### INSIGHT

CHAPTER XVI

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### METAPHYSICS AS SCIENCE

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Because we admitted insight to be a fact, we were confronted with a problem of objectivity. Because we were not content to affirm that the fact of insight is merely compatible with objectivity, we have been engaged in showing that our analysis of knowledge implies a method of metaphysics and grounds a deduction of the six metaphysical elements of proportionate being. It remains that the deduced elements give rise to a series of questions, and it will serve both to test the method and to reveal its power. if those questions are given answers. Accordingly, the present chapter deals 1) with the notion of distinction and its different kinds, 2) with the notion of relation and the basic problems it generates, 3) with the nature of the metaphysical elements, their reality, their relation to the elements of a logic or grammar, and their technical significance in gunified knowledge, 4) with the notion of unity as applied to the universe of proportionate being, to a single concrete being, and to the human compound of matter and spirit, and 5) with the concept of metaphysics as a rigorous department of knowledge.

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Though the foregoing issues commonly are treated in manuals of metaphysics, one is not to infer to an identity of scope and aim. Our purpose is not to write a treatise on metaphics but to reveal in concrete fashion the existence and the power of a method. If the method is both valid and powerful, the treatise will follow in due course. It remains that the treatise is a future event and not a present fact, that the present fact is an exploration of method, and that the future event will follow, not as a conclusion deduced by an electronic computer, but as a product of intelligence and reasonablences.

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## Distinctions.

In general, any P and Q are distinct, if it is true that P is not Q. However, this proposition is interpreted differently in accord with different views on reality, knowledge, and objectivity. On the position, knowledge of the distinction between P and Q is constituted by the negative comparative judgment. On the counter-position, the negative comparative judgment merely expresses previously acquired knowledge of the distinction. On the position, the real is being and, as being is known by affirmative judgments, so distinctions in being are known by negative judgments. On the counter-position, the real has to be known before one can make a judgment; it is known by an ocular or a fictitious intellectual look; and so distinctions are known through the occurrence of different acts of looking that cannot be referred to the same object. We contend. of course, that the counter-position is to be rejected. It is

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true that prior to judgment there are other components in knowledge: but it is not true that the components of knowledge prior to judgment are complete as knowledge: before one denies that P is Q, one must have evidence for denying; but having the evidence is one thing; grasping its sufficiency is another; and assenting to the denial is a third. Only in the act of judgment itself does one posit the absolute; only in positing the absolute does one know being.

However, when it is true that P is not Q, it may or may not be true that P is real and it may or may not be true that Q is real. Hence, distinctions may be divided into notional, problematic, real, and mixed.

A distinction is notional, if it is true that 1) P is not Q, 2) P is merely an object of thought, and 3) Q is merely an object of thought. For example, a centaur is not a unicorn.

A distinction is problematic, if it is true that 1) P is not Q, 2) either P or Q or both have not been explained definitively, and 3) there is the possibility that, when definitive explanation is reached, then P or Q or both may turn out to be mere objects of thought, or else P and Q may prove to refer to the same reality.

A distinction is real, if it is true that 1) P is not Q, 2) P is real, and 3) Q is real.

A distinction is mixed, if it is true that 1) P is not Q, 2) one of P and Q is real, and 3) the other is merely notional.

Heal distinctions are divided into major and minor; and major real distinctions are sub-divided into

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numerical, specific, and generic. Minor real distinctions are between the elements or constituents of proportionate being, that is, between central and conjugate potency, form, and act. Major real distinctions are between things, which may pertain to different genera or to different species of the same genus or, finally, may be different individuals of the same species.

Again, real distinctions are divided into adequate and inadequate. There is an adequate real distinction between Peter and Paul, between Peter's right hand and his left hand; but there is an inadequate real distinction between Peter and his hands.

In conclusion, it may be noted that the Scotist formal distinction on the side of the object 1) presupposes the counter-position on objectivity and 2) finds its strongest argument in the field of trinitarian theory. God the Father is supposed to intuit himself as both God and Father; the object as prior to the intuition cannot exhibit both aspects as completely identical, for otherwise the Son coold not be Gol without also being Father. The fundamental answer is, <u>Ex falso sequitur quodlibet</u>; and the supposition of the intuition rests on a mistaken cognitional theory. The history of this Scotist distinction has been investigated by B. Jansen, Beiträge zur geschic hillchen Entwicklung der Distinctio formalis, <u>Zeit. f. kath. Theol.</u>, 53 (1929), 317-44, 517-44.

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# <u>Relations</u>

As distinctions, so relations may be notional, problematic, real, or mixed. They are notional if they are merely supposed, merely objects of thought. They are problematic if their affirmation occurs in a description or in a provisional explanation. They are real if their affirmation would survive in a definitive explanatory account of this universe. They are mixed if one correlative is real and the other notional.

The foregoing division has a ground and a consequent. Its ground lies in our view that metaphysics regards proportionate being as explained. Its consequent is the problem of determining which relations survive in a definitive explanation and so pertain to a metaphysical account of reality.

To meet this problem, it is necessary to distinguish in concrete relations between two components, namely, a primary relativity and other secondary determinations. Thus, if it is true that the size of A is just twice the size of B, then the primary relativity is a proportion and the secondary determinations are the numerical ratio, twice, and the two observable sizes. Now "Size" is a des-

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criptive notion that may be defined as an aspect of things standing in cortain relations to our senses, and so it vanishes from an explanatory account of reality. Again, the numerical ratio, twice, specifies the proportion between A and B, but it does so only at a given time under given conditions; moreover, this ratio, may change, and the change will occur in accord with probabilities; but while probabilities will explain why objects like A and B every so often have sizes in the ratio of two to one, they will not explain why A and B are in fact in that relation here and now; and so the numerical ratio, twice, is a non-systematic element in the relation. However, if we ask what a proportion is, we necessarily introduce the abstract notion of quantity and we make the discovery that quantities and proportions are terms and relations such that the terms fix the relations and the relations fix the terms. For the notion of quantity is not to be confused with a sensitive or imaginative apprehension of a size; a quantity is anything that can serve as a term in a numerical ratio; and inversely, a proportion, in the present context, is a numerically definable ratio between quantities.

The point, then, to our distinction between the primary relativity of a relation and its secondary determinations is that it separates the systematic and the non-systematic. If A and B are things of determinate kinds, then they must be quantitative; and if they are quantitative, there must be some proportion between their quantities. But just what that proportion will be at any given time, will depend on the manifold of factors that form the non-system-

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atic pattern of a diverging series of conditions, and so there is within the limits of human science no ultimate and fully determinate explanation of why A happens to be just twice B at a given moment.

There is a further point to our distinction. As it separates the systematic and the non-systematic, so also it separates the relative from its absolute determinations. All that is relative in the notion, twice, is also found in the notion, proportion; the difference between them is that "twice" is a proportion specified by some pair of quantities such as one and two, or two and four, etc.; and such pairs of quantities, simply as pairs of quantities, prescind from the relations of one to the other.

In this fashion we are brought to conceiving relations as involving two components: one component contains all the relativity of the relation, and it is necessary and permanent inasmuch as it is inseparable from its base in a thing of a determinate kind; the other component, however, is contingent; it is subject to variation in accord with the successive schedules of probabilities in world process; but these variations change, not the primary component, but only the secondary determinations; they modify not the relative but the absolute.

Moreover, this analysis possesses a remarkable generality. For we have found it possible to conceive the universe of proportionate being in terms of central and conjugate potencies, forms, and acts. But conjugate forms are defined implicitly by their explanatory and empirically verified relations to one another. Still, such relations

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are general laws; they hold in any number of instances; they admit application to the concrete only through the addition of further determinations, and such further determinations pertain to a non-systematic manifold. There is, then, a primary relativity that is contained in the general law; it is inseparable from its base in the conjugate form which implicitly it defines; and to reach the concrete relation that holds at a given place and time, it is not enough to think about the general law; one has to add further determinations that are contingent from the very fact that they have to be obtained from a non-systematic manifold.

What holds for the relations of scientific explanation, also holds for the relations of metaphysical explanation. As conjugate forms are defined by their relations to one another, so central forms are unities differentiated by their conjugate forms; and central and conjugate potency and act stand to central and conjugate forms. as experience and judgment stand to understanding. The whole structure is relational: one cannot conceive the terms without the relations nor the relations without the terms. Both terms and relations constitute a basic frame- # work to be filled out, first, by the advance of the sciences and, secondly, by full information on concrete situations. Moreover, as we have argued metaphysics to be immune from revolutionary change, that frame+work in its fundamental lines lets us know now the types of relations that would survive in a definitive explanatory account of this universe. Accordingly, our first problem seems solved.

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Because we conceived metaphysics as the implementation of integral heuristic structure, we had to affirm that it regarded proportionate being as explained and so we had also to affirm that real relations are relations that would still be affirmed in a definitive explanatory account of this universe. By distinguishing in concrete relations between their primary relativity and their secondary determinations, it was possible to locate the relative component of the concrete relation entirely within the list of metashys ical elements, Scientific laws and systems are successive approximations to the relations between conjugate forms. Scientific probabilities are approximations to the relations between forms and acts of existence and occurrence. Finally, the emergent processes investigated by genetic and dialectical method contain the relations of successive levels of conjugate forms and the sequences of relations between successive stages in the development of conjugate forms.

Noreover, there follows a clarification of the problem of internal and external relations. Relations are said to be internal when the concept of the relation is intrinsic to the concept of its base; they are external when the base remains essentially the same whether or not the relation accrues to it. Thus, if "mass" is conceived as a quantity of matter and matter is conceived as whatever satisfied the Kantian scheme of providing a filling for the empty form of time, then the law of inverse squares is external to the notion of mass. On the other hand, if masses are conceived as implicitly defined by their relations

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to one another and the law of inverse squares is the most fundamental of those relations, then the law is an internal relation, for the denial of the law would involve a change in the concept of mass.

Now at first sight it would seem that on ; a definitive explanatory account of the universe, all relations would have to be internal. For an explanatory account proceeds from insight; it consists basically of terms and relations with the terms fixing the relations and the relations fixing the terms; and clearly such relations are internal to the terms. But while this is true of the systems to be reached by classical method, it is not the whole truth. Because classical systems are abstract, because they can be applied to the concrete only by appealing to a non-systematic manifold of further determinations, there also are statistical method and statistical laws. It follows that classical method reveals the primary relativity without the secondary determinations of concrete relations, that it provides an abstract relational field, say, for the positions and momenta of masses, but it leaves to observation and, in the general case, to probabilities the determination of how many masses with what momenta are at what positions. Again, it is true that statistical laws can be turned to explanatory account when they are coupled with large numbers or with long periods of time; but this explanation does not pin down particulars. It makes it intelligible that things like A and B every so often should be found in the ratio of two to one; but it leaves as mere empirical fact the determination that here and now A and B

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are in the given ratio. Finally, because that determination is more empirical fact, A and B remain subject to the same classical laws whether they are found in the ratio of two to one or in the ratio of three to one.

Accordingly, while we must grant that the shift from description to explanation involves a shift from external to internal relations, still, we also contend that the internal relations constitute no more than the component of primary relativity and, since in concrete relations there is also a component of contingent secondary determinations, external relations also survive in a definitive explanatory account of our universe.

This issue has an older and slightly different form. Aristotle had advanced that change did not occur primarily in the category of relation, and Aquinas undertook to resolve the consequent paradox that, when a change in the size of Q makes it equal to P, then 1) no reality accrues to P and yet 2) P becomes the subject of a real relation of equality to Q. Apparently these two propositions are contradictory, but there is no doubt that fail to offer. Aquinas affirmed both. Nor did he leak reason. P can acquire a real relation of equality without acquiring any new reality, because all along P has possessed the reality of the real relation so that the change in Q merely provided it with its external term. See In V Phys., lect.  $3, \neq 7, 8$ ; ed. Leon., II, 237.

However, if one is to agree with Aquinas on the matter, one has to push his analysis further than he did himself. What is the reality of the real relation

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that is found in P before Q is changed to an equal size? If it is absolute, then the real relation of P to Q is the nothing that comes to P when Q is changed. If it is relative, then what is its term? Such considerations have led the commentators to deny one of the propositions that Aquinas undertook to reconcile and then to invent distinctions to reconcile their explanation with the text they were explaining, But the present analysis leads us to the opposite procedure of pushing Aquinas! thought further on the line he has chosen. The reality of the real relation is in P prior to the change in Q; that reality is relative; it is the primary relativity inseparable from quantity; it involves everything quantitative in some relation of proportion to everything else that is quantitative; but it does not determine just what is the proportion between P and Q, and R, or P and S, etc. To settle just what the proportion is in any case, one has to appeal to the secondary determinations, such as the size of P and the size of Q; and because the secondary determinations are found not only in P but also in Q, because variations in P and Q are not functionally related, the determinate proportion of P to Q can change without any change in P.

In other words, concrete relations such as equality and similarity lie in the field of descriptive knowledge. Their metaphysical analysis supposes their transference to the explanatory field. Through such transference it appears that such relations are not simple entities but composite. They involve a component of primary relativity and a component of secondary determinations. The primary relativity is inseparable from its base and for that reason

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all change is change in the base and only incidentally and consequently change in the relativity. The secondary determinations are constitutive neither of the relation nor of its reality as relation but simply of the differentiation of concrete relations; and because that differentiation depends, not on the base alone but on the base and term together, it can vary without variation in the base.

There remains a final question. Is the reality of a real relation distinct from the reality of its base? It is one thing to conceive the absolute; it is another to conceive the relative; but is there one reality grounding both concepts, or are there two really distinct realities? To handle this question expeditiously, let us contrast counter-positions with the position.

On the basic counter-position, there is simply no meaning to talk about real relations. The real is a sub-division of the "already out there now". That is simply given. All relations arise only through the acitivities of our understanding. Therefore, no relations are "already out there now" and so none are real.

Besides the foregoing counter-position, there is its transposition. Besides the looking that is performed with the eyes, there is also a spiritual looking. It looks at the content of acts of conceiving, thinking, supposing, defining, considering. Such contents are or can be real. But it is one thing to take a spiritual look at an absolute content and it is quite another to take a spiritual look at a relative content. The two are irreducible. Therefore, the reality of the absolute base and the reality of the

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relation must be two really distinct entities.

On the position, the real is being; it is whatever is to be grasped intelligently and affirmed reasonably. Now within the limits of proportionate being, whatever is grasped intelligently is never a term without relations or a relation without terms. To express an insight, one needs several terms and relations with the terms fixing the relations and the relations fixing the terms. To suppose that there are any terms without relations or any relations without terms is to suppose an oversight. Descriptive terms are no exception, for they express things as related to us. Metaphysical terms are no exception, for they come at least in pairs, such as substance and accident, matter and form, potency and act, essence and existence. On scientific terms we have been sufficiently abundant already. But what cannot be affirmed, cannot be. What cannot be conceived, cannot be affirmed. But there is no intelligent conception of terms apart from relations or relations apart from terms, and so there is no possibility of their being apart.

It will be said that P and Q can be inseparable and yet be really distinct. But such inseparability would seem to be merely physical. The inseparability in question is not merely physical. It is essential. The basic terms of the sciences and the six elements of metaphysics are defined by their respective relations to one another. To distinguish between the defining relation and the defined term can be no more than a notional operation; and even then it cannot be carried through, for if one prescinds from the

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defining relation, one no longer is thinking of the term as defined but of some other term that is mistakenly supposed to be absolute. Finally, while there are relations other than such defining relations, still they are not adequately distinct from them; for these other relations are concrete; their primary relativity consists in the defining relations; and their secondary determinations are neither relations nor the reality of relations but the contingent concrete differentiations of the primary relativities.

However, while we maintain that the reality of proportionate being is embraced in its entirety by central and conjugate potencies, forms, and acts, so that there is no further really distinct element named relation, it is to be borne in mind that we are envisaging proportionate being as explained. From a descriptive viewpoint, Aristotle's ten categories retain their obvious validity and, among them, the category of relation maintains its distinct place.

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### Metaphysics as Science

## 3. The Meaning of the Metaphysical Elements

3.1 What are the metaphysical elements?

If considerable space has been devoted to the notion and method of metaphysics and to the derivation of the metaphysical elements, it is still possible to be puzzled and to ask just what, after all, are central and conjugate potency, form, and act. In general, one may answer that they are the as yet unspecified U,V, W, and X,Y, Z, that are to be specified if proportionate being is to be explained. Again, one may say that they are elements in the articulation of the integral heuristic structure of proportionate being. In all probability, however, more is desired than such a reiteration of an already familiar theme and so, since the direct answer does not satisfy, various indirect answers must be tried.

First, then, it will not be out of place to recall the conditions of the legitimacy of the question, What is it? One can put the question with regard to data, and the answer will be to name a thing or property; one can repeat the question about the thing or the property and learn that the thing is a unity differentiated by certain properties and that the properties are defined by their relations to one another; one can raise the question once more about the process of explaining data and of defining things and properties, and the answer will tell what knowing is either in concrete instances or in its general structure; finally, one can make the discovery that this structure governs not only the knowing but also the known,

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and then one can ask what the structure is under the latter aspect. So we arrive at the question, What are the metaphysical elements? Clearly, the answer has to be that the elements do not possess any essence, any "What is it"? of their own. On the contrary, they express the structure in which one knows what proportionate being is; they outline the mould in which an understanding of proportionate being necessarily will flow; they arise from understanding understanding and they regard proportionate being, not as understood, but only as to be understood.

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There follows an important corollary. If one wants to know just what forms are, the proper procedure is to give up metaphysics and turn to the sciences; for forms become known incomuch as the sciences approximate towards their ideal of complete explanation; and there is no method, apart from scientific method, by which one can reach such explanation. However, besides the specialized acts of understanding in which particular types of forms are grasped in their actual intelligibility, there also exist the more general acts of understanding in which one grasps the relations between experience, understanding, and judgment, and the isomorphism of these activities with the constituents of what is to be known. If the metaphysician must leave to the physicist the understanding of physics and to the chemist the understanding of chemistry, he has the task of working out for the physicist and chemist, for the biologist and the psychologist, the dynamic structure that initiates and controls their respective inquiries and,

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no less, the general characteristics of the goal towards which they head.

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In other words, the task of explaining proportionate being leads to a division of labor. Different domains of data fall to different departments of science, and from any given department one is to expect explanation only of the data of its field. But among the data are those that arise from the scientific process itself, from the fact of inquiry, from the division of the undertaking, from the procedures employed, from the recults obtained. Such consequent data also admit explanation, and the explanation regards not only investigations and their procedures but also the content of their results. It is on this second level that the cognitional theorist and metachysician operate, and the contents of other results.

The existence of this division of labor means that, while further questions must elways be met, still they are not always to be met within a given field of inquiry. Because the metaphysician can assign the general characteristics of proportionate being as explained, it does not follow that he can give detailed enswers. On the contrary, he must refer questions of detail to particular departments: and he fails to grasp the limitations of his own subject if, in his hope to meet issues fully, he offers to explain just what various forms are. Inversely, scientists in their several fields can give detailed answers to appropriate questions; but their competence in their own field

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is conjoined with a failure to grasp its limitations if they attempt to answer the further questions that regard other particular fields or the universe as a waole.

# 3.2 <u>Cognitional or Ontological Elements?</u>

Secondly, it may be asked whether the metaphysical elements constitute an extrinsic or an intrinsic structure of proportionate being. Are they merely the structure in which proportionate being is known? Or are they the structure immanent in the reality of proportionate being? To put the issue in its traditional form, are the metaphysical elements notionally distinct or really distinct?

The question has to do with the relation between knowing and reality. For central and conjugate potency, form, and act have been defined heuristically in terms of cognitional acts: if there were more or fever basic types of cognitional acts, there would be more or fewer metaphysical elements. So, as far as their definitions go, the differences of the metaphysical elements are differences in the process of knowing and,unless further evidence is forthcoming, they are not differences in the being to be known. Still, one may expect the further evidence to be available, for the simplest reason why our knowing has its peculiar structure would be that proportionate being has a parallel structure.

A first point, then, is that intelligibility is not extrinsic but intrinsic to being. By intelligibility is meant what is to be known by understanding. By the

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intrinsic intelligibility of being is meant that being is
precisely what is so known or, in negative terms, that being
is neither beyond the intelligible nor apart from it nor
different from it.

Now if by being one means the objective of the pure desire to know, the goal of intelligent inquiry and critical reflection, the object of intelligent grasp and reasonable affirmation, then one must affirm the intrinsic intelligibility of being. For one defines being by its intelligibility; one claims that being is precisely what is known by understanding correctly; one denies that being is anything apart from the intelligible or beyond it or different from it, for one's definition implies that being is known completely when there are no further questions to be answered.

Further clarification will result from contrast. One might claim that the real is a submittision in the "already out there now" or, if one pleases, in the "already in here now". On that view, intelligent inquiry and critical reflection, however useful or praisemorthy they may be, necessarily are extrinsic to knowing reality, for extroversion or introversion of consciousness is prior to asking questions and independent of answers to questions. Accordingly, by descriing the position of being and reverting to the counter-position, one can form a notion of the real to which intelligibility is extrinsic. Moreover, since such descriion and reversion can take place inadvertently by a mere shift in the pattern of one's experience, it can

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happen easily enough that the intrinsic intelligibility of being will seem a puzzling or a preposterous view. But once all this is admitted, it becomes still clearer that, if the counter-position is rejected in principle, then in principle being must be intrinsically intelligible and, if in fact one is in the intellectual pattern of experience, then in fact this intrinsic intelligibility sheds its obscurity.

However, a further difficulty can arise. After all, as intelligence, so intelligibility is intrinsic to human cognitional activity. Since by that activity being is to be known, it follows that intelligibility will be intrinsic to being as known. However, the knowing is extrinsic to the being, for the knowing is one thing and the being another. Therefore, what is intrinsic to being as known, may be extrinsic to being itself, to being as being.

Now if by being one means an "already out there now", it is quite possible to argue that knowing is extrinsic to being. Again, once one has posited an appropriate set of judgments, one again can claim that knowing is extrinsic to certain beings; for example, one will judge that there is a knowing, that there is a known, and that the knowing is not the known; clearly, when the knowing is not the known, it is extrinsic to the known. However, this distinction between knowing and known is within being, and it presupposes the intrinsic intelligibility of being; for without that intrinsic intelligibility, our intelligent activities would give us knowledge of the intelligible but

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not of being, and the distinction between knowing and known would be a distinction within the field of the intelligible but not a distinction of two beings.

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Our first point, then, though it has its complexities, at least cuts deeply. It affirms the intrinsic intelligibility of being, and it identifies this affirmation with the affirmation of the possibility of knowledge.

Our second point is that intelligibility is, not all of a piece, but of different kinds. There is the intelligibility that is known inasmuch as one is understanding; it is the formal intelligibility that is the content of the insight and the dominant element in the consequent set of concepts. But our understanding results from inquiry, and as inquiry presupposes something into which we inquire, so our understanding presupposes some presentation of what is to be understood, Such presentations are in some sense intelligible; as materials for inquiry, they are what is to be understood; and when inquiry reaches its term, they become understood. Still, this intelligibility . of the presentations is not formal but potential; it is not the intelligibility of the idea, of what is grasped inasmuch as one is understanding; it is the intelligibility of the materials in which the idea is emergent, which the idea unifies and relates. Finally, besides formal and potential intelligibility, there is a third type. It is what is known inasmuch as one grasps the virtually unconditioned; it is the intelligibility of the factual. While

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the potentially intelligible is what can be understood, and the formally intelligible is what may or may not be, the accurally intelligible is restricted to what in fact is.

Now as intelligibility is intrinsic to being, so also the differences of intelligibility are intrinsic to being. In particular, proportions to being is what is to be known by experience, intelligent grasp, and reasonable affirmation. It is not what is known by experience alone, for such knowing falls short of human knowing. It is not what is known by experience and understanding without judgment, for tithout judgment there is not knowing but merely guess-work, her can there be judgment without prior understanding, nor understanding without experience. The proportionate object of human knowing not only is intrinsically intelligible but also is necessarily a compound of three distinct types of intelligibility.

It follows that potency, form, and act not morely assign the structure in which being is known but also the structure immanent in the very reality of being. For intelligibility is intrinsic to that reality, and the intrinsic intelligibility is of three different kinds. Nor are these the only differentiations immanent in being, for there are different formal intelligibilities; conjugate forms are of different kinds; central forms are defined differently from conjugate forms and they differ from one another by the different conjugates they unite; and potencies and acts share the definitions of the forms with which they constitute unities. For every difference

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in intelligibility there is a difference intrinsic to the reality of known proportionate being.

So we are swung back to our account of real distinctions. P and Q are really distinct if it is true that P is, Q is, and P is not Q. When P is a thing and Q is a thing, the real distinction is major. When P and Q are metaphysical elements of a thing, the real distinction is minor. When P is a thing and Q is one of its metaphysical elements, the real distinction is inadequate.

Finally, we may note the correctness of our expectation. Why does our knowledge bogin with presentations, mount to inquiry, understanding, and formulation, to end with critical reflection and judgment? It is because the proportionate object of our knowing is constituted by combining different types of intelligibility. In so far as that object is only potentially intelligible, it is to be known by more experience; in so far as it is formally intelligible, it is to be known inasmuch as we are understanding; in so far as it is actually intelligible, it is to be known inasmuch as we posit the virtually unconditioned "Yes". Again, experience is of things as potentially intelligible, but through experience alone we do not know what the things are. Understanding is of things as formally intelligible, but through understanding we do not know whether things are what we understand them to be. Judgment is of things as actually intelligible but through judgment alone we would not know either the nature nor the merely empirical differences of what we affirm to be.

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# 3.3 The Nature of Metaphysical Equivalence

We have been endeavoring to clarify from different viewpoints the meaning of the metaphysical elements. First, we considered the question, What are central and conjugate potency, form, and act. Secondly, we asked whether they were merely the structure in which being is known or also the structure in which being is. As a third topic we may ask about the relations between the metaphysical elements on the one hand, and, on the other, the objects of true propositions.

In the first place, then, there is a general community of reference. The object of the true proposition is being, for being is what is known by intelligent grasp and reasonable affirmation: and as we have just seen, the metaphysical elements are components intrinsic to being.

In the second place, true propositions may be analyzed. Grammarians distinguish nouns and verbs, adjectives and adverbs, etc. Logicians distinguish subject, copula, and predicate, terms and relations. In both cases, the analysis is based on a consideration of the end-products of cognitional process, of the definitions formed in conception, of the affirmations and negations uttered by reflection. On the other hand, metaphysical analysis has a quite different basis. It takes its stand, not on the end-products, but on the dynamic structure of cognitional process. For it, the significant division has nothing to do with nouns and verbs, subjects and predicates,

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or even terms and relations: it concentrates on the merely empirical residue from which all understanding will abstract, on the content of the act of understanding itself, on the virtually unconditioned grasped in the act that grounds and leads to judgment.

Thirdly, since metaphysical elements and true propositions both refer to being, there must be some correspondence between them. On the other hand, since metaphysical analysis has a quite different basis from grammatical or logical analysis, one must not expect any one-to-one correspondence between metaphysical elements and grammatical or logical elements.

Fourthly, while the foregoing conclusion seems too manifest to be worth mentioning, once one conceives precisely the nature and method of metaphysics, still until such exact conception is reached, metaphysics is apt to languish in a morass of pseudo-problems that have no basis apart from a confusion of the metaphysical with the logical and grammatical. Accordingly, even though we do not attempt to offer an exhaustive list of precepts, it may be worth while to set down at least a few obvious rules.

1) The concepts and names of the metaphysical elements are general: "potency" can denote any instance of potency. Still this generality does not involve them in abstractness, for there is nothing to a thing apart from its potencies, forms, and acts. The ground of this generality without abstractness is that the metaphysical elements are defined heuristically; the definition of form does not refer

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immediately to reality, as does the definition of man or of hydrogen; its immediate reference is to a type of cognitional activity and only through the occurrence, which is usually hypothetical, of such activity does it refer to being; finally, since the envisaged hypothetical activity is to be full and complete, necessarily it will pertain to knowledge of the concrete.

Accordingly, while "potency", "form", and "act" are general concepts and names, their reference is exclusively to concrete potencies, forms, and acts. On the other hand, true propositions may be abstract in their meaning; and then to assign their metaphysical equivalent, they have to be transposed into concrete propositions. Such transposition may be easy or difficult but, in so far as it is found difficult, there also will be found that some measure of ignorance is taking cover under the abstract expression. It is not the metaphysician's business to remove that ignorance. He fulfils his function by assigning the equivalent metaphysical elements corresponding to true propositions whose concrete meaning is known.

This first principle may be named the rule of concreteness and its application yields a solution to the problem of individuation. For, in the first place, since potencies, forms, and acts are all concrete, they are all individual, and so there is no problem of their individuation. Secondly, since the problem does not regard the individuality of the metaphysical elements, it has to regard the individuality of beings as referred to in grammatical or logical propositions. Thirdly, the problem does not regard

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any kind of individuality but solely the individuality that consists in morely empirical difference. Thus, consider two points, A and B, and ask why they are different. One will appeal, perhaps, to the distance between them. Construct, then, an equilateral triangle, ABC, and ask why the distances, AB, BC, CA, differ from one another. It is not because they are unequal, for they are equal. Nor can one say that it is because of their different positions, for then one will be explaining the difference of the distances by the difference of the points and vice versa the difference of the points by the difference of the distances. The only solution is to ensuer from the start that the points, A and B. differ from one another not intelligibly but materially, not for an intrinsically assignable reason but as a pure matter of fact. Such is the meaning of merely empirical difference. It is the object of the problem of individuation. Why is this pea different from that, this Ford from that? Even though the two peas or the two Fords might not be similar in every respect, still they could be absolutely alike and yet different. Such difference would not be grounded in any assignable reason, in anything to be known by a direct act of understanding. It is grounded in what is to be known merely empirically. In other words, its metaphysical ground is potency. Just as the affirmation of the existence of a thing is grounded in central act, just as the affirmation of its unity is grounded in central form, just as the affirmation of its mass is grounded in a

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conjugate form, just as the affirmation of its momentum is

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grounded in a conjugate act, so the affirmation of its merely empirical individuality is grounded in potency.

2.) Again, the metaphysical elements are defined through the anticipation of explanatory knowledge. They regard things, not as related to us, not as related to our senses, not as represented in our imaginations, but as understood in their relations to one another. Now true propositions may be merely descriptive; to assign their metaphysical equivalents, they must be transposed into an explanatory form; and until that transposition is effected, formally or virtually, it is useless to attempt to assign the metaphysical grounds of their truth. Accordingly, besides the rule of concreteness, there also is a rule of explanatory formulation.

It is a rule of extreme importance, for the failure to observe it results in the substitution of a pseudometaphysical myth-making for scientific inquiry. One takes the descriptive conception of sensible contents and, without any effort to understand them, one asks for their metaphysical equivalents. One by-passes the scientific theory of color or sound, for after all it is merely a theory and, at best, probable: one insists on the evidence of red, green, and blue, of sharp and flat; and one leaps to a set of objective forms without realizing that the meaning of form is what will be known when the informed object is understood.

Such blind leaping is inimical not only to science but also to philosophy. The scientific effort to understand is blocked by a pretence that one understands

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already and, indeed, in the deep, metaphysical fashion, But philosophy suffers far more, for the absence of at least a virtual transposition from the descriptive to the explanatory commonly is accompanied by counter-positions on reality, knowledge, and objectivity, When one is endeavoring to explain, one is orientated to the universe of being; one is setting up distinctions within being; one os relating distinct beings to one another; and one is relegating all the merely descriptive elements in knowledge to particular instances of the case that arises when some being with senses and imagination is related through his senses and imagination to other beings. But while explanatory knowledge includes descriptive, descriptive knowledge is a part that is prone to fall under the illusion of being the whole. It is a fact that explanatory knowledge is an unattained ideal and that the explanations we have reached are commonly mere opinions. It is also a fact that metaphysics takes its stand on the present existence and functioning of the dynamic structure of explanatory knowledge. But the first fact is far move accessible than the second. There arises a demand for a metaphysics that is grounded, not in the impalpable potentiality of explanation, but in the manifest truth of description. The correct ground of metaphysics is rejected and instead there is erected a pseudo-metaphysics whose elements stand in a happy, if ultimately incoherent, conjunction with sensitive presentations and imaginative representations. Then the real is the "already out there now", knowing it is taking a good look, and

objectivity begins from the obviousness of extroversion to end in the despair of solipsism.

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3) Even when true propositions have been transposed into a concrete and virtually explanatory formulation, there remain structural differences between logical and metaphysical analysis. True propositions contain affirmations and negations about subjects. Their metaphysical equivalents are positions, distinctions, and relations in the universe of being. If it is true that A is similar to B, then "similarity to B" is predicated truly of the subject, A. But it does not follow that "similarity to B" is some one of the metaphysical components constitutive of A. For B is not a constitutive component of A yet, without B, there is no similarity of A to B. The rule of structural transposition requires a transition from the logical subject, A, to two beings, A and B. The predicate, similarity, has its metaphysical ground in the fact that the difference between the at least one constitutive component of A and one constitutive component of B is merely empirical.

The foregoing point might have been made in a different manner, for the metaphysical equivalent of a true proposition is also the metaphysical equivalent for all the necessary implications of the true proposition. Since A cannot be similar to B without B being similar to A, one and the same metaphysical equivalent has to provide the ground for both propositions.

Those familiar with traditional metaphysics will recall in this connection the distinctions between intrinsic and extrimination and between formal

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cause and formal effect. Intrinsic and extrinsic denomination is a difference in propositions. Denomination or predication is intrinsic to a subject, P, when the metaphysical equivalent of the name or predicate is a constituent of the being, P. On the other hand, denomination is extrinsic to a subject, P, when the metaphysical equivalent of the name or predicate is not a constituent or not entirely a constituent of the being, P. Again, the relation between formal cause and formal effect is a less general case of the relation we have named metaphysical equivalence, The formal cause is the metaphysical equivalent in the particular case when that equivalent is a form. The formal effects are the range of objects of true propositions grounded by the formal cause. Formal effects are primary or secondary, absolute or conditioned, intrinsic or extrinsic, according as the true propositions grounded by the formal cause are premisies or conclusions, necessary or conditioned conclusions, conclusions about the constituted subject or about other subjects. Thus, if Socrates has a human central form (formal cause), he will be a man (primary formal effect), be capable of understanding (necessary, secondary, intrinsic formal effect), occasionally understand (conditioned, secondary, intrinsic formal effect), have a father (extrinsic formal effect).

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### 3.4 The Significance of Metaphysical Equivalence

The significance of metaphysical equivalence is twofold. On the one hand, it provides a critical technique for the precise control of meaning. On the other hand, it is an implement for the levelopment of metaphysics.

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"Mean what you say, and say what you mean", is an excellent precept. Obviously, it has to be observed if human communication is to be successful on any but superficial levels. Yet it is a common experience that, as the basic issues in any field are approached, it becomes increasingly difficult to pin down exactly what others or, for that matter, what one oneself means. Nor can that fact be surprising to the reader familiar with the distinction between different patterns of human experience, the alternative positions and counter-positions in which may be expressed what one discovers or learns, and the protean character of the notion of being that turns out to mean whetever is to be grasped intelligently and affirmed reasonably.

Now just as the study of human experience, of the philosophies, of the notion of being, enables one  $\mathbf{t}^{o}$ grasp in a general fashion the range of the possibilities of meaning, so the use of metaphysical equivalence as a technique enables those that possess such a grasp of possibilities to assign with precision which of possible meanings is their actual meaning. Discussion of this universe is discussion of proportionate being. Proportionate being is one or many, if it is true that there are a P, a Q, an R,... and P is or is not Q, P is or is not R, Q is or is not R,....

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Any single being is existent by its central act, one by its central form, individual by its central potency, differentiated from other beings and related to them by its conjugate potencies, forms, and acts. There are generic differences inasmuch as conjugate forms emerge on successive higher levels, and there are specific differences inasmuch as different unities are difforentiated by different sets of conjugates. The objects of the several sciences are not an unrelated set of indefinables, such as energy, life, consciousness, intelligence, but a systematically related set of differences in the total object of human inquiry. Nor is this basic unity, this systematic differentiation, to be sought at the price of pre#judging scientific issues. It is to be had by recognizing that scientists already are committed to inquiring intelligently and reflecting reasonably, that that commitment has implications, that the implications are coincident with the suppositions of scientific method in its classical. statistical, genetic, and dialectical forms, that it is through that coincidence that metaphysics contains virtually and structurally what the sciences are to discover formally and in detail. Moreover, what is at issue, is not merely the luxury of unifiel science, of distinct and autonomous sciences dealing with a common object in related yet distinct and autonomous fields, There also is at issue the liberation of the sciences from the whirligig of philosophic dialectic; for the counter-positions, in which philosophy is involved through the polymorphism of human consciousness, automatically spread to the field of scientific thought when, indeed, they do not originate, as Cartesian dualism

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in Galileo and Kantian criticism in Newton, from scientific failure to reach an adequate account of its assumptions and presuppositions. Finally, while contemporary scientific interest in logic constitutes a recognition of this need, it is not a sufficient remedy for the infection. For logic is static, but science is dynamic. Logic will bring to light the eternal presuppositions and the eternal implications of an absolutely precise account of any position. But the scientist never possesses an absolutely precise account of his present position; for his position is system on the move. It increases in procision inasmuch as it keeps moving from one logical position to another. Its yeal presuppositions are not a set of propositions but the dynamic structure of the human mind, and its need of liberation arises, not from incautiously formulated sentences, but from the polymorphism of human consciousness.

Metaphysical equivalence possesses a special significance in the human sciences. For man is the being in whom the highest level of integration is, not a static system, nor some dynamic system, but a variable manifold of dynamic systems. For the successive systems that express the development of human understanding are systems that regard the universe of being in all its departments. To that development the human organism and the human psychige have to find appropriate adaptations. In consequence of that development, the range of human skills and techniques, of economies and polities, of sciences and philosophies, of cultures and religions is diversified. Only the broadest possible set of concepts can provide the initial basis and

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the field of differences that will be adequate to dealing with a variable set of moving systems that regard the universe of being. Only a critical metaphysics that envisages at once positions and counter-positions can hope to present successfully the complex alternatives that arise in the pursuit of the human sciences in which both the men under inquiry and the man that are inquiring may or may not be involved in the ever possible and ever varied aberrations of polymorphic consciousness.

Finally, there is the inverse aspect of metaphysical equivalence. If the sciences of nature and of man can derive from metaphysics as a technique a common yet systematically and critically differentiated object, so inversely, metaphysics derives from the sciences the content and enrichment that actual activity brings to a dynamic structure. In human knowledge metaphysics is the initially latent structure that comes to light only through developments in particular fields. It becomes the explicitly transforming and unifying structure that possesses a content in so far as it has materials to transform and unify. In theory, it is possible for metaphysics to rest solely on the known structure of the human mind. In practice, it is necessary for the metaphysician over to bear in mind that scientific views are subject to revision. But neither the theoretical possibility nor the practical restraint add up to the conclusion that the metaphysician does well to lose contact with the sciences; for that loss of contact not only means that metaphysics ceases to play its integrating role in the unity of the human mind but also exposes the meta-
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physician to the over recurrent danger of discoursing on quiddities without suspecting the equiddity means what is to be known through scientific understanding. Accordingly, just as the scientist has to raise ultimate questions and seek their answers from a metaphysics, so the metaphysician has to raise proximate questions and seek their answers from scientists. In either case, the tool to be employed is metaphysical equivalence which assigns to true propositions their grounds in the constituents of proportionate being and thereby reveals both what exactly the propositions mean and what the constituents are.

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#### The Unity of Proportionate Being

The unity of proportionate being raises three questions, for there is the general question of the unity of this universe, there is the particular question of the unity of any concrete being with its manifold of meta physical elements grounding its manifold of predicates, and there is the special question of the unity in man in whom both materiality and its opposite seem combined.

## 4.1 The Unity of the Proportionate Universe

The unity of the universe of proportionate being is threefold: potential, formal, and actual. Its actual unity is an immanent intelligible order, which we have found reason to identify with a generalized emergent probability. Its formal unity is constituted by its successive levels of conjugate forms which set up successive, intelligible fields. Its potential unity is grounded in conjugate prime potency, in the merely empirical conjunctions and successions that constitute the inexhaustible manifold of the merely coincidental for successive levels of forms and schemes to bring under the intelligible control of system. Thus, the merely coincidental becomes space-time through the inter-relations of gravitation and electro-magnetic theory. This displaces the coincidental to the level of physical events, where it is overcome by the higher unities of the chemical elements and their affinities. There follows its displacement to the level of

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chemical processes where it is overcome by the higher system of the cell and by the ontogenetic and phylogenetic sequences of the organism in which each stage is either adapting to environment or circumventing it. On the psychic level, inter#relations are transformed into the developing conjugates governing increasing perceptiveness and ever more nuanced aggressive and affective responses. Finally, on the level of intelligence man's relations to the universe are settled by his grasp of the relations of the universe and his rational choice of his relation to the universe. The unity of the universe then is 1) the possibility and the problem of intelligible relations set by the coincidental, 2) the successive transpositions of the problem to higher levels where it is met by ever more adjustable and more comprehensive modes of unification. and 3) the realization in accord with successive schedules of probabilities of the compound conditioned series of concretely possible solutions.

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## The Unity of a Concrete Being

Secondly, there is the unity of any concrete being, and here we meet with a host of difficulties. A first set of difficulties arise when we attempt to imagine not only the concrete being but also its constituent metaphysical elements. These are no sconer overcome than another set arises because we attempt to think not only of the concrete being as existing and changing, but also of the metaphysical constituents as existing and changing. Finally, there are the real difficulties implicit in the fact that the concrete being is one and its metaphysical constituents are many.

Let us begin from the real difficulties. First, then, potency, form, and act are distinct, for intelligibility is intrinsic to being, and potential intelligibility is not formal nor actual, nor is formal intelligibility actual. Still, though they are three, they also are one: for potency is potency to form, and form is the form of act; in other words, potency is capacity to come under law and form is being under law and act is according to law; again, just as one and the same reality is known by experience, understanding, and judgment, so one and the same reality is constituted by potency, form, and act. Nor is there any need for any glue to make potency one with form or form one with act. For if there were any such need, why should it not recur? What would unite the glue with the potency? Its stickiness? Some relativity of function?

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But relativity is already present in potency, form, and act, which are defined by their relations to one another and by the fact that they constitute a single reality. We can and must dispense, then, with the Suarezian modes; and the argument that potency without form differs from potency as informed is to be met with the distinction between intrinsic and extrinsic denomination.

Secondly, central form differs from conjugate form. Both are intrinsic to the real and neither is the other. But as they differ, so also they are related. They are to be known inasmuch as the same data are understood 1) as individual and 2) as similar to other data. When they are grasped by understanding, the central form proves to be a principle of unity that is to be differentiated by further inquiry, and the conjugate forms prove to be principles of differentiation of unities to be determined by further inquiry. Just as potency, form, and act are the many components of a single reality, so central and conjugate forms equally are the many components of a single reality.

Let us now turn to problems of predication. The objects of ordinary discourse are concrete beings, men and women, horses and dogs, hydrogen and oxygen. They exist as individuals with a natural unity. They are differentiated by their capacities for coming under laws, being under laws, acting in accord with laws. The truth of such statements can be assigned its ground in the metaphysical constituents of the concrete beings, for example, that their existing

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involves a central act, their natural unity a central form, their moraly empirical individuality a central potency, and their potential, habitual, and actual behavior conjugate potencies, forms, and acts. But as ordinary discourse speaks of men and women, horses and dogs, hydrogen and oxygen, so metaphysicians speak of central and conjugate potency, form, and act. Now if these elements are real, they exist. Presumably they are unities. In some sense they are individual. Since they can be defined, some laws are relevant to them. Therefore, it would seem to follow that, just as concrete being is composed of central and conjugate potencies, forms, and acts, so each of these elements is so composed; and if the argument works once, then it will work repeatedly, so that not only each element is composite but also the constituents of the elements are composite in turn, and so on indefinitely.

The fallacy, however, in this procedure is apparent. Potency, form, and act are constituents of what is known by experience, understanding, and judgment, where potency corresponds to the experiencing, form to the understanding, and act to the judging. Quite clearly, then, potency itself is not known by experiencing, understanding, a nd judgment, and so it is not composed of a further potency, form, and act. But if this is so, then, there is a profound difference between discourse about horses and dogs and discourse about potency, form, and act: for from the former through the rules of metaphysical equivalence one arrives at constituent potencies, forms, and acts; but from the latter one cannot legitimately proceed to a repetition

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of the analysis with respect to the elements themselves. It is this difference that is expressed in traditional metaphysics when it is affirmed that, while horses and dogs exist and change, potency, form, and act are, not what exists or changes, but that by which are constituted the beings that exist and change.

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There remain the difficulties of the imagination. As we employ sensible names such as potency and form and act, so too we are helped by imagining these constituents of concrete being; and as the images represent the objects, so they give rise to problems about the objects; but it is escential to grasp that such images are merely symbolic on 1 that such problems commonly are to be met by denying their suppositions. For on the one hand, potency, form, and act are not the explanation of anything but the general structure in which occurs the explanation of any proportionate being. On the other hand, and this is the more fundamental point, explaining and explained do not lie within the field of the imaginable, but imaginable and imagining lie within the field of explaining and explained. This is but another statement of the basic

antithesis between positions and counter-positions. A many who understood everything, might proceed from his grasp of metaphysical analysis through its determination in appropriste sciences to the nature and occurrence of his own sensations and acts of imagining. Still that all-inclusive act of understanding would account no less for past and future samsations and images than for the experiences of the present; and inasmuch as it accounted for present

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experiences, it would be independent of the experiencing for it would consist in assigning laws and probabilities to instances labelled with the ultimate conceptual determinations named "here" and "now". In brief, the relations of things to our senses and imaginations are included within the far broader sweep of the relations of things to one another; but they are not included as sensed nor as imagined nor as described but as explained. Moreover, such explanation is twofold. For there is the dynamic structure of explanatory knowledge, and there is the actuation or filling of that structure through the development of the several departments of science. Only the latter, detailed explaining proximately includes acts of sensing and imagining. Yet the metaphysician is concerned directly only with the general dynamic structure and so it is only in an extremely remote and general fashion that he can include his own sensitive acts within his explanatory view.

A parallel but complementary point must be made. Just as the metaphysician includes his own capacities and habits and acts of sensing and imagining under the sweeping rubric of conjugate potencies, forms, and acts, so too he includes under the same categories the space and time that, from the viewsoint of sensitive extroversion, contain both the totality of sensible objects and the totality of senses and sensitive acts. This reversal of roles, in which the sensible container becomes the intellectually contained, has already been noted. "To be" cannot mean "to be in space" or "to be in time". If that were so, and

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space is or time is, then space would be in space and time would be in time. The further space and time, if real, would cloo be, and so would demand a still further space and time. The argument could be repeated indefinitely to yield an infinity of spaces and times. "To be" then is just "to be", Space and time, if real, are determinations within being; and if they are determinations within being, then they are not the containers but the contained. To put the issue more concretely, there are extensions and durations, juxtapositions and successions. Still such affirmations are descriptive. They have to be transposed into explanatory statements) before one ask legitimately for their metaphysical equivalents; and when that transposition takes place, then from the general nature of explanation it follows that the metaphysical equivalents will be the conjugate potencies, forms, and acts that ground the truth of spatio-temporal laws and frequencies. So it comes about that the extroverted subject visualizing extension and experiencing duration gives place to the subject orientated to the objective of the unrestricted desire to know and affirming beings differentiated by certain conjugate potencies, forms, and acts grounding certain laws and frequencies. It is this shift that gives rise to the antithesis of positions and counter-positions. It is through its acknowledgement of the fact of this shift that a philosophy or metaphysics is critical. It is only by a rigorous confinement of the meta hysician to the intellectual pattern of experience and of metaphysical objects to the universe of being as explained, that this basic enterprise of human

intelligence can free itself from the morass of pseudoproblems that otherwise beset it.

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The foregoing position must not be confused with any type of Platonism. For if it distinguishes sensible and intelligible, aesthetic and nostic, still it does not distinguish them as being and not-being nor relate them by some theory of participation. One and the same universe of being is sensed, described, understood, affirmed. The same real things are related both to us and to one another. But as affirmed, they just are; as related to one another, they are subject to laws and frequencies; these relations of things to one another include identically all the relations of things to us; but as so included, the relations of things to us are not sensed nor described but explained. It is one thing to experience the sensible manifold of juxtapositions and successions, of extensions and durations. It is quite another to understand its laws and frequencies and to postulate as conditions of their possibility non-countable multiplicities of merely empirical differences. For neither the understanding nor the postulation is performed by sensitive activities.

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### The Unity of Man

This brings us to our third, special question of unity, for man is one yet both material and spiritual. Man is one. No less than electrons and atoms, plants and animals, man is individual by his central potency, one in nature by his central form, existent by his contral act. Moreover, this basic unity extends to the distinctive conjugates of human intellectual activity. The conjugate forms of the atom constitute the higher system of the atom's own subtatomic events. The conjugate forms of the organism constitute the higher system of the organism's own chemical processes. The conjugate forms of the psyche constitute the higher system of the animal's own organic processes. In like manner, the conjugate forms of human intellectual activity constitute the higher system of man's sensitive living. In each case an otherwise coincidental manifold of lover conjugate acts is rendered systematic by conjugate forms on a higher level.

Still, if we ask in what manner precisely the conjugate forms of human intellectual activity constitute the higher system of man's sensitive living, we are confronted not with a single but with a twofold array of facts. For human intellectual activity provides the higher system for sensitive living both unconsciously and consciously. It does so unconsciously inasmuch as it grounds the pattern in which sensitive experience occurs, and in this respect it is a higher system to sensitive living as sensitive living is a higher system to organic living. But there also is a

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conscious intellectual control of one's sensitive living, and this differs from the former enormously. For conscious intelligence is engaged primarily in grasping the intelligible systems relevant, not to one's sensitive living, but to the contents of one's sensitive experience. By this shift from subjective acts at objective contents, it is headed towards the systematization, not of the particular animal that I am, but of the whole universe of being. And it is within its knowledge of the universe that knowledge of itself is attained, knowledge of its function in the universe is acquired, and the grounds for willing the execution of that function provided. Finally, it is through willing that conscious intellectual control of sensitive living is effected.

Now if we go to the root of this duality of control over sensitive living, we are brought to the contrast between the intelligible and the intelligent. As has been seen, intelligibility is intrinsic to being. There is in the universe of proportionate being a potential intalligibility that makes experience a necessary component of our knowing, a formal intelligibility that makes understanding a necessary component, and an actual intelligibility that makes judgment a necessary component. But we too are. Besides the potential intelligibility of empirical objects, there is the potential intelligibility of the disinterested, detached, unrestricted desire to know. Besides the formal intelligibility of the unity and the laws of things, there is the formal intelligence that consists in insights and grounds conceptions. Besides the actual intelligibility of

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existences and occurrences, there is the actual intelligence that grasps the unconditioned and posits being as known. Finally, we not only are but also know ourselves. As known to ourselves, we are intelligible as every other known. But the intelligibility that is so known is also intelligence and knowing. It has to be distinguished from the intelligibility that can be known but is not intelligent and does not attain to knowledge in the proper human sense of that term. Let us say that intelligibility that is not intelligent is material, and that intelligibility that is intelligent is spiritual. Then, inasmuch as we are material, we are constituted by otherwise coincidental manifolds of conjugate acts that unconsciously and spontaneously are reduced to system by higher conjugate forms. But inasmuch as we are spiritual, we are orienteted towards the universe of being, know ourselves as parts within that universe, and guide our living by that knowledge.

Further, inasmuch as the material universe can be understood correctly, there can be a correspondence between the material intelligibility that is understood and the spiritual intelligibility that is understanding. But besides this correspondence, which would seem to consist in some type of similarity for the latter term is knowledge of the former, there also is difference, for the latter is spiritual cal the former is material. Moreover, it seems possible to pin down the precise nature of this difference. For our direct understanding abstracts from the empirical residue. As was noted early in this study, inusmuch as we

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are understanding, we are grasping the universal apart from its instances, the limit apart from the continuum, the invariant apart from particular places and times, the ideal frequency apart from the non-systematic divergence of actual frequencies. But just as spiritual intelligibility is apart from the empirical residue, so material intelligibility is not without it. The universal can be thought but cannot be without the instance; the limit can be thought but cannot be without the continuum; the invariant\_can be considered but does not exist apart from particular places and times; ideal frequencies can be formulated but cannot be verified apart from actual frequencies. The empirical residue, then, is at once what spiritual intelligibility excludes and what material intelligibility includes.

Now the metaphysical equivalent of the empirical residue has been found to be prime potency. But since the empirical residue is the ground of materiality, prime potency also is prime matter. There follows the possibility of explaining what matter is and what the material is. Nor is this superfluous. The materialist thinks the nature of matter perfectly obvious: matter is the real, and the real is a submitted to the view that the real is being and that being is whitever is to be grasped intelligently and affirmed reasonably. So if we are to say that matter is real, we have first to grasp its nature and then find sufficient grounds for our affirmation. But there exist in this universe submatomic entities, chemical ele-

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ments and compounds, plants and animals. A brief consideration of their functioning reveals not merely that it does not occur but even that it could not occur apart from the from manifolds of instances in a spaceempirical residue. and apart from time continuum, actual frequencies that non-systematically diverge from ideal frequencies. Accordingly, the material can be defined as whatever is constituted by the empirical residue or is conditioned intrinsically by that residue. It follows that conjugate potencies, forms, and acts on the physical, chemical, organic, and psychic levels are material. Further, since central forms are differentiated by their conjugates, it follows that the corresponding central forms are material. Finally, since act shares the definition of the form, with which it constitutes a unity, it follows that the corresponding central acts are material.

If our definition of the material is correct, then it must be possible to say that the spiritual neither is constituted nor is conditioned intrinsically by the empirical residue. Certainly, it is not constituted by the empirical residue: for inasmuch as we are understanding, we are abstracting from that residue; and inasmuch as we are grasping the unconditioned, we are attaining the lucid, fully rational factualness that contrasts so violently with the brute factualness with which instances similar in all respects still are different instances, with which the multiplicity of the continuum is non-countable because non-ordinable, with which actual frequencies diverge from ideal frequencies in any manner provided it is non-systematic. But if insight and grasp of the unconditioned are

constituted quite differently from the empirical residue, so also are the inquiry and critical reflection that lead to them and the conception and judgment that result from them and express them.

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Further, our definition requires that the spiritual is not conditioned intrinsically by the empirical residue. Quite obviously, there is some conditioning. Our inquiry and insight demand something apart from themselves into which we inquire and attain insight; initially and commonly that obser is sensible experience, and in it is found the empirical residue. But if sensible experience and so the empirical residue condition inquiry and insight, it is no less plain that that conditioning is extrinsic. Seeing is seeing color, and color is spatial, so that seeing is conditioned intrinsically by the spatial continuum. But insight is an act of understanding, and so far from being conditioned intrinsically by the empirical residue, understanding abstracts from it. Again, to grasp the unconditioned there is a prerequisite of a known fulfilment of conditions; commonly this fulfilment lies in sensible experience; still the fulfilment is snything but unconditioned: and it is the unconditioned that intrinsically conditions a grasp of the unconditioned.

We have been attempting to define explanatorily the material and the spiritual. Earlier it was shown that intelligibility is intrinsic to being. This intelligibility we have found to be of two kinds, material and spiritual. In the first instance, we distinguished between the two by saying that spiritual intelligibility also was intelligent

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while material intelligibility was not. In the second place, we moved beyond this descriptive differentiation and determined that material intelligibility either is constituted or is conditioned intrinsically by the empirical residue while solritual intelligibility neither is constituted nor is conditioned intrinsically by the empirical residue. With these clarifications we may now advance a further step in our study of man's nature.

Man, the concrete being, is both material and spiritual; he is material by his physical, chomical, organic and sensitive conjugates; he is spiritual by his intellectual conjugates. Still, man is not just an assemblage of conjugates; he is intelligibly one, and that unity has its metaphysical ground in his central form. As was seen in the Chapter on Self-affirmation, a single knower must be conscious empirically, intelligently, and rationally. Not only is there a unity on the side of the object, inasmuch as the experienced is also understood, and the understood is also affirmed. There is needed the prior unity on the side of the subject, inasmuch as the one that inquires and understands must be identical with the one that experiences, and the one that reflects and grasps the unconditioned must be identical with the one that both experfences and understands. Now it is central form that constitutes the metaphysical ground of the truth of affirming that unity. But are we to say that man's central form is material or spiritual?

The question regards the intelligibility that is the intrinsic constituent of man's being, Such

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intelligibility may be material or spiritual. As long as the alternatives are merely described, it is possible to straddle the issue. For spiritual intelligibility is intelligent, while material intelligibility is not; and man's central form seems to be the point of transition from the material to the spiritual. As the center of sensitive experience, it is material; as the center of the transformation of sensitive experience by the imposition of an intellectual pattern; and as the origin and ground of inquiry and insight, reflection and grasp of the unconditioned, it emerges as spirit.

However, our explanatory definitions of the material and spiritual are not so accomodating. The metaphysical ground of the empirical residue is prime potency: The material is what is constituted by prime potency or what is conditioned by it intrinsically. The spiritual is what neither is so constituted nor is so conditioned. No central form is constituted by prime potency. But is or is not man's central form conditioned intrinsically by prime potency? Can man exist as a unity without prime potency?

The question is one of possibility. In fact, insight is into sensitive presentations and imaginative representations, but if is no less a fact that what is grasped by insight is not the empirical residue but what is abstracted from the empirical residue, and so insight is not conditioned intrinsically by the empirical residue. In fact, grasp of the unconditioned presupposes a fulfilment of conditions that commonly is obtained by the

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occurrence of appropriate sensitive experience; still that occurrence is not the unconditioned that is grasped unless, perhaps, one is deciding whether there is occurring a sensitive experience; and there are judgments in which the fulfilment consists, at least proximately, not in any sensitive experience, but in such acts as insight and reflective understanding. Similarly, in fact man exists and functions physically, chemica 11y, organically, and sensitively. But the question is whether the break-down of his organic and sensitive living necessarily is the end of his identical existence. For if his central form is material, then it is conditioned intrinsically by the prime potency that in turn is bound up with his physical, chemical, organic being. But if his central form is spiritual, then it is not conditioned intrinsically by prime potency; and then, absolutely speaking, his central form could be separated from prime potency without ceasing to ground an existing unity and identity.

A solution seems to result from a simple principle, namely, that material reality cannot perform the role or function of spiritual reality but spiritual reality can perform the role and function of material reality. Were man's central form a material intelligibility, then it could not be intelligent and so could not be the center and ground of man's inquiry and insight, reflection and judgment. Inversely, though man's central form were a spiritual intelligibility, it could be the ground and center of his physical, chemical, organic, and sensitive conjugates; for

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the spiritual is comprehensive; what can embrace the whole universe through knowledge, can provide the center and ground of unity in the material conjugates of a single man.

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#### Summery

We have been exploring the trad it inal metaphysical theme of being and unity. The middle term of our comparison has been intelligibility, for intelligibility is intrinsic to being and, at the same time, it is the essence of unity. Potential intelligibility is potency; it is the multiplicity of the empirical residue with the orientation to unity of finality. Formal in telligibility is form; it is the unity of unification or of correlation. Actual intelligibility is act; it is the unity of identity and non-contradiction which are the basic principles of rational consciousness and judgment. Though potency, form, and act are distinct and three, still they are the distinct components of the same reality. Similarly, though central and conjugate forms are distinct, they too are the distinct components of the same reality : for while it is true that an imaginable whole does not differ imaginably from the sum of its imaginable parts, it also is true that understanding and affirming a central form is quite different from grasping and affirming an aggregate of conjugate forms. Finally, intelligibility may be material or spiritual; material intelligibility either consists in merely empirical multiplicity and difference of prime potency or else is conditioned intrinsically by it; in contrast, spiritual intelligibility is comprehensive; its reach is the universe of being; and it is in virtue of that reach not only that man can know the universe but also that the universe can bring forth its own unity in the concentrated form of a single intelligent view.

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#### Metaphysics as Science

Our study of human intelligence revealed the necessity of distinguishing sharply between ordinary concepts, that express and result from insights, and the notion of being, that has to have quite a different origin and ground. For if the notion of being expressed and resulted from an insight, that insight would have to be an understanding not merely of the whole of the actual universe but also of the total range of possible universes. Such an understanding would be identical with Aquinas' actus totius entis, that is, with God (Sum. theol., I, q.79, a. 2 c.). Since man possesses a notion of being yet obviously fails to satisfy Aquinas' concept of God, man's notion cannot result from an act of understanding. Accordingly, we were led to the discovery that the notion of being has its origin and ground in an anticipative desire to understand, in a capacity to inquire and reflect. Further, we were led to conceive metaphysics, which traditionally is the science of being, as an implementation of the integral heuristic structure of the realm of being that coincides with the field of possible experience. From this conception of metaphysics there followed a formulation of a method of metaphysics, and to test this method we have devoted two chapters to the <u>Elements of Metaphysics</u> and to <u>Metaphysics</u> as Science.

While we have attempted no more than a test, still the test has been, I think, sufficiently basic and extensive to establish the possibility of constructing a

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complete metaphysical treatise in accord with the method that has been worked out. Moreover, it is not difficult to predict the general character of such a complete treatise for, despite differences in detail, the results of applying the method bear an astounding similarity to the doctrines of the Aristotelian and Thomist tradition. There is the contrast between the ten categories and the metaphysical elements of potency, form, and act in central (or substantial) and conjugate (or accidental) orders; there is a hierarchy of grades of being in an objectively ordered universe; there are matter and spirit with spirit independent in existence and in operation both of matter and of the empirical residue (the conditiones materiae); there are distinctions and relations, the immunity of relations from direct change, intrinsic and extrinsic denomination, formal cause and formal effect.

Still, there is a basic novelty for these results are obtained not by strokes of genius but by method. They are obtained without any appeal to authorities. They are obtained without deductions from principles that claim to be self-evident yet, in fact, are not self-evident to everybody. They rest on a strategy of break-through, encirclement, and confinement. Inquiry and insight, formulation and critical reflection, grasp of the unconditioned and judgment are found to be necessary conditions of our knowing. Without them no revision of any view is possible; without them the subject can be neither intelligent nor

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reasonable and, in fact, not only is the subject unable to renomnce his intelligence and inquire, or to repudiate his reasonableness and reflect, but also he has a positive and effective inclination both to inquire intelligently and reflect reasonably. From this break-through there results encirclement, for despite the protean character of the notion of being (which as protean now is identified with matter and now with idea, now with phenomena and now with essence, now with a transcendent unknowable and now with the things that exist), there is latent and operative, prior to all such determinations, the objective of the detached and disinterested desire to know, the objective to be reached through intelligent grasp and reasonable affirmation. Being in this sense is a notion that cannot be controverted; it is assumed in all inquiry and reflection, in all thought and doubt; its acknowledgement is implicit in the break-through; and since, it embraces all views and their objects, its acknowledgement is an encirclement. Still if the heuristic notion of being cannot be controverted, it need not be identified with the real; if being is what is to be known by intelligent grasp and reasonable affirmation, then the real may be what is known unquestioningly because it is known before any questions are asked. But at least the antithesis is sharp; it results in the division of philosophic statements into the two classes of positions and counter-positions; it implies that statements of counter-positions cannot be both completely coherent and either intelligent or reasonable; it grounds the account of the dialectical process in which positions

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invite development and counter-positions invite reversal; and once the subject grasps that, unless he identifies the real with being, his statements are bound to be counterpositions that eventually are due for reversal, confinement has set in.

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Nor are the attractions of the method limited to securing a solid foundation for the metaphysical structure. For the very process that erects the foundation also builds upon it. As was noted in examining the methods of natural science, there is a scissors-like action that selects the mathematical expression of physical laws by operating simultaneously from above with differential equations and from below with measurements and empirical correlations. But this procedure was employed in its pure form in reaching the self-affirmation of the knower, when the inevitability of experience, of intelligent inquiry, of critical reflection, and of their unity, combined with the subject's awareness of his own subjection to such inevitability to issue into his affirmation of himself as an individual existing unity differentiated by capacities to experience, to inquire, and to reflect. Now this affirmation of oneself as a knower also is an affirmation of the general structure of any proportionate object of knowledge. Further investigation of the process of knowing can determine in greater detail the structure of the proportionate known. This upper blade of the scissors is matched by the lower blade of common sense and scientific pronouncements, which the philosopher can criticize but cannot replace, for any attempt at replacement would be to desert the method

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proper to philosophy and to employ the methods proper to science or the procedures proper to common sense. Finally, to close the scissors, there is operative the detached and disinterested desire to know, reinforced by the explicit rejection of all obscurantism, and guided by the critical dialectic that discriminates between positions and counterpositions in the formulation of the results of common sense, of science, and of metaphysics.

If the imm diately preceding paragraphs sharpen the outline of our account of method in metaphysics, this and the preceding chapter show that the method can be applied and that it is at once poverful, expeditious, and decisive. For the issues we have raised are neither simple nor secondary nor undisputed. If the answers we have reached are essentially traditional, they have been pulled neatly and effectively out of the compromising orbit of Aristotle's physics and they have been endowed with new life and vigor by their intimate conjunction with cognitional theory, with the results of possible science, and with the pronouncements of common sense. The surprising dispatch, with which the elements of central and conjugate potency, form, and act were established, could be followed by an invasion of the new territory of explanatory genera and species and of processes of development. The intricacies of distinctions and relations, of the precise meaning of the metaphysical elements and their function in total human knowledge, and of the unity of the universe, of the single concrete being, of the human compound of spirit and matter, could be thrown into a basic perspective with a minimum

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expenditure of effort.

No doubt, every reader will have his further questions, for our excursion into metaohysics has aimed solely at illustrating and testing the concrete possibility of a method. For that reason, it would be missing the point entirely to put the further questions to me instead of endeavoring to work out the answers oneself. My purpose has been to reveal the nature of insight as knowledge by showing in a concrete fashion that metaphysics can be a science with a sharply defined objective, with strictly imposed limits, and with a criterion that is effective in excluding mere disputation. But the clear-cut proof of possibility is the fact. Accordingly, I have not been content to define metaphysics as the conception and implementation of the integral heuristic structure of our knowing in an endeavor to ground, penetrate, transform, and unify the scattered knowledge of common sense and the sciences. I also have tried to indicate just how that integral heuristic structure could be reached and applied to the task in hand. I have not been content to limit metaphysics to the structure of proportionate being as explained, but repeatedly I have illustrated the meaning and the implications of that limitation. I have not been content to show that the discoveries of human intelligence may be formulated as positions or as counter-positions, but also I have illustrated how that cardinal principle of critical dialectic cuts like a knife through disputes on the nature of the real, of the objective, of development, of distinctions, of relations, of the metaphysical elements,

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of matter and spirit.

Elowever, the main point is that the method puts an end to mere disputation. It divides the field of possible knowledge of proportionate being into knowledge of things as related to us and knowledge of things as related to one another. It divides the Latter field into science that explains and metaphysics that anticipates the general structure of proportionate being as explained. It divides such anticipations into grounded assertions, that possess a factual premise in the utilized structure of our knowing, and empty assertions, that lack such a premiss. Finally, it divides grounded assertions into coherent positions, that admit development, and incoherent counter-positions, that invite reversal. Now every disputant has something to say. But what he says either refers to proportionate being or not, either to proportionate beings in their relations to one another or not, either to the anticipated structure of proportionate being as explained or not. If the disputant's statement falls under the negative member of any of these dichotomies, then it is not a metaphysical statement and it is to disregarded in metaphysics. But if it is a metaphysical statement, then either it possesses a factual premisa in the utilized structure of our knowing or it does not; and if it does not, then it is an empty assortion. Finally, if it is grounded assertion, then either it is a position that admits development or else it is not: and if it is not, then it is a counter-position to be reversed by the simple technique of anking it coherent with the statement that it is stated intelligently and

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The first three disjunctions separate metaphysical assertions from the assertions of common sense, of science, and of theology. The last two disjunctions separate valid metaphysical statements from empty assertions and from counter-positions. Together they serve to define what questions are metaphysical, how correct answers are to be determined, and how they are to be formulated. Moreover, correct answers and correct formulations are selected, not by asking further metaphysical questions, but by investigating iss ues that pertain to the field of cognitional theory and ultimately prove to be quite determinate questions of concrete cognitional fact, For the metaphysical structure of proportionate being as definitively explained, is an object of our knowledge, not through present scientific explanation of the universe, nor through any alleged inspection of the essence of the universe, but through its isomorphism with the utilized structure of our knowing. What the structure of our knowing is, sets a question to be answered by investigation of our cognitional activities. A gain, the utilization of that structure sets another question of fact; for the question arises inasmuch as our knowing admits different structural alternatives; and the question can be settled by an appeal to the boundary conditions provided by the broadest certainties of dialectically transformed science and common sense. Finally, correct answers need correct formulations; but the possibility of mistaken formulations has its ground in the polymorphism of human consciousness; and the selection of correct

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formulations can be effected inasmuch as the incoherence of counter-positions invites their reversal.

Now such a procedure eliminates mere disputation and bestows upon metaphysics the status of a science, I do not mean that it secures automatic solutions for metaphysical iss uss, or that it annihilates the obscurantist, the obtuse, or the mind fixed in a habitual routine. On the contrary, I regard the automatic solution as a mere myth that springs from a non-rational hankering after a non-rational security. for every solution is to be discovered by intelligence and is to be accepted by reasonableness, and neither the exercise of intelligence nor the exercise of reasonableness is automatic. Again, like the poor of the Gospel, the obscurantist, the obtuse, and the merely routine mind may be expected always to be with us. But however example ating such minds may be in the short run, in the long run they are negligible; they can block but they cannot initiate; they can manipulate pressures but they cannot lead; and if they denounce you a s a fool in your life-time, their sons will mistake you for a genius when you are dead. For they are indifferent to truth and falsity; they are concerned only with the familiar, which they strive to maintain, and with the unfamiliar, which they strive to oppose; but the mere passage of time makes the unfamiliar familiar, and people that cannot be persuaded by the suddenness of intelligence and reason. are easily convinced by the slow but inevitable gradualness of time. So it is in the sciences. For scientific method does not succeed in teaching old dogs new tricks. As Max Planck testified, a new scientific position gains general acceptance,

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not by making opponents change their minds, but by holding its own until old age has retired them from their professorial iosal chairs (M.Planck, <u>Scientific Autobiography and Other</u> <u>Papers</u>; E.T. by F. Gaynor; New York, 1949, p.33 f.).

As in the natural sciences, so also in metaphysics the function of method is to secure a firm orientation and a tendency that in the long run is efficacious. As in the natural sciences this goal is attained by requiring a fulfilment in the data of observation and experiment, so that there will exist a possible transition from the conditioned supposition of thought to the virtually unconditioned affirmation of judgment, so too in metaphysics a similar goal is to be attained by requiring a fulfilment in the utilized structure of our knowledge, so that there will exist a possible transition from metaphysical speculation to metaphysical affirmation. Finally, as in the natural sciences, so also in metaphysics, an understanding of the method, its accurate formulation, its acceptance, and its proper use are neither automatically achieved nor automatically efficacious. They are operations of intelligence and reasonableness. They result only from sustained inquiry and sustained reflection. Their power is no more than the power of intelligence and reasonableness and, while that power 1s great indeed, it is not exercised after the fashion of the steam-roller that crushes opposition but through a mounting dialectical tension that makes absurdity ever more evidently absurd until man either rejects it or destroys himself by clinging to it.

The apt illustration of this point lies, of

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course, in the dialectical demand for method in metaphysics, for it is that demand thatarose in the medieval universities, that has remained the basic preoccupation of subsequent philosophies, that is responsible, since it has not been met fairly and squarely, both for the disrepute into which metaphysics has fallen and for the intellectual, moral and social consequences that in our day so evidently flow from disdain for metaphysics.

The demand for method in metaphysics rose out of medieval theology. The twelfth century was oppressed with an apparently insoluble problem, with the necessity of distinguishing between divine grace and human freedom and, at the same time, an inability to conceive either term without implying the other. In the first third of the thirteenth century, there gradually was evolved the notion of two entitative orders so that grace stood above nature, faith above reason, and charity above natural human excellence. With increasing thoroughness this distinction between a natural order and a supervening gratuitous order was carried through by successive theologians to receive after the middle of the century its complete formulation and its full theological application in the writings of St. Thomas Aquinas. Finally, despite the condemnations of Aquinas at Paris and Oxford, despite the aridity of fourteenth century nominalism and the sterility of its scopticism, despite the worldly contempt of the Renaissance for the School #men and the pious contempt of the Reformation for carnal knowledge. despite the semi-rationalism of a Hermes, a Gunther, a

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Frohschammer, and the agnosticism of modernists, the technically formulated distinction between reason and faith has only grown in importance in the Catholic Church since its basic formulation in the thirteenth century. Within his own terms of reference, Aquinas did his work well.

Still a distinction between reason and faith is a distinction within theology. It pertains to the theologian's delimitation of his own field and to the elaboration of his own methodology. But it possesses implications outside the theological domain. Its meaning is not confined to the erection of distinct and subordinate departments of philosophy and science within theological schools and for the futherance of theological purposes. For once reason is acknowledged to be distinct from faith, there is issued an invitation to reason to grow in consciousness of its native power, to claim its proper field of inquiry, to work out its departments of investigation, to determine its own methods, to operate on the basis of its own principles and precepts. Such was the underlying significance of the discovery of Aristotle by the medieval age of faith. Such too was the open significance of Renaissance humanism, Penaissance philosophy, and Renaissance science.

In Decartes, one finds the problem of philosophic method explicitly envisaged and vigorously explored. But if he could take for granted the legitimacy of pursuing philosophy without bringing his religious faith to bear directly on the issue, he was completely innocent of the notion that science could be pursued with a similar in-

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dependence of philosophy. For him it was plain that one man had one mind and to his synthetic grasp it seemed simpler to master the whole of human knowledge than to disentangle one part from the rest and attempt to learn it thoroughly. So, as he deduced the existence of God from the initial certitude of his Cogito, he also deduced the conservation of momentum from the immutability of God. Clearly the distinction between reason and faith had to be followed by a distinction between science and philosophy. As the eleventh century brilliance of an Anselm had been mistaken in offering necessary reasons for the mysteries of faith, so the seventeenth century brilliance of Descartes was mistaken in offering philosophic reasons for a theory of mechanics. Yet as theology had been able to work out its method only by distinguishing itself from philosophy and thereby generating a challenge to its pre-eminence, so philosophy could not formulate its nature and method without distinguishing itself from science and thereby calling forth a challenge to its ambition to rule. And as the challenge to theology emphasized the distinct existence of philosophy, so the challenge to philosophy emphasized the distinct existence of science.

The course of the dialectic is clear enough. As there is a post-Cartesian affirmation of philosophy that rules theology out of court, so there is a post-Kantian affirmation of science that tosses overboard even Kant's modest claims for philosophy, and there is a still later totalitarian violence that with equal impartiality brushes

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aside theology and philosophy and science. But at that empty conclusion to the sequence of ever less comprehensive syntheses, man still exists and man still is called upon to decide. Archaists urge him to imagine that he lives in an age of Liberalism, or rationalism, or faith. Futurists paint for him a utopia that cannot disguise its own mythical features. But the plain fact is that the world lies in pieces before him and pleads to be put together again, to be put together not as it stood before on the careless foundation of assumptions that happened to be unquestioned but on the strong ground of the possibility of questioning and with full awareness of the range of possible answers.

Such, I would submit, is the significance for our time of method in metaphysics. For if I am concerned to meet Kant's demands upon any future metaphysics, if I am impressed by Hume's argument that the central science is the empirical science of man, if I respond to Descartes! aspiration for bold yet methodical initiative, these themes from a past that is over are but overtones in the problem that that is our existential situation. If its confusion is to be replaced by intelligible order and its violence by reasonable affirmation, then the nucleus from which this process can begin must include an acknowledgement of detached inquiry and disinterested reflection, a rigorous unfolding of the implications of that acknowledgement, an acceptance not only of the metaphysics that constitutes that unfolding but also of the method that guides it between the Charybdis of asserting too

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