to St. John of the Cross, takes place by love and in line with what I have called the intentional being of love. 'It is love alone which joins and unites the soul with God. . . .[3] It is love which unites the soul to God; and the more the soul leaps up the steps of love, the more deeply it enters into God and concentrates itself in him. . .'.[4] Therefore do I entreat that which thou desirest me to entreat, what thou desirest not that I desire not, nor can I desire it, nor can the very desire of desiring it pass through my mind . . . and my judgment comes forth from thy countenance.'[5] *De vulto tuo judicium meum prodeat*. . . .[6]

Between the spiritual marriage and the states which precede it there is a form of heterogeneity; St. John of the Cross, like St. Theresa, strongly marks this difference of nature. In the state of spiritual betrothal 'the soul has come to have God in it by grace and by the conformity of the will'[7]—to the degree of the rightness and conformity of the will in itself. But 'such are not the dispositions for the union of marriage',

[1] *Living Flame*, str. 2, v. 6. Thus, as has been explained earlier (cp. chap. v), this 'union of love' is *possessive* because, thanks to the gifts of intelligence and wisdom, the transformation by love of the soul into God is itself, under a special illumination and inspiration of the Holy Ghost, the formal means of an experimental knowledge of God, of a passion for the things which are divine.

[2] See *supra*, chap. v, p. 315.

[3] *Obscure Night*, book ii, chap. 18. Cp. *supra*, p. 437, and chap. vii, pp. 395 and 419.

[4] *Living Flame*, str. 1, v. 3: second redaction: 'It is by means of love (*mediante el amor*) that the soul unites itself with God. . . .'

[5] *Ibid.*, str. 1, v. 6. [6] Ps. xvi, 2.

[7] 'He llegado a tener a Dios por gracia de voluntad' (*Living Flame*, str. 3, v. 3).

and 'that has nothing to do with these favours and delights': then the soul 'not only has God within it by grace, it has him also by union'—in the degree of all the force and the sweetness of his will, and by 'communication and union of persons,'[1] as is the case in marriage. At each stage of the progress of the life of grace, the Divine Persons, says St. Thomas, are *sent* into the soul.[2] Then they are sent and given definitively, and in fullness, to the very core and centre, and, until the ultimate transformation which is produced by death, no new or further mission can take place.

But it is more than ever, as witness *The Living Flame* and *The Spiritual Canticle*, by love, in the life of love and according to the *esse amoris*, that the whole of this is accomplished. Spiritual betrothal was this transformation of love about-to-be, or the final dispositions for this transformation; spiritual marriage is the consummation of this transforming; 'total transformation into the Beloved:'[3] an opposition of *fieri* and *factum esse* which we only know in a parallel degree of sensible example in the order of substantial changes; but it is essential to understand that what is there true of nature or entitative nature, is here verified by the immaterial being of love, where the whole principle of gravitation of a whole spiritual universe is as though transessentiated into another spirit (it remains the same entitatively, it becomes another spiritually). This is why St. John of the Cross has recourse to the classic image of the flame and the wood.[4] The wood goes on fire, but while it keeps its own native humidity it crackles, it smokes, it sends out vapours and drops of wet, it transforms itself, it is not transformed. Only when it is incandescent charcoal or pure flame, then is it transformed (that it so loses its very entitative being represents the defect of such a comparison, where it is precisely only that being which is in question). St. John used another metaphor, where no question remains of a substantial being, but which remains equally inadequate: 'Thus, when the light of a star or of a lamp is joined and united with that of the sun, what gives light is no longer the star or the lamp but the sun, which has drowned the other lights in his own.'[5] And St. Theresa: 'One might speak of the water from the sky, which falls into a river or a fountain, and is so lost in it that we cannot any longer divide or distinguish which is the water of the river and

[1] *Living Flame*, str. 3, v. 3. [2] *Sum. theol.*, i, 43, 3. Cp. *supra*, chap. v, pp. 317-8.
[3] *Cant.*, str. 27. [4] *Living Flame*, str. 1, v. 5. [5] *Cant.* str. 27.

which the drop from the sky. Or better, of a tiny brook which throws itself into the sea, and which it is impossible to separate from thence. . . .[1]

Whatever may be the comparison, it is understood that so long as love has not achieved the transformation of the soul, the latter lives with its own life, without doubt progressively made divine, but nevertheless always enclosed in its created limits, always finite (not only in its entitative structure, as it will be always, but also in the union of the love itself which causes its operations, and which is like the breath of its liberty). It is a whole which makes exchanges with the Whole. But when the transformation of love is accomplished, and the whole soul is evaporated, so that it does not even draw the breath of love itself, then in a way it is the Whole, it is the infinity of the life of God which explodes within it, as if the sea itself should flow into the river, into the amorous river, springing out in vital fountains, which may become, because of the well-head of its waters, one *spirit* with the sea itself. The whole universe, says St. Thomas Aquinas, can be contained in the least of its particles, if it is knowledgeable.[2] The eternal and infinite life of God can fill the least of his creatures if it is loving, and allows to go to all lengths in it the Love which has first loved. '*I live, yet not I, but Christ who liveth in me.*'

These principles allow us, I believe, to understand in its full force[3]

[1]St. Theresa, *Interior Castle*, Seventh Mansion, chap. 2. 'In the spiritual marriage', writes St. Alphonsus Liguori, 'the soul is transformed into God, and makes one with him, as a jugful of water which is thrown into the sea is also one with it' (*Homo apost.*, appendix I).

[2]*De Veritate*, q. 2, a. 2.

[3]'Sometimes', writes Père Poulain, 'the mystics allow themselves to go to *exaggerations* of language, in their inability to rightly describe all that is raised in this participation. They will say that one thinks with the eternal thought of God, loves with his infinite love, wills by his will. They appear to confound the two natures of the divine and the human. They so describe *what we believe* we feel; like astronomers they talk in the language of appearances.' (*Des Grâces d'oraison*, 9th edit., p. 282. The italics are the author's.) I hope to have shown here that to exonerate St. John of the Cross from any shadow of pantheism or of 'confusion of two natures', it is unnecessary to admit that at the very moment when he is teaching the highest mysteries of the union of love with the First Truth he would allow himself to run to *exaggerations* of language, and that he speaks the *language of appearances*, describing not what he feels but what he *thinks* he feels, in short, that he, 'like the astronomers' keeps to the order of what appears to be, not of what is, when he witnesses to the sovereign realities which he has livingly known. It is a singular invention to set *appearances* at the end of mystical wisdom, as if it were a telescope!

what St. John of the Cross teaches of the spiritual marriage. His doctrine thus appears under three inseparable aspects.

To love is to give; essentially and first of all, in the sealed abyss of immanent activity, to give all of oneself. What the wedded soul gives it gives by its finite act of love, and inseparably and indiscernibly by the infinite Love himself, it loves God with the same love with which he loves it and with which he loves himself. How can this be? It is the very effect of the union of love, as I have endeavoured to explain. The uncreated Love has become, as the immaterial being of love, the principle and agent of all that the soul does.

'The will of the soul is changed into the will of God, it is become entirely the will of God, not that the will of the soul is destroyed, but it has been made the will of God. And so the soul loves God by the will of God, which is also its own will; and it can love as much as it is loved by him, since it loves by the will of God himself, in the same love with which he loves, which is the Holy Ghost, which is given to the soul, in the words of the Apostle: *Gratia Dei diffusa est in cordibus nostris per Spiritum Sanctum qui datus est nobis. . . .*[1] He shows the soul the love with which it loves . . . He transforms it into himself and he gives it by this the love wherewith it loves him, what is rightly his; he shows how to love, as he who puts the instrument into another's hands saith how it should be used. It is in this way that the soul loves God as it is loved by him, since their two loves are one single love. Thus the soul is not only instructed in love, it is also capped as master in love, being united to the Master himself, and therefore it is content, which it cannot be so long as it has not come to this love which consists in loving God completely with the same love with which he loves himself. This however cannot be perfect in this life, but at least it is possible in a certain manner in the state of perfection, which is that spiritual marriage of which I spoke.'[2]

The wedded soul then loves and gives with the infinite love itself; it is by this that it acts in regard to the intentional being of love, while all the while acting according to its entitative being in its own finite and individual actions. And what is it it so gives? Not only itself and its all, but what is more than its all, its core and its life, what is more than its life itself and its own intimacy. God, in fact, as though to a veritable wife,

[1]Rom., v, 5. [2]*Cant.*, str. 37.

has given it a right over him, has made it the proprietor of his goods; it may dispose of them, may give them to whom it will. Thus it gives God to God; its act of love, which measured in itself is finite and limited, gives to God, by the infinite Love of God, the Infinite itself, a gift without measure. A donation which evidently must not be understood as being in any degree in the entitative order, as though the soul were able to exercise any influence on God or add to his perfections, to enrich the being of God with that being itself, which would be absurd. A most real donation, but which takes place in line with the pure being or actuality of love, in a totally immanent and immaterial activity, which, without implying the slightest entitative mutation, for it is *actus perfecti*, fulfils and accomplishes the most important thing in the world in the sealed enclosure of the universe which is the soul in itself.

'For since the soul has been made one thing with God, it is after a certain manner God by participation; for, although this is not so as perfectly as in the next life, the soul is, as it were, the shadow of God. And in this way, since the soul by means of this substantial transformation[1] is the shadow of God, it does in and through God that which he does through himself in the soul, in the same way as he does it. For the will of these two is one and the operation of the soul and of God is one. And even as God is giving himself to the soul with free and gracious will, even so likewise the soul, having a will that is freer and more generous in proportion as it has a greater union with God, is giving God in God to God himself, and thus the gift of the soul to God is true and entire. For in this state the soul truly sees that God belongs to it, and that it possesses him by hereditary possession, as an adopted child of God, by rightful ownership, through the grace that God gave to it of himself, and it sees that, since he belongs to it, it may give and communicate him to whomsoever it desires; and thus it gives him to its beloved, who is the very God who gave himself to it. And herein the soul pays all that it owes; for, of its own will, it gives as much as it has received with inestimable delight and joy, giving to the Holy Spirit that which is his in a voluntary surrender, that he may be loved as he deserves.

'And herein is the inestimable delight of the soul: to see that it is giving to God that which is his own and which becomes him according to

[1] 'Substantial' in the sense of an absolute and basic transformation of love.

his infinite being. For, although it is true that the soul cannot give God himself to himself anew, since he in himself is ever himself, yet, in so far as the soul is itself concerned, it gives perfectly and truly, giving all that he had given to it, to pay the debt of love. And this is to give as has been given to it, and God is repaid by that gift of the soul. . . . And God takes this with gratitude, as something belonging to the soul . . . and because of this he loves the soul and surrenders himself to it. And so there is a reciprocal union between God and the soul, in the agreement of the union and surrender of marriage, wherein the possessions of both, which are the Divine Essence, and possessed by each freely and by both together in the voluntary surrender of each to the other, wherein each says to the other that which the Son of God said to the Father in St. John: *Omnia mea tua sunt, et tua mea sunt et clarificatus sum in eis. . . .*[1] This gift can evidently be made by the soul, although it is greater than its capacity and its being. . . . This is the great satisfaction and contentment of the soul, to see that it is giving to God more than it itself is worth. . . . In the next life this comes to pass through the light of glory, and in this life through most enlightened faith.'[2]

[1]John, xvii, 10.

[2]*Living Flame*, str. 3, vv. 5-6.

In an article in *Vie Spirituelle* (1st July, 1931), Dom Philippe Chevallier has rightly pointed out that in these pages of the *Living Flame* where he explains with what *values* (*con extraños primores. . . .*) the soul makes its gift, St. John of the Cross is referring to the opuscule *de Beatitudine* (which is indeed expressly cited in *Canticle B*). I should like to reproduce here, following Dom Chevallier and his translation, the passage in question from this opuscule, which was for long attributed to St. Thomas, but which now Mandonnet's researches have classified among the apocrypha. 'The glorified soul will love God by God, that is to say, by the Holy Spirit. Not only is everything that the creature may do in as much as it is a creature imperfect, but the Lord Jesus asked this for his disciples when he said to the Father: I have taught them your name (by faith), I will show it them (by the vision) so that the Love by which you have loved me may be found in them. Now the Love with which the Father loves the Son is eternal and immeasurable: He loves Him in the Holy Ghost, which is the Union between them.

'The gloss says: the same Love with which the Father loves the Son will dwell in all the just; by him the glorified soul loves God and is loved by God; otherwise the soul which, according to St. Augustine, can only rest in God for whom it was created, would never know either a full or complete repose if it did not give back to the Creator an equality of love.

'When God loves the soul, says St. Bernard, it is an eternity which loves, it is an immensity which loves, one whose grandeur has no bounds and whose wisdom no

Finally—there is that almost unspeakable 'breathing-forth', of which one cannot speak without diminution,[1] the most mysterious of the Saint's teachings, which is like the luminous cloud about his Tabor—the wedded soul, he says, is associated in a certain manner with the action of the Trinity. The Holy Ghost, in producing in it 'a touch and most delicate sense of love' (which is that inspiration by which it 'will love God in full perfection'), raises it 'to breathe in God that same suspiration of love with which the Father breathes with the Son and the Son in the Father, which is the Holy Ghost himself, which they suspire in it in this transformation'.[2] Once more it is clear that St. John of the Cross is not employing here the language of speculative theology, that it is not a question, in any possible way, of any *entitative* participation by the creature in the act of uncreated love by which the Holy Ghost proceeds from the Father and the Son: it would be madness to suppose that any creature could contribute in any way to the procession of one of the Persons

limits; and therefore it is necessary that the soul should return an immense and eternal love to be able to completely rest in God. This can only be by the Holy Spirit, of which the Apostle speaks, "The love of God is poured forth in our hearts, by the Holy Spirit which is given to us" (Rom. v, 5).

'The gloss points out: the Love of God is at once God and a gift of God. And because God has loved us in order that we on our side may love him, he has given us the Holy Spirit. If the virtue of charity is to be the measure of our love for God in the life of the blessed, it is plainly in vain that God in the fullness of his wisdom has given us the Holy Spirit.

'Heretofore the Master of the Sentences was of this opinion, nowadays modern men think differently, choose which side you will; it remains that God would have given us his Holy Spirit in order that the blessed soul may give him an equal love and by that find in him a repose without any admixture.'

[1]'Of that breathing of God, which is full of glory and blessing and the delicate love of God for the soul, I should not wish to speak, neither do I desire now to speak; for I see clearly that I cannot say ought concerning it, and that, if I were to speak of it, it would appear less than it is.' *Living Flame*, second redaction, str. 4, vv. 4-6. After that it seems wrong to hazard even the smallest comment on these things. There is a certain measure of reassurance in the knowledge that what I am attempting to do here makes no pretension to lessen any of the mystery surrounding such union; it is simply an effort to make clear the angle from which the Saint's language must be understood. Mystical not ontological utterances, which, as I have pointed out above (chap. vii), endeavour, before all and at any price, to witness to what love has known by experience.

[2]*Cant.*, str. 28.

in God.[1] He is speaking of something entirely different, and this is why he insists on the ineffable nature of the mystery on which he touches.

When he recalls the highpriestly prayer of Christ: 'Father, I will that where I am, they also whom thou hast given me may be with me: that they may see my glory which thou hast given me,'[2] that is to say, adds the Saint, I will 'that they may do by participation in us that which I do by nature, namely the suspiration of the Holy Ghost';[3] when he explains that we are so called, in association with the divine nature, to become 'gods by participation, equals with and companions of God',[4] to work in the measure of God, to 'partake in him, in concert with him, in the work of the Most Holy Trinity, in the way in which I have said',[5] he means that the Father, wishing that we should be one as they are one, the Son in us and he in the Son, and loving us as he has loved the Son,[6] will give us 'the same love as is in the Son, not by nature as in the Son, but truly, as I have said, *by virtue of the unity and transformation of love.* We are not to suppose from this (from St. John) that the Son asked of the Father that the saints should become one in essence and nature as the Son and the Father are; but they may be so *in the union of love*, as the Father and the Son are one in the unity of love.'[7]

[1]The teaching of St. John of the Cross has nothing to do with the proposition by which Eckhart affirmed that 'everything which is proper to the divine nature is also proper to the just and holy man; he works all the works of God; with God he created heaven and earth, he generates the eternal Word, and God without such a man could not act', a proposition which was condemned by the Church. Eckhart, as a theoretician and maker of systems, enunciates a theological enormity from which St. John of the Cross remains wholly alien, exactly by reason of the strict fidelity by which he only holds to what is warranted by his own experience. As I have explained in the text, St. John of the Cross nowhere suggests that the soul is associated *in any entitative way*, even by participation, in the divine processions. The participation of which he speaks is in relation to *the union of love*, to the *unity and transformation of love:*

[2]John, xvii, 24. [3]*Cant.*, str. 38.

[4]'De donde las almas esos mismos bienes poseen por participación, que el por naturaleza; por lo cual verdaderamente *son dioses por participación, iguales y compañeros suyos de Dios.*' (*Ibid.*)

[5]*Ibid.* 'O souls created for such greatness,' he adds, 'and for such a vocation, what is it that you do? With what are you preoccupied? Your ambitions are base and your possession misery, O miserable blindness of your eyes!'

[6]John, xvii, 22-3. [7]*Cant.*, str. 38.

It is uniquely in the order of the union of love, in the pure immanence of an act which inwardly refers the soul to the Trinity as object, and which is perfected and achieved in itself without any outward overflow: it is not in so much as it is or it acts, but only in the degree to which it loves, so that another becomes its centre and its weight and its all, that the bridal soul, crowned with the seven gifts, penetrates into the heart of the life of the Trinity, without the Triune essence in itself suffering or being able to suffer the least entitative contact. God says eternally to his creature, 'Touch me not', but equally ,'I will espouse thee to me forever.'[1] Thou hast wounded my heart, my sister, my spouse,[2] I am thine and for thee, and I rejoice to be what I am that I may give myself to thee and may be thine,'[3] to raise it to the kiss of his spirit, and to penetrate it entirely with those 'substantial touches', in virtue of the union of love.[4] So that, turned towards the Father and the Son as the objects of its love, the soul loves them—without the Third Person receiving absolutely anything from it—with the same love with which God breathes forth the Holy Spirit, and in the same sense in which it 'gives God to God himself', one can say that it suspires with the Father and the Son the Spirit of love, in a very real way in regard to what the soul is in itself and its rightful amorous transformation, but not in the least real in regard to I know not what inconceivable entitative effect. Thus it is that the soul is itself transformed into the Spirit by the union of love. 'There would be no veritable transformation if the soul were not united with and transformed into the Holy Spirit equally with the two other Divine Persons, although in a very obscure and veiled manner because of the base conditions of this life. . . . The soul united with and transformed in God breathes in God and to God the same divine suspiration which God, dwelling in it, breathes in it and to it; this is how I understand the words of St. Paul: *Because you are sons of God, God hath sent the Spirit of his Son into your hearts, crying Abba, Father*,'[5] which cries in prayer to the Father.[6] 'The soul now loves God, not through itself, but through God himself: which is a wondrous illumination since it loves through the Holy Spirit,

[1] Osee, ii, 19.
[2] *Canticle of Canticles*, iv, 9.
[3] *Living Flame*, str. 3, v. 1.
[4] Cp. chap. vii, pp. 402-4.
[5] Gal. iv, 6.
[6] *Cant.*, str. 38.

even as the Father loves the Son, as the Son himself says in St. John: *that the love wherewith thou hast loved me may be in them and I in them.*'[1]

'There thou wilt show me what my soul hath desired. . . .' This then is how man attains to his penultimate end, to that supreme point of the commencement here on earth of eternal life, where he loves God as he is loved by God and as God loves himself,[2] already ready to pass without hiatus or suppression, when his body shall be dissolved, to the ultimate transformation which will give him open possession of that which he loves. 'The lover cannot be content unless he feels that he loves as much as he is loved.'[3] To love God *as* he loves us, that is to say, with his own love: in this equality of love of the eternal marriage inaugurated here on earth, we see the plenary fulfilment in its highest degree of the evangelical precept: 'Be ye perfect *as* your Father in heaven is perfect,' that is, be perfect in his own perfection or his love: and it is also the supreme accomplishment of the third petition of the Lord's Prayer: that the will of the Father may be done on earth *as* in heaven, that is, that we may live in his own will or his love.

It is very remarkable and of the highest consequence, that, at the summit of spiritual life and mystical experience, the soul should expressly enter into the depths of the most sacred mystery of the whole christian revelation—'transformed into that flame of love, in which the Father, the Son and the Holy Spirit communicate themselves to it'[4]—that what already from the beginnings of contemplation—if it is authentically mystical—has proceeded from living faith and the supernatural gifts, makes it enter, not into the One of the philosophers, God known from without and by his effects, but God attained in his own divine essence, to the very deity as such, who in his own and absolutely inward life is in Trinity of

[1] *Living Flame*, str. 3, vv. 5–6.

[2] 'Como el se ama', *Cant.* str. 37; 'con el mismo amor que el se ama', *ibid.* This expression, as a gloss on the *Sanlucar MS.* is careful to note: 'I do not mean to say that it loves God *as much* as he loves himself'—evidently does not signify that the soul can love God, with its creaturely love, as much as he is lovable. It signifies, in the sense which has been pointed out, that it can 'give God to God', and love him 'by the will of God himself, in the same love with which he loves it, which is the Holy Spirit given to the soul', for it is by the same eternal act of love by which he loves himself that God loves us; *amarle como él se ama* has exactly the same meaning as *le amará tanto como es amada.*

[3] *Cant.*, str. 37.

[4] *Living Flame*, str. 1, v. 1.

Three Persons, the resplendent and tranquil society of Three in the same indivisible essence and light of love. So in these last pages we rejoin the doctrine of mystical experience set forth in an earlier chapter. Essentially supra-philosophic, since its immediate and proportionate principle is faith illuminated by the gifts of the Holy Ghost, mystical experience tends from its origin towards the loving and fruitful knowledge of the Three uncreated Persons. 'The knowledge of the Trinity in unity', says St. Thomas Aquinas, 'is the fruit and end of all our life'.[1] And St. Augustine: 'The realities which we have for our joy are the Father and the Son and the Holy Ghost.'[2]

Another conclusion becomes visible at the same time. How can the supreme perfection of mystical experience, its flowering into the state of spiritual marriage, be possible to souls to whom the mystery of the Trinity has not been explicitly revealed? Doubtless more or less concealed forms are possible, corresponding to diverse typical phases of normal mystical progress. The fact remains that spiritual marriage is in itself a state existing in explicit reference to the inward life of the Trinity. In distinction to all anterior states, it carries with it an explicit and formal experience of the Trinity in unity. St. Theresa attests this on her part in

[1] *In I Sent.*, dist. 2, expos. textus. Cp. *ibid.*, dist. i, q. 2, a. 2: 'Una fruitione fruimur tribus Personis.'

[2] *De Doct. christ.*, book iii, chap. 5. It is the fundamental error of theosophical doctrines (if we understand by theosophy the deviation of a mysticism which, forgetting the sobriety essentially necessary to knowledge, *sapere, sed sapere ad sobrietatem*, cedes to metaphysics the space of contemplation, and that in the very order of the sacred mysteries)—an error already present in Boehme and very visibly expressed by Valentine Weigel—to regard the knowledge of the Trinity of Persons as an exoteric knowledge of God in relation to the creation, and the knowledge of the One, of the *Ungrund*, as a penetration into the inwardness of deity. Thus metaphysics (a pseudo-metaphysics) is in reality set as surpassing the divine revelation and supernatural wisdom, which is the exact opposite of the truth. Jean Baruzi commits an error of the same order in writing of St. John of the Cross himself. (*Saint Jean de la Croix et le problème de l'expérience mystique*, 2nd edit., 1930.) When the contemplative knows God by love, in a knowledge higher than any distinct concepts and more highly one in its mode, it is the divine Trinity which he so knows, and at the same time and in the same act, the unity of the divine essence, attained by a supernatural experience which infinitely surpasses all philosophy. When Ruysbroeck insists on the unity in which the contemplative is immersed, it is the unity so attained of which he is speaking. His formulas are in any case not always irreproachable.

the strongest possible fashion. But as she is speaking in conformity with her own personal experience, she witnesses at the same time, if indistinctly, to the substance of this experimental union and to the special manner in which she herself knew it: 'Once the soul is introduced into this Mansion, the Three Persons of the Blessed Trinity reveal themselves to it in an intellectual vision. . . .'[1] Now, according to St. Thomas, intellectual vision belongs to the gift of prophecy; it is a high grace which, as such, is charismatic and supererogatory to the essential nature of the mystical state;[2] we need not therefore be astonished that the vision of which St. Theresa speaks should not always be accorded to souls who have attained to the spiritual marriage.[3] But that in no way authorises our regarding as accidental also the essential fact that the consummated union is an experienced union with the very Persons of the Trinity.

To speak of *mystical experience of the life of the Trinity* as the sovereign degree of infused contemplation is not to speak of an *intellectual vision of the Trinity*. Between these two notions there is a very clear difference, the one belongs to the order of charisma, the other to that of grace and the gifts of the Holy Ghost. This is the testimony of St. John of the Cross whom we need here to clarify that of St. Theresa,[4] since he is not only

[1]St. Theresa, *The Interior Castle*, Seventh Mansion, chap. 1.

[2]*Sum. theol.*, ii-ii, 174, 2 and 3.

[3]'In this degree, certain persons have a continual *intellectual vision* of the Holy Trinity. St. Theresa even says that it is always so. Nevertheless it seems that this is frequently not the case with souls which have arrived at transformation in God, and already possessed of that which makes the basis of the spiritual marriage.' A. Poulain, *Des grâces d'oraison*, 5th edit.

[4]Père Poulain (*op. cit.*) points out that St. Theresa says it is always so for souls which have reached the Seventh Mansion; in another place she says that this is accorded 'in an extraordinary way' (*Interior Castle, loc. cit.*). Is this a contradiction? It is understandable if we make use of a distinction which she herself has not drawn in this case, that it is also so *in regard to infused contemplation*, and that this was given, to her, in an extraordinary way, *as a charisma of intellectual vision*. In any case it is in reference to an experimental knowledge of the divine Persons by the way of infused contemplation, subtracting the charismatic mode which may be joined thereto, that we should hold her testimony and accord it a universal value, when she writes: 'The three divine Persons show themselves distinctly and, by an admirable notion which is communicated to it by them, the soul knows with an absolute certitude that the three are one in the same substance, the same power, the same science and one God. Thus what we believe by faith, the soul, one may say, perceives by sight. And meanwhile one sees nothing, neither with the eyes

giving an account of his personal experience, he is teaching the practical science of the mystical path. And his testimony is entirely clear; the quotations which have been given from the *Canticle* leave no doubt upon the subject. How then can Père Poulain say that in the *Canticle* and *The Living Flame* St. John of the Cross 'contents himself with describing a very elevated contemplation of the divine attributes'?[1] To say that the soul is associated with the life of the Trinity, that it is called to 'work in God, in concert with him, the work of the Holy Trinity', and to 'suspire in God the same suspiration of love with which the Father suspires in the Son and the Son in the Father, which is the very Holy Spirit which they suspire in it in this transformation', to say that 'the soul must needs be united and transformed 'as much into the Holy Spirit as into the two other divine Persons',[2] this is not to 'content oneself with describing a very elevated contemplation of the divine attributes'. The *intellectual vision of the Trinity* is not essential to the spiritual marriage. But the *mystical experience of the life of the Trinity*, in so much as it can only proceed from the essential principles of infused contemplation, *i.e.* from the faith which is supremely illuminated by the gifts of intelligence and wisdom, from that *fe ilustradisma*,[3] as St. John of the Cross says, exactly apropos of the spiritual marriage, which is one of the essential privileges of this state of transformation. While always implying and because it implies the highest possible earthly knowledge of the abyss of unity, this state applies in an explicit and formal manner to the triune life, such is certainly the teaching of St. John of the Cross. Denis the Carthusian

of the soul nor with those of the body, for this is no vision of the imagination. Then the Divine Persons communicate themselves, all three, to the soul, they speak to it and discover to it the meaning of that passage in the Gospel where our Saviour announces that he will come, together with the Father and the Holy Ghost, and dwell in the soul which loves him and keeps his commandments.' (*Op. cit.*)

[1] *Op. cit.*, p. 283.

[2] See *supra*, p. 461. 'And that is for the soul so high a glory, so profound and sublime a joy that no mortal tongue can express it nor any human understanding as such have any idea of it.' *Cant.* str. 38. 'This only has its perfect accomplishment in the other life; for all that, even here, when the soul is come to the perfect state, it enters into its great beginnings and into the savour of such glory, in the way of which we have spoken, although there is none that can express it, as I also have said.' (*Ibid.*)

[3] *Living Flame*, str. 3, vv. 5-6.

holds the same teaching;[1] and if it is necessary to cite modern instances also, the witnesses of Père Rabusier[2] and of Mère Cécile Bruyère are formally alike.[3] It is for this reason that I hold that, high as it may attain,

[1]'Then it will be given thee to see in all suavity and truth, with the intelligence of a purified soul penetrating the causes and the secret reasons of the mysteries, all that is given to us by our faith; then, inundated with deific light, thou wilt be able to enter into the serene and assiduous contemplation of the inaccessible glory of the august Trinity, considering the procession and the relations of the Divine Persons *ab intra*, their mutual love and the joy which each tasteth in the other; the ineffable regard by which they self-contemplate each the other, their eternal and immutable essence, sovereignly glorious and beatific. Then, in the presence of the infinity and immensity of God, every creature will seem to thee petty and narrowed; and thou wilt find thy consolation and all thy love in God alone.' Dionys. Carthus., *Flam. div. amoris* (French translation in Mde. Cécile Bruyère, *La Vie spirituelle et l'oraison*, p. 350).

Angelo of Foligno brings a similar witness: 'In this Trinity which I see in such great darkness, it seems to me that I hold myself and that I lie in its centre.'

[2]In the immense perturbations and the hell and the complete desert of the prayer of ecstasy the soul has bought this earthly paradise; it has found the way into that promised land, where, in a state of incomprehensible beatitude, it can now say truly: 'It is not I that live, but the thrice-holy Trinity which lives in me, and I live in the holy Trinity.'

'Indeed one can say that, in the prayer of spiritual marriage, the soul enters into the spirit and the life of God, as God enters into the soul of man. . . . And in its depths, in that innermost sanctuary of God, this soul is one and at one with the essential secret of the Three Divine Persons and participates in their perfections.' (*Revue d'ascétique et de mystique*, July, 1927, p. 284.)

[3]Speaking of the spiritual marriage, she writes: 'The contemplative, in the act of contemplation, thus perceives eternal things, not in the ordinary mode of vision, but by a real experimentation. God reveals himself and he reveals himself as he is, that is, one and triune. In fact, the soul is introduced into the perfect union with and a very high knowledge of the august and most holy Trinity. The words of our Saviour at the last supper are realised in their entirety and their full force: *Ad eum venimus, et mansionem apud eum faciemus*. Not only do the Three Divine Persons manifest their presence in the soul, but in a certain way they dwell there, and although not always with clarity, for the greater part of time the soul feels that it is in this divine company. It is a most characteristic point of this third degree of the unitative life that St. Dionysus begins his treatise on mystical theology with an invocation of the Blessed Trinity which must be read in the text itself. . . . *The soul lives in a close and conscious union with the Three Divine Persons.*'

And she adds, apropos of the saints of the old law, 'Abraham the great patriarch, whom the Bible shows us as raised to such a close familiarity with God, had this revelation of the august Trinity, when he received the Lord under the form of the three

outside the communion of the visible Church of the Incarnate Word, a mystical experience issuing from a supernatural faith that is only implicit can never reach to this point.

So come to the highest possible degree of divine union, the soul can do nothing which in itself is better, at least by positive obligation, nothing more useful or fecund, than the contemplation and love of God in solitude.

'As long as the soul has not attained to the state of union of which I speak, it is good that it should exercise itself in love, in the active as well as the contemplative life: but once it is established there, it is no longer suitable that it should occupy itself with other works, or with exterior exercises which might raise the slightest possible obstacle to its life of love in God, and I do not except even those works most relevant to God's service. For a little of this pure love is more precious before him and before the soul, and more profitable to the Church, although it seems to do nothing, than all the other works together. This is what explains the actions of Mary Magdalene. In preaching Christ she did much good and in continuing this active life she would have done still more: but in the great desire which she had to please her Bridegroom and to make herself useful to the Church, she hid herself for thirty years in the desert, in order to give herself to all the truth of this love. She was convinced that such a life would produce in every way more abundant fruits, for nothing is more to the good of the Church and nothing is more profitable than a little of such love. . . . Indeed, indeed we have been created for nothing except this love.'[1]

angels, whom he saluted as if they were only one; and this example is not unique in the Old Testament, although the truth, and particularly the mystery of the august and tranquil Trinity, were still enveloped in shadows. One cannot be astonished: God had already condescended to raise certain chosen souls to higher regions and, revealing himself to such souls, taught them to know him as he is, one in essence and triune in persons.' (*La Vie spirituelle et l'oraison*, pp. 343–6.)

[1]*Cant.* second redaction, str. 28. This passage is not in the least contradictory to the witness of Père Elisée des Martyrs, when he reports that St. John of the Cross held the same opinion of the superiority of the mixed life, where contemplation overflows into action (without itself suffering any diminution), as St. Thomas Aquinas. 'He also said that the love of one's neighbour and devotion to his good is born of the spiritual and contemplative life. . . . The Rule makes us observe the mixed life, organised so as to

Purely and perfectly spiritual, free from all egotism, as from every vestige of the 'animal' or 'biological' (I mean by the word a life still

unite in itself the contemplative and the active. It is this life that our Lord chose for himself because it is the most perfect. And this kind of life and the state of the religious who adopt it is the most perfect.' (Silv., iv, p. 351.) 'With this reservation,' he adds, 'that at a certain period he found it better not to stress publicly among the religious this manner of thought which was his own; because the number of religious was too small and in order not to disquiet them; it was needful to only insist on the contemplative life until the number of brothers should be greater.'

When St. Thomas and St. John of the Cross after him so affirm the superiority of the mixed life, they are speaking from the point of view of states of life, of manners and orders of existence; and in itself the state of the mixed life is evidently the best, since it is marked by that 'overplus' by which contemplation overflows, and so multiplies the species of goodness: it is the state which resembles Christ's own manner of life. (We may add that souls placed in this manner of life,—which, by being the highest, sanctions and sanctifies, in as much as its works proceed *per se* from contemplation, the humble regime of mutual service and interaction naturally required by the economy of human life—will generally fulfil it badly enough, remaining themselves less inadequate to it so long as they have not arrived at sanctity. The episcopal state is a state of acquired perfection, it is necessary to be a saint to fill it adequately.)

In the passage on St. Mary Magdalene which I have cited, St. John of the Cross is considering the problem from another angle. He is no longer considering the nature of the kind or order of life taken in itself, but that of a soul presumed to have come to the plenitude of love where it is truly co-operative with Christ; its contemplative life has its total perfection in itself and in its pure immanence, like the life of God *ad intra*; it does not require to overflow into action, to spend itself in the duties of the state which it holds in the course of human life (duties of the episcopal state, of that of a doctor, of a father, etc.); precisely because this activity is supererogatory in view of the substance of perfection (rather as production *ad extra* is supererogatory in regard to the divine perfection).

If then we are no longer considering the various states of life, but purely and simply the work which is best and most useful in itself which a soul come to this degree of divine union can do, St. John of the Cross will say: to give all its time to love in contemplation.

The love of souls and their salvation remains always inseparable from the love of God. 'Explaining', continues Elisée des Martyrs, 'the words of Our Lord: *Nesciebatis quia in his quae Patris mei sunt, oportet me esse,* Father John of the Cross said that the works of the Eternal Father should be understood in no other way than as the redemption of the world and the good of souls, which Christ our Lord had procured in the way preordained by the Father. And in confirmation of this truth St. Denis the Areopagite has written this admirable sentence: *omnium divinorum divinissimum est cooperare Deo in salutem animarum.* That is to say that the supreme perfection of every creature, in its hierarchical place and its degree, is to rise and to increase, according to its talent and its resources, in the imitation of God, and what is most admirable and most divine is to be his co-operator in the conversion and the salvation of souls. In that

centred round the interests of the individual and the species), such a love, in which two natures are one spirit, two persons one love, is inseparable from the penetrating savours of a wisdom which in itself is in some manner substantial, and from an experiencing knowledge of the Divine Persons. Thus it carries a human being to the highest degree of knowledge which is accessible here on earth.

POINTS IN THE POSSESSION OF ALL

In this nakedness the spirit finds
Quiet and rest; for indeed

It covets nothing, nothing urges
Towards the height and nothing draws

Either downward, for it is centred
In the centre of humility. And when it covets

Ought, in the very act
Thereby it wearies.

the works of God have their greatest resplendence and it is an immense glory to imitate them. This is why Christ calls them the works of his Father, the objects of the Father's care.' (*Ibid.*) But for a soul come to the plenitude of union, the means which are in themselves best for the salvation of souls are, again, the contemplative activity of love. It possesses already the virtual perfection of the mixed life, and will not deploy it in action unless a special motive intervenes which is of obligation. Thus, by an apparent paradox, the most perfect soul should not, at least unless required to do so from without, enter into those works *ad extra* which are implied by the most perfect state of life.

A SUMMARY OF THE APPENDICES

I. ON THE CONCEPT

'THE THEORY of the concept expounded here (chap. ii, p. 144 *et seq.*), in which I have followed John of St. Thomas, has been already dealt with in a more concise form in *Réflexions sur l'intelligence* (chap. i).'

M. Maritain then proceeds to consider and reply to certain criticisms of this theory proffered by the R. P. M. D. Roland-Gosselin in the *Revue des sciences philosophiques et théologiques* (Apr. 1925) and in the *Bulletin thomiste* (Nov. 1925). This is followed by a critical and tabulated analysis of this theory, and a tabulated series of citations from St. Thomas, with lengthy comments.

II. CONCERNING THE ANALOGY

'The pages of chap. iv devoted to the analogy of being and the transcendentals are not an exposition *in forma* of the doctrine of this analogy. They only endeavour to bring to light certain particularly important aspects of it from the point of view which is there under consideration, which is that of the critique of metaphysical knowledge. This is why, among the various forms of analogy recognised by logicians (by virtue of a division which is itself analogical)—analogy of attribution, metaphorical analogy, analogy of rightful proportionality—I have only dealt with the last, which is the metaphysical analogy *par excellence*, and which it is advantageous to consider alone, in order to work on a *pure instance*. It alone, as Cajetan has said, constitutes the veritable analogy, the others are only improperly so called. . . .'

Then follows 'a brief characterisation' of the three kinds of analogy: that of attribution, metaphorical analogy, and the analogy of rightful proportionality; and an argument on these points with the book of M. T.-L. Penido cited in the text.

III. 'WHAT GOD IS'

A further discussion of the *scire de aliquo quid est*, with authorising quotations from Cajetan, *In de Ente et Essentia* and St. Thomas; followed by a critical disagreement with R. P. Sertillanges, 'due not so much to metaphysical disagreement, as to the terminology which Sertillanges has chosen to use', *i.e.* in the rendering of St. Thomas's Latin into French —a point still more difficult to elucidate in English! For, as M. Maritain adds, 'ambiguity is not a philosophical instrument. . . .'

IV. ON THE NOTION OF SUBSISTENCE

'The notion of subsistence is one of the most difficult and controversial of all Thomist philosophy. . . .' Followed by some highly technical analytic suggestions for its elucidation, based primarily on John of St. Thomas.

V. ON A BOOK BY PÈRE GARDEIL

'An attempt at a truly scientific analysis' of Père Gardeil's *La Structure de l'âme et l'expérience mystique*, and a comparison between it and the points put forward in chapter v. 'After the classical works of a Joseph of the Holy Ghost and, above all, John of St. Thomas, of whom it has been said that nothing can be added to his teaching on the Holy Ghost except our meditations upon it, the profound and penetrating book of Père Gardeil, together with the two admirable books of Père Garrigou-Lagrange (*Perfection chrétienne et contemplation* and *L'Amour de Dieu et la Croix de Jésus*), must be regarded as the most important on this theme. I would here like to bear witness to the depth of my gratitude to these two masters.' In his book Père Gardeil makes certain references to the substance of this book when it appeared as articles in *La Revue thomiste*, and M. Maritain proceeds to consider these comments in detail, with further elucidations and certain criticisms; a difference in the use of the word *intentional*, etc.

VI. SOME PRECISIONS

A critique of the criticisms offered by M. Blondel on *Réflexions sur l'intelligence*, and a rebutting criticism of an article by M. Blondel on 'Le Problème de la mystique' (*Cahiers de la nouvelle journée*, 3).

VII. 'SPECULATIVE' AND 'PRACTICAL'

An enlarged and technical justification of the distinction drawn in chapter vii.

VIII. 'LE AMARA TANTO COMO ES AMADA'

A further discussion and elucidation of the points raised in chaps. vii and viii.

IX. THE 'CAUTELAS' OF ST. JOHN OF THE CROSS

A reproduction of M. Maritain's preface to R. P. Bruno's *St. John of the Cross.*