A HANDBOOK
TO KANT'S
CRITIQUE OF PURE REASON

BY

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To

Professor K. C. BHATTACHARYA

in sincere gratitude
and affection

PREFACE

There is no dearth of books on Kant in English, and to add another to the existing legion seems to demand an apology. And my apology is this. In the Histories of Philosophy we have very brief accounts of the contents of Kant's great book *Critique of Pure Reason*. We have also extensive commentaries, such as those of Prof. Kemp Smith and Prof. Paton. There are smaller commentaries too, but none avoid being critical or seek to give a plain objective account of the entire *Critique*. If a general reader or a beginner in Kant, who does not need, and is not in a position to profit by, any criticism of the Kantian position, wants to have a sufficiently full account of the kind of matters discussed in Kant's book, there is at present no book in English, as far as I know, which will exactly answer this purpose. My book is intended to meet the need of such elementary students and general readers. It is certainly not meant for experts or serious students who should go directly to Kant's own work. I should be happy if my book served any purpose as a preliminary reading.

I have merely tried to do in English what August Messer has done in German, in his *Kommentar zu Kants Kritik der reinen Vernunft*, for students of Kant. I cannot hope that I have been as successful as Messer. But it is true that his book has been my guide.

I cannot pretend that my book will help to solve any of the knotty problems of Kant's thought and meaning. But I do hope that a careful reader of my book will have a fair and faithful idea of the main arguments of Kant's work in their strength and weakness.

In preparing this book I have been greatly indebted to Prof. Kemp Smith's Commentary and to his valuable translation. Prof. Paton's Commentary came out after I had practically written out my book, but I have made certain changes in it in the light of his commentary. I have already mentioned Messer. I consulted certain other expositors also, such as Watson and Kuno Fischer, and derived much help from them.

I am thankful to my friend Mr D. Y. Deshpande who prepared the Index and helped me with several useful suggestions.

Calcutta University
May, 1948

R. *Das*

A BIRD'S-EYE VIEW

Critique of Pure Reason has two main divisions: A. *Transcendental Doctrine of Elements* and B. *Transcendental Doctrine of Method.*

A. Transcendental Doctrine of Elements is divided into two parts :

1. *Transcendental Logic* and 2. *Transcendental Dialectic.*

1. Transcendental Logic has two parts : (i) *Transcendental Aesthetic* and (ii) *Transcendental Analytic.*

(i) Transcendental Aesthetic deals with Sensibility and its pure forms (Space and Time).

(ii) Transcendental Analytic deals with the Understanding and its Categories (Substantiality, Causality, etc.)

These forms and categories are supplied by the mind out of itself. They are transcendental and not empirical, in the sense that they are necessary conditions of experience and are not derived from experience.

2. Transcendental Dialectic deals with Reason and its Ideas (God, soul and the world as a whole). These Ideas are not necessary for knowledge, but for systematization of knowledge. They are called *Regulative* in contrast to the forms and the categories which are called *Constitutive* inasmuch as the latter constitute, or form essential part of, objects of knowledge, whereas there are no actual given objects to which the Ideas of Reason may apply although we may use these Ideas merely to systematize our knowledge of objects.

Aesthetic and *Analytic* explain how knowledge is possible in Mathematics and Physics. *Dialectic* makes clear how we get no knowledge proper in Metaphysics which deals with super-sensible objects like God, Soul and the world. In fact these are no real objects, as they never come within experience. The world seems to be there, but the world which is there is only a series of phenomena, endlessly running from past to future. There is no such given thing which is the world as a whole.

B. Transcendental Doctrine of Method explains Kant's methodology or the formal conditions of a System of Pure Reason.

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THE TITLE

CRITIQUE OF PURE REASON

The term 'critique' means criticism or 'the passing of critical judgements'. The significance of the adjective 'pure' lies in the fact that the reason which is to be considered in this book is to be taken as independent of experience. The term 'reason' has a technical meaning as distinguished from the term 'understanding'. Here it is used in the sense of that faculty which supplies the *a priori* elements of our knowledge.

'Critique of Pure Reason' then means the passing of critical judgements upon pure reason; but it may be also taken to mean the passing of critical judgements by pure reason. The meaning of the expression most consonant with the aim and achievement of the treatise would be 'criticism of pure reason by itself'. Pure reason is the subject as well as the object of criticism.

KANT'S *PREFACE* (First Edition)

Human reason is troubled by certain questions, which it cannot avoid, because they spring from its own nature, and which at the same time it cannot answer, because they transcend its power.

The difficulty is not of its own creation. It starts with principles which are amply verified within experience, and one does not suspect that their use will be illegitimate in any case. One such principle is the law of causality which says that every event must have a cause. The validity of this law is well proved in experience. But as we go on asking for cause, we find that the causal chain cannot be completed. We therefore take our refuge in a first cause to which we believe the causal series leads. But in so doing, we fall into obscurity and contradiction, because we do not understand how the first cause was led to begin its causal operation. As the first cause goes beyond all experience, we cannot verify any of our assertions with regard to it, and so our controversies about it cannot be decided by any test of experience. Metaphysics is the science which treats of super-sensible entities and is full of endless and inconclusive disputes.

There was a time when metaphysics was highly respected, but it had come to be discredited in Kant's time.

At first *dogmatists* ruled in metaphysics. By a *dogmatist* Kant understands a philosopher who naively believes, without a critisim of our faculty of knowledge, that we can know everything and answer every question. Kant says that the rule of the dogmatists was despotic, by which he means that dogmatists answered every doubt in the truth of their doctrines by mere bold assertions

without critical examination. But as one assertion could be met by an opposite assertion people began to doubt whether it was at all possible to arrive at any sure knowledge in philosophical matters, and so dogmatism gave place to *scepticism*. But scepticism never proved a sufficient check to dogmatism. It seemed at one time as if Locke's Enquiry into Human Understanding would bring these disputes to an end by tracing the origin of our metaphysical ideas to common experience. But as the psychological account of the empirical origin of our metaphysical ideas was not in fact true (as Kant showed later), the dogmatic procedure in metaphysics continued in spite of Locke. People became indifferent to metaphysical questions, not because they did not consider metaphysical knowledge to be of any value, but because in the state of metaphysics then obtaining, they despaired of such knowledge. The indifference then was not due to levity but mature judgement, and was a call to reason to undertake an examination of itself as regards its capacity to know things independently of all experience. As metaphysics claims to give such *a priori* knowledge, which is independent of all experience, the criticism of reason will decide whether metaphysics is possible at all, and if possible, what is the ground of its validity and how far it can go. All these must be decided once and for all, and according to principles.

Kant believes himself to have supplied such a criticism of reason. He has given a survey of metaphysical questions and shown how reason falls into apparent self-contradiction and how this can be avoided. Kant claims that there is not a single metaphysical question which has not been solved in the *Critique* or, at least, to the solution of which the key has not been supplied.

Pure reason is such a perfect unity that if its principle is found insufficient to solve one single legitimate problem, its capacity to solve others cannot then be trusted. This claim to completeness is not however extravagant, becasue Kant's proposed criticism is concerned with pure reason alone which cannot hide itself, and his claim is in fact more modest than the claim of those who profess to give us metaphysical knowledge about God and soul.

Kant is concerned to ascertain how far reason can go without any assistance from experience, that is, the extent of our *a priori* knowledge. Such knowledge must be necessary. The survey of *a priori* knowledge also must hold good *a priori* and must be an example of apodeictic certainty. The knowledge which the *Critique* is designed to supply must be therefore absolutely certain, so that there can be no room for opinion or difference of views with regard to what it says. But in the Transcendental Deduction which Kant has provided in the second chapter of the *Analytic* and which occupies the most important place in the whole work and has cost its author the greatest labour, he has said certain things with regard to which, it seems, different views may be held. Now the Deduction has two sides, objective and subjective. The objective side explains how the *a priori* concepts of the understanding are valid of objects. This is really essential to this whole work and there is nothing doubtful about it. The subjective side seeks to investigate the understanding itself and find out how it comes to be possible. This part, although important, is not essential, because our main question is what and how much reason and understanding can know without the help

of experience, and not how the faculty of thought (understanding) comes to be possible. The subjective part may appear to resemble an hypothetical enquiry for the cause of a given effect in regard to which different opinions may be held. If for this amount of apparent uncertainty, the subjective part is rejected, the full force of the objective deduction, which is really essential, will still remain unaffected.

So far as regards certainty. As regards clearness, Kant says that he has amply provided for discursive or logical clearness which can be attained through concepts, but he has not been able to provide for intuitive or aesthetic clearness which can be given by examples and illustrations. This is not altogether to be regretted, because examples and illustrations would have increased the bulk of the work and would have made it difficult for us to arrive quickly at a conspectus of the whole.

As the *Critique* deals with the *a priori* elements of knowledge, it prepares the way for a real metaphysics which will be nothing short of an inventory of all our *a priori* possessions (all that can be known by pure reason) systematically arranged. As reason, in such a metaphysics, is concerned with itself and dispenses altogether with experience, which might add anything to it, it can give us a complete survey and can be sure that nothing has been left out of consideration.

Such a metaphysics Kant promises to give us under the title *Metaphysics of Nature*. While the *Critique* is concerned only with the fundamental *a priori* concepts (e. g. causality) and their complete synthesis, metaphysics will deal also with derivative concepts (such as force, activity, etc.) derived from causality.

Whether or no any branch of rational knowledge is proceeding on the sure path of a science can be determined by its results. If it is compelled frequently to retrace its steps and if the workers in it follow no commonly agreed plan, then we may be sure that it is not on the secure path of a science, but is merely groping at random. If, on the contrary, it makes steady progress without having to retrace its steps, and there is agreement among its various workers, we conclude that it is proceeding in a scientific way.

Judged by this standard, metaphysics shows a very disappointing result. It makes no progress and there is no agreement whatever among its workers. That logic has been from the earliest times on the right path is clear from the fact that since Aristotle it has not had to retrace a single step.

Mathematics and physics are good examples of science. But they arrived at the royal road of science through a revolution in their way of thought. And the revolution consisted in this—that the object to be known was no longer presupposed as given ready made in experience, but was constructed. If one constructs a triangle making its three sides equal, then it follows from the construction that the triangle is equiangular. If anything is to be known *a priori* with certainty, for example, in respect of a geometric figure, it can only be what follows necessarily from what we ourselves have put into the figure in drawing it according to our concept. Who brought about this revolution in mathematics we do not know.

The revolution in physics is not so old as in mathe-

matics. We know its originators. Bacon, Galileo, and Torricelli may be named in this connexion. They did not content themselves merely with observing what was given in experience. They *introduced* experiment. The essence of experiment lies in this—that we ourselves bring about processes whose laws we are to determine. Thus here the object to be studied is as it were constructed by us. By means of experiment we compel nature to produce processes in which we are interested and thus to answer our question as to the causal conditions under which they take place.

Can we raise metaphysics to the status of a science through a revolution in the mode of our thought? This is the great question of Kant. He thinks he has brought about such a revolution, and he compares his achievement to the revolution brought about by Copernicus in astronomy. People before Copernicus thought that the sun and the stars moved the round the earth. But Copernicus, with a view to explaining certain changes in the positions of heavenly bodies, introduced the hypothesis that the earth itself moved. People before Kant thought that our knowledge had to conform to its objects; Kant tried the hypothesis that the objects conformed to our ways of knowing. By this hypothesis he could explain how we could have *a priori* knowledge of objects. So long as one supposed that knowledge conformed to, or simply copied, objects which were given ready made in our experience, one could not explain how any *a priori* knowledge was possible. But if the objects conformed to our ways of knowing, that is, if they were determined by our faculty of knowledge, then to the extent they were so determined, they might be known even prior to experience.

Kant does not doubt that there are cases of *a priori* knowledge which are, for instance, supplied by mathematics and physics. This fact of *a priori* knowledge can be explained only by his hypothesis. One has to make an experiment with this hypothesis in the spirit of science, and the experiment succeeds as well as could be desired.

But the *Critique*, although it shows how *a priori* knowledge is possible in regard to objects of possible experience, shows at the same time that the scope of our knowledge is limited to such objects only. It shows that we know objects as appearances, as they are or may be given in our experience, but we cannot know things in themselves, which are not and cannot be given in any experience. Metaphysics claims to give us knowledge of super-sensible entities like God and soul, that are never objects of any possible experience. Kant shows that such knowledge is not possible. What transcends the limits of experience is the unconditioned, and if the unconditioned were to be an object of knowledge, then since an object has to conform to the conditions of knowledge, the unconditioned would be conditioned by our knowledge, which would be a contradiction. But although theoretical knowledge is denied of the super-sensible, we may still have practical knowledge of it, such as is needed by morality and religion.

It might be supposed that the *Critique* restricts our knowledge and has only a negative value, inasmuch as it warns us not to go beyond the limits of possible experience. But this would be a mistake. The *Critique* in fact has not restricted but extended the scope of our knowledge (taken in a wide sense). For to suppose that everything must be known theoretically is to suppose that we must be confined in our knowledge within the

limits of sensibility (because sensibility is the basis of theoretical knowledge). But when we suppose that there are things which cannot be theoretically known, we extend the scope of our knowledge along the line of practical reason.

Further, the value of the *Critique* is not merely negative but positive also. By placing God and freedom beyond the scope of theoretical reason, the *Critique* has secured them against all attacks of atheists and sceptics, because theoretical reason cannot say anything about a matter which falls beyond its scope. To say that the *Critique* has no positive value is as good as to say that policemen render no positive service, because they merely prevent people from doing any violence.

Kant thus believes that his *Critique* has rendered a valuable service to morality and religion, and explains it by a reference to the question of the freedom of the will. An act of will, as considered by the science of psychology, is like any other natural process causally determined. And so, if the scientific way were the only way of regarding things, then there would be no freedom. But morality requires freedom in the strict sense of the term. If the will could be known exhaustively in the scientific way, we find there would be no room for freedom, and so none for morality too. Kant saves the situation by supporting that the will, as known by science (theoretical reason), is an appearance among other appearances and is determined, but as a thing in itself given by practical reason it is free. We cannot of course assert two such contradictory predicates as free and unfree of one and the same thing, understood in the same sense. Thus although we cannot (theoretically) know freedom, we can think and believe it, when there are practical

grounds for such a belief, because the very idea of freedom does not involve any contradiction. To think of the will as part of nature and as free would be a contradiction.

Similarly in the case of God and the immortal nature of our soul. Although we cannot know them scientifically, we may still think and believe them when there are practical reasons for such a faith. Kant therefore says that he has removed (theoretical) knowledge in order to make room for faith.

This negation of knowledge is no actual loss; for the arguments which the metaphysician uses to prove God, freedom and immortality are too subtle to be intelligible to the great mass of ordinary people, and so the knowledge which metaphysics claimed to provide was really unavailing to them.

As nothing can be positively proved in the supersensible sphere, so nothing can also be denied. Thus our faith in God, freedom and immortality has nothing to fear from atheists and materialists.

Kant refutes *scepticism*, which despairs of all knowledge, by showing that knowledge of objects as appearances is quite possible. Subjective idealism, which holds that the world is a mere idea and is not as real as ourselves, is refuted by showing that the idea of the empirical self is correlative to that of the objective world, and both are equally real.

Kant is not opposed to the dogmatic procedure of reason, but only to *dogmatism* which presumes to know things without a previous criticism of our faculty of knowledge. When such criticism has done its work, then philosophy has indeed to proceed dogmatically, i. e. deduce its doctrines from established principles.

INTRODUCTION

I. *The Distinction between Pure and Empirical Knowledge.*

All our knowledge no doubt begins with experience, but is not wholly derived from experience. Knowledge consists of impressions derived from experience, together with other elements supplied by the faculty of knowledge from within itself. "This leaf is green" is a piece of knowledge. The mere green impression of the sense represents no knowledge, till it is organized by the ideas of substance (leaf) and quality (green) supplied by the understanding. Our faculty of knowledge however cannot work unless it gets its material from sense-impressions.

Now the question is whether there is any knowledge which is independent of all experience. Such knowledge would be *a priori* knowledge, in distinction from *a posteriori* or empirical knowledge which is derived from experience. "Every change has its cause" is an instance of *a priori* knowledge, because we cannot learn from experience that *every* change has its cause, since all changes do not come within our experience. But although this piece of knowledge is *a priori* it is not quite pure, because it involves the idea of change which can be learnt only from experience. We want to know whether there is any pure *a priori* knowledge which is independent of all experience whatever.

Note :— The word 'experience' is used in different senses. In a narrow sense it stands for sense-impressions only. In a wider sense it stands for our empirical knowledge, consisting of sense-impressions together with the ideas applied to them. In the latter sense it contains both *a priori* and *a posteriori* elements.

II. We are in Possession of Certain Modes of a priori *Knowledge.*

Necessity and *universality* are the two sure marks of *a priori* knowledge. From experience we can only learn what a thing *is*, but not what it *must be*. Similarly from experience we can only learn that a thing is such and such, *so far as our observation goes*, but not that it is such *universally*. So if there is any knowledge which possesses necessity and universality, that knowledge must be *a priori*, seeing that these characteristics (necessity and universality) cannot be derived from experience.

It is easy to show that we know many judgements which are necessary and universal, and therefore, *a priori*. All the propositions of pure mathematics are *a priori*. And the proposition "every change has its cause", which is assumed in everyday life and underlies natural science, is also *a priori*. Hume was wrong in supposing that the causal principle is derived from experience, because the causal connexion is universal and necessary and so cannot be derived from experience.

III. Philosophy stands in Need of a Science of the a priori.

We have just seen that there are *a priori* elements of knowledge in both science and mathematics. Besides these we have the *a priori* concepts of God, freedom and immortality, to which nothing whatever corresponds in our actual experience. Metaphysics is concerned with these *a priori* concepts and professes to give us knowledge about them—knowledge which we value far more highly

than any empirical knowledge.

The procedure of metahpysics has been so far *dogmatic*, that is, it has offered us supposed knowledge about super-sensible things without a previous enquiry as to whether and how far we can know anything *a priori* without any help of experience. In fact, however, such an enquiry into the possiblity, limits and value of *a priori* knowledge is urgently needed if metaphysics is to be freed from the doubt and uncertainty which would otherwise fall to its lot. For metaphysical knowledge cannot be verified in experience, and we cannot be sure whether we have any valid knowledge in metaphysics or merely meaningless assertions.

Kant's *Critique of Pure Reason* is meant to supply this science of the *a priori* which philosophy needs.

The reason why this critical enquiry was not so long undertaken by metaphysics is to be found in the fact that it was misled by the example of mathematics and that much of its work was merely analytical. Mathematics gives us a splendid example of how far we can go in *a priori* knowledge without any aid from experience. But the *a priori* knowledge of mathematics is knowledge in so far as it can be exhibited in intuition. As the intuition needed for mathematics is pure intuition, it was not distinguished from a bare concept. This misled metaphysics into supposing that no intuition or experience was needed for knowledge.

The other circumstance which misled metaphysics was the fact that it was engaged mostly in analysing concepts which we already possess and for such analysis no reference to experience was necessary. Such analysis of course does not add anything to one's knowledge but only clarifies the ideas one already possesses. Metaphysics

however also made assertions which were not mere analyses of concepts but added new concepts to the given concepts, and that without any support from experience. That is to say, it also made synthetic *a priori* judgements. Kant therefore now proceeds to discuss the distinction between analytic and synthetic judgements.

IV. The Distinction between Analytic and Synthetic Judgements

When in a judgement we join a predicate to a subject, the predicate is either already contained (although covertly) in the subject or it is not so contained. In an analytical judgement the predicate is contained in the subject or is part of the meaning of the subject. The judgement "all bodies are extended" is analytic, because the idea of extension is already contained in the idea of a body, and the judgement does nothing but analyse our conception of a body. We have not to refer to experience in order to enable ourselves to make such judgements. They are *a priori* and based on the principle of identity or the principle of non-contradiction. In the example given above we find extension is identified with body and we should contradict ourselves if we were to say that bodies are not extended.

A judgement in which the predicate represents a new idea not already contained in the idea of the subject, is called synthetic. Thus the judgement "all bodies are heavy" is a synthetic judgement inasmuch as the idea of weight is no part of the meaning of a body. This judgement does not merely analyse our concept of a body, but makes an addition to our knowledge of it.

It has to be noted here that by the meaning of a term we are not to understand what is associated with it in the mind of this or that individual. Otherwise a person might always think of bodies as heavy and so for him the judgement "all bodies are heavy" would yield no new knowledge. By the meaning of a term we should understand a common scientific meaning which is not different for different individuals. Such meaning of the term body includes extension, impenetrability, etc., but not weight. This is why the judgement "all bodies are heavy" is synthetic.

There are of course synthetic *a posteriori* judgements in which the connexion between subject and predicate is grounded in experience. Thus although by an examination of the idea of body, we cannot trace any connexion between body and weight, we can nevertheless learn from experience that weight is connected with body.

There are however synthetic *a priori* judgements also. "Every event has a cause" is such a judgement. It is synthetic because the idea of cause is not contained in the idea of something that happens, which we call an event. This judgement is not only universal but also necessary, and cannot therefore be derived from experience. So it is *a priori*. The main task of Kant is to explain the possibility of such judgements.

V. *In all Theoretical Sciences of Reason Synthetic* a priori *Judgements are contained as Principles*

1. All mathematical judgements are synthetic. All mathematical judgements, at least those of pure mathematics, are necessary and therefore *a priori*, because necessity cannot be derived from experience. They are

also synthetic. It might be supposed that an arithmetical proposition like 7+5=12 was merely analytical, but that would be a mistake. The idea of 12 is not by any means contained in the idea of the sum of 7 and 5, which merely says that the two numbers, 7 and 5, should be combined into one, but says nothing as to what that one number may be. We cannot get the idea of twelve merely from the ideas of 7 and 5, nor from that of their combination. It is only with the help of intuition, that is, by referring, say, to our five fingers or to five points and adding them one by one to 7 that we get 12. The judgement therefore is synthetic.

The fundamental judgements of pure geometry also are synthetic. The judgement, for instance, that the straight line between two points is the shortest is synthetic, because the idea of the shortest distance is not contained in the idea of the straight line. Here too intuition is needed to make the synthesis possible.

2. Natural science (physics) contains *a priori* synthetic judgements as principles. That in all changes of the material world the quantity of matter remains unch anged is a fundamental proposition of science. This is an *a priori* proposition because it is taken to be necessary by science. It is also synthetic, because the idea of permanence (remaining unchanged) is no part of the meaning of matter which signifies only occupation of space.

3. Constituted as we are, we cannot help asking questions about God, future life, etc. This is due to the nature of human reason itself. Metaphysics, therefore, in spite of all its failures, is an indispensable science and ought to contain *a priori* synthetic knowledge. For its business is not merely to analyse our *a priori* concepts of things, but to add to our *a priori*

knowledge, and this can be done only through *a priori* synthetic judgements. Thus metaphysics consists, at least in intention, entirely of *a priori* synthetic propositions.

VI. The General Problem of Pure Reason

The proper problem of pure reason is formulated in the question, *How are* a priori *synthetic judgements possible?* The only philosopher who came nearest to envisaging this problem was David Hume, but even he did not conceive the problem in its generality, but concerned himself exclusively with the principle of causality. He attempted to show that the principle of causality was in fact derived from experience and was wrongly supposed, under the influence of habit, to be a necessary principle. If he had conceived the problem in its generality, he would have realized that it was wrong to deny the possibility of synthetic *a priori* propositions, seeing that even pure mathematics, which undoubtedly contains such propositions, would in that case have to be denied.

Both pure mathematics and pure science, by the fact of their existence, preclude the question whether they are possible. We can merely ask and try to understand how they are possible.

Metaphysics does not exist as an established science. As soon as our reason attains to a certain degree of maturity it is impelled to raise questions which cannot be answered by experience nor by any principle derived from it. This tendency to metaphysics is inherent in human reason and we have to ask: How is metaphysics as a natural disposition possible?

But since all attempts to answer metaphysical

questions, such as for instance, whether the world has a beginning or is there from eternity, have always met with contradictions. Our reason cannot rest satisfied unless we can determine whether it is at all possible for us to know anything in the metaphysical field. So the last question arising out of the general problem is: How is metaphysics as a science possible? The question really means whether and in what sense the metaphysical problems raised by human reason can be solved at all. It is the aim of the *Critique* to provide an adequate answer to this question.

VII. The Idea and the Division of the Critique of Pure Reason

What Kant proposes to give us in his *Critique* is only an introduction (propaedeutic) to the system of pure reason or metaphysics proper.

He is undertaking a *transcendental* enquiry. By 'transcendental' he understands all knowledge which is occupied not so much with objects as with our knowledge of objects in so far as such knowledge is possible *a priori*. Transcendental enquiry thus means only an epistemological enquiry into the *a priori*.

Kant says that he is not going to offer a complete system of transcendental philosophy, although his *Critique* contains all that is essential in such a philosophy. A complete system of transcendental philosophy would have to give an exhaustive analysis of the whole of *a priori* human knowledge. In the *Critique* no doubt there is "a complete enumeration of all the fundamental concepts that go to constitute such pure knowledge." But there is no exhaustive analysis of all

these concepts nor a complete survey of those that can be derived from them. In the *Critique* the analysis is carried only so far as is requisite for the complete examination of knowledge which is *a priori* and synthetic. Great care has been taken to include only those concepts which are wholly *a priori*. Even the highest principles and concepts of morality which are no doubt quite *a priori* are not included in it, because in a systematic consideration, they would involve such empirical concepts as those of pleasure, pain, desire, inclination, etc.

The *Critique* is first divided into a *Doctrine of Elements* and a *Doctrine of the Method*. The *Doctrine of Elements* is divided into *Aesthetic* and *Logic*, and *Logic* is further divided into *Analytic* and *Dialectic*.

Substantially the *Critique* consists of three parts, *Aesthetic, Analytic* and *Dialectic*, dealing respectively with sensibility (intuition), understanding and reason, and showing in the first two parts, how pure mathematics and pure science of nature are possible, and in the last part, how metaphysics is impossible.

TRANSCENDENTAL DOCTRINE OF ELEMENTS

PART I

TRANSCENDENTAL AESTHETIC

1. Introductory

The term 'aesthetic', according to the present usage, is connected with the beautiful, but Kant, following the meaning of the Greek root from which the word is derived, uses it in the sense of the theory of sensibility. The purpose of this section is to separate the *a priori* elements in our sensibility and to point out their significance for knowledge. These *a priori* elements are found to be space and time, which are thus also the *a priori* forms of all that can be given to us intuitively. In order to bring this out, Kant begins with some very useful and important definitions.

Intuition is an apprehension which relates itself immediately to the given objects. Prof. N. K. Smith has expressed this definition of Kant after clearing it of all ambiguity, in the following words: "Intuition is the immediate apprehension of a content which as given is due to the action of an independently real object upon the mind."

Sensibility is the capacity to receive or obtain representations when objects act upon (affect) us. *Representation* is taken in the sense of any cognitive state. *Sensation* is the effect in the mind produced by the object when we are affected by it. An empirical intuition is an intuition which relates itself to its objects only through sensation. All our intuitions (i. e. intuitions we men can have) relate to their objects only through

sensation, i. e. are empirical.

The object of an empirical intuition when it is not yet determined through any categories is called *appearance*. Appearances are to be distinguished from *phenomena* which too are objects of empirical intuition but determined through categories. Appearances are mere objects of sensation, but they become phenomena when they are also thought in terms of categories.

The *matter* of appearance is what 'corresponds to sensation', i. e. what corresponds to the *subjective* act of sensing; it is the content felt or sensed. The *form* of appearance is that in which the content of sensation is ordered. That in which the sensed content is ordered is not itself given through sensation. It lies *a priori* in the mind.

When I see a patch of colour, which I have not yet determined as the colour (quality) of anything (substance), I have a mere appearance. This appearance includes both matter and form. What is given through sensation and could not otherwise be obtained, the particular sensed in the present case, is the matter of appearance, but the space in which the colour is seen is its form, and this is not derived from sensation or experience but is *a priori*.

The pure form of sensibility in which all sensed contents are ordered, is called pure intuition. When from the representation of a body, we take away all that has been contributed by thought such as substantiality, quality, etc., and also what is given by sensation as hardness, colour, etc., we find something still remaining, namely extension and figure. These belong to pure intuition, which is not derived from experience, but exists in the mind *a priori* as a mere form of sensibility.

There are two pure forms of intuition, space and time. When it is said that they lie ready in the mind, we are not to understand that we possees them as full-fledged notions before all experience. They are innate only as capacities of the mind to develop these notions out of itself on the occasions of suitable experience.

Section I
SPACE

2. *Mataphysical Exposition of the Concept of Space*

The *Metaphysical* expositions of space and time purport mainly to show, first, that space and time are not derived from experience but are *a priori*, and, secondly, that they are 'intuitions' and not 'concepts'. Space and time are treated seperately and first comes space.

There were originally five arguments in the metaphysical exposition, but the third argument was dropped from it in the Second Edition and was merged in the transcendental exposition, thus giving only four arguments to the metaphysical exposition.

The *first argument* says that "space is not an empirical concept which has been derived from outer experiences." Our outer experiences are experiences of things in space. We cannot suppose that we get the idea of space only when we have had such experiences, because such experiences presuppose the idea of space, so that the idea of space must already be there if we are to have any outer experiences. Instead of these experiences making the idea of space possible, it is the idea of space which makes these experiences possible. Therefore the idea of space is not derived from experience.

The *second argument* shows that the idea of space

is *a priori* because it is a necessary idea and necessity is a mark of the *a priori*. That the idea of space is necessary is shown by the fact that although we can imagine the the absence of all objects in space we cannot imagine the absence of space itself. If the first argument presents the negative position that space is not empirical, the second argument says positively that it is *a priori*.

The *third argument* proves that space is not a discursive or general concept but a pure intuition. We cannot represent several spaces but only one space. When we speak of many spaces, we simply mean parts of one and the same space. And the mode of knowledge that relates itself directly to a single individual is intuition and not conception. Moreover, the so-called parts of space are not given first, out of which one may suppose the one single whole space to be constructed. Space is never constructed in that way. It is the parts that arise as limitations of one space which is presupposed by them and is given first. If space were a concept, the parts would have preceded the whole. It is only in an intuition that the whole can precede the parts. Space therefore is an intuition and not a concept.

The *fourth argument* establishes the same point, viz. that space is not a general concept but an intuition. Space is represented as an infinite given magnitude. If space were a general concept, abstracted from particular instances of space, then nothing could have been determined as regards its magnitude, far less could we say that it was infinite. Because being a generalized concept, it would have to be equally present in all instances which might be of very different magnitudes; and no one determined magnitude, far less an infinite magnitude can be equally present in things of different magnitudes.

Moreover a generalized concept has an infinite number of instances under it, but they are not contained within it. The particular horses are never part of the generalized concept horse, whereas in the case of space, the particular spaces are mere parts of the one space. Therefore space is not a concept, and so it must be an intuition.

3. *Transcendental Exposition of the Concept of Space*

If the metaphysical exposition has shown that space is an *a priori* intuition, the *transcendental* exposition shows that it is on this view of space that *a priori* synthethic knowledge, such as we find in geometry, becomes intelligible.

Geometry determines the properties of space synthetically and yet *a priori*. We have already seen how geometrical propositions are synthetic. This shows that space must be an intuition, because from mere concepts we never derive any synthetic knowledge.

Moreover, geometrical propositions are one and all necessary propositions. The three angles of a triangle do not merely happen to be equal to two right angles as an empirical fact, but we know that they *must* be so. Now necessity is a mark of the *a priori* and so space to which geometrical propositions relate must be *a priori*. We thus see that the *a priori* synthetic character of geometrical knowledge is explicable only on the supposition that space is an *a priori* intuition.

Since geometry is applicable to objects of experience, we can determine their properties even before actually experiencing them. We can thus anticipate experience.

This is intelligible only if we suppose that space exists as a form of our sensibility, that is, as the subjective form of outer experience. We are subjectively so constituted that whatever is to be an object of outer experience has to be represented as spatial and so necessarily illustrating the properties of space determined by geometry.

4. *Conclusions from the above Concepts*

Space does not represent any property or relation of things in themselves, (far less does it represent a thing in itself), for if it belonged to things in themselves, then we could know it only through experience, and no *a priori* intuition of it would have been possible. It is absurd that we should know, of things in themselves, relations or properties prior to all experience—as we do of space.

"Space is nothing but the form of all appearances of outer sense." It belongs to us as the subjective condition of our sensibility. We know we can intuit only when we are affected by objects through sensation and we cannot know any object of outer sense without representing it as in space.

Space does not represent any actual character of things in themselves but only the form of their appearance to us as objects of intuition. If they are to appear to us, they must appear in space. The form of their appearance, being due entirely to the constitution of our subjective being, can be known *a priori* even before the perception of actual things.

There is thus no space in itself, there is only a representation of space. But this does not amount to saying that space is merely imaginary or is not true of

objects of experience. Although it is a subjective condition, it is a condition to which all human understanding is subject and is not peculiar to this or that individual. It is true of all subjects of outer experience. There can be no object of outer experience which is not in space. This means that space is *empirically real.* But from transcendental or epistemological consideration, we find that apart from all relation to our consciousness, it has no existence at all as a thing in itself; it is so far merely ideal, i. e., it exists merely as a form of our consciousness. This is what is meant by the *transcendental ideality* of space.

The ideality of space would be misunderstood if it were conceived after the analogy of sensible qualities like colour, taste, etc. The sensible qualities are not properties of things in themselves. They depend on the character of our physical organs and may be different with different individuals. But space is the same for all. The sensible qualities can be known only through empirical sensation and no *a priori* intuition of them is possible, whereas there is an *a priori* intuition of space. The great difference between space and sensible qualities can be traced to the fact that space is relative to the nature of our sensibility which is the same for all men, and sensible qualities are relative to physical organs which are pifferent for different individuals.

Section I
TIME

5. *Metaphysical Exposition of the Concept of Time*

The arguments on Time follow those on space, with slight variation. The *first argument* says that time is

not an empirical concept, because the idea of time, which might be supposed to be derived from our experience of the co-existence and succession of things is already presupposed by such experience and cannot therefore be derived from it. If we have no notion of time, we cannot experience things as successive or simultaneous. The idea of time does not follow but precede such experience. It is therefore *a priori*.

The *second argument* draws the same conclusion from the fact that although we can think away all appearances and thus conceive time as empty, time as the universal condition of their possibility cannot itself be removed. It seems possible to think the absence of time. What seems therefore to be meant by Kant is that we cannot think of the possibility of appearance without presupposing the being of time.

The *third argument*, as Kant himself says, properly belongs to the transcendental exposition and will be better explained there.

The *fourth argument* shows that time is not a discursive or general concept, but an intuition. There is only one time and what are sometimes spoken of as many times are really parts of one and the same time. The mode of knowledge proper to a single individual is intuition and not concept. Moreover the proposition that different times cannot be simultaneous is synthetic and therefore cannot be derived from a concept. "It is immediately contained in the intuition and representation of time."

The *fifth argument* also shows that time is an intuition. The parts of time can be conceived only as limitations of one (infinite) time. It is therefore such that the whole precedes the parts. According to Kant, in conception the parts recede the whole whereas in intuition the

whole precedes the parts. Time therefore is an intuition.

6. *Transcendental Exposition of the Concept of Time*

The purpose of the transcendental exposition is to show that some synthetic *a priori* knowledge is made intelligible by the view of time or space maintained in the metaphysical exposition. We know that time has only one dimension and that different times are only successive and not simultaneous. We treat these propositions as axioms and know them with apodeictic certainty. Further, they are also synthetic. Since they are synthetic they must be based on intuition and cannot be derived from mere concepts, and since they are necessary (apodeictic), we know that they cannot be derived from experience. They must therefore be based on *a priori* intuition. It is because the metaphysical exposition has shown that time is such an *a priori* intuition that we can understand how synthetic *a priori* knowledge contained in these axioms is possible. This is what the third argument really shows.

Kant has further referred to change and motion. Both these notions involve contradictory ideas and would not be intelligible from more concepts. We cannot understand the presence as well as the absence of the same property in one and the same thing (change), nor the presence as well as the absence of the same thing in one and the same place (motion). It is the intuition of time that renders these ideas intelligible by showing that presence and absence of the same thing or property do not contradict each other when they occur one after the other, i. e. in time. Thus the ideas of time developed

in the metaphysical exposition and (as an *a priori* intuition) explains the body of synthetic *a priori* knowledge contained in the science of mechanics.

7. *Conclusions from the above Concepts*

Time is not something self-subsistent, nor is it an objective determination of things. If it were self-subsistent, it would be something actual without being an actual object, an infinite nothing. If it were characteristic of things in themselves, we could not know it, as we certainly do, prior to the experience of objects. Hence time merely represents a subjective condition under which alone intuition is possible for us.

Time is the form of inner sense. It represents the way in which our inner experiences are ordered (i. e. successively) and does not represent any characteristics of outer appearances, such as shape, position, etc. We represent time by a line progressing to infinity, which like time is of one dimension. Time differs from a line in that the parts of a line are simultaneous,, but the parts of time are never simultaneous. Kant thinks the fact that time can be represented by a line (in outer intuition) is a further proof that time is an intuition.

Whereas space is the formal condition of all outer appearances, time is the formal condition of all appearances, whether inner or outer. Because even outer experiences ultimately represent certain inner experiences of the mind which require time as their formal condition. Thus time, though it directly conditions only inner appearances, indirectly conditions all appearances. So all appearance is in time.

Time like space is *empirically real,* but *transcen-*

dentally ideal. Time is an inalienable aspect of all objects in so far as they appear to us. It is thus quite objective. But when abstraction is made of our faculty of intuition time reduces itself to nothing. Apart from our faculty of knowing, it has no being as a thing in itself or as a real property of things in themselves. It is then merely ideal, that is, belongs to our faculty of knowledge and not to things in themselves. Both space and time are thus subjective as well as objective. They are quite objective inasmuch as they are true of objects of experience as such and are not peculiar to this or that individual. At the same time they are also subjective in the sense that they are only a part of the conditions of *our* knowledge and not a property of things in themselves.

The subjectivity or ideality of time should not be confused with that of sensible qualities. The sensible qualities are no doubt ideal, and when they are abstracted, the real objects of experience in which they inhere are still supposed to exist. But when abstraction is made of time there remains no objects of experience at all.

ELUCIDATION

People find it difficult to believe that time is not absolutely real, because even though we may deny all outer appearances with their change, we cannot deny change in our own subjective experience which is directly evident. And change is possible only in time. Hence they conclude that time must be absolutely real.

Kant readily grants that time is certainly real, but only as the form of our inner intuition. If we are to appear to ourselves we can do so only as in time. But apart from the condition of our appearing to ourselves,

i. e. of inner intuition, time has no reality. That people have greater difficulty in accepting the ideality of time is due, according to Kant, to the fact that (subjective) idealism has already familiarized them with the view that all outer appearances are illusory. Kant's view however is that the other appearances as appearances are as indubitable as the inner appearances.

The transcendental ideality of space and time leaves our empirical knowledge of the world wholly unaffected. For our empirical knowledge they are quite real and nothing can appear to us which is not subject to the conditions of space and time.

The Kantain view of space and time explains how synthetic *a priori* knowledge, such as we have in mathematics, is possible. The Newtonian view of them as independent and absolute realities or the Leibnizian view of them as empirical concepts abstracted from our confused experience of the relations of real things is open to one serious objection or another. The Newtonian view requires us to believe in the existence of two eternal, infinite, self-subsistent non-entities. But it has the merit of making mathematics possible, for since space is universal, geometrical propositions can be applicable to all things. The Leibnizian view lacks this merit and makes *a priori* knowledge of mathematics impossible, because for it space is merely an empirical concept. But then on this view our understanding can judge of supersensible entities without being hampered by spatial limitations (which pertain to sensee-xperience only). This is a merit which is not enjoyed by the Newtonian view for which sqace is infinite and universal and would leave no room for supersensible knowledge (e. g. knowledge of God) unaffected by its limitation.

It is the contention of Kant that his view combines the merits of both the Newtonian and the Leibnizian views without sharing the defects of either. It makes synthetic *a priori* knowledge possible and at the same time does not make all knowledge subject to the conditions of space and time, because these are conditions of sense experience only and need not affect any supersensible knowledge.

8. *General Observations on the Transcendental Aesthetic*

I. The upshot of Kant's teaching in the *Aesthetic* is that space and time are only forms of our sensibility and have no independent existence apart from our faculty of intuition. Whatever we know through them is an appearance. Appearances do not exist in themselves, but only in us. What the object may be in itself, apart from all relation to our knowledge, we do not and cannot know. Our knowledge is confined to appearances only. It may become ever so clear, but it will never reach beyond appearance.

This implies a distinction between appearance and things in themselves. But the Kantian view of the distinction is fundamentally different from the Leibnizian and the Lockian views on the subject. The Leibnizian view is that we know things in themselves in our conceptual apprehension through the understanding and that in our sensuous apprehension we know the same entities in a confused manner. According to this view, sensibility differs from thought only in clearness, and it would seem that our sense-knowledge which now gives us only appearance would, if rendered sufficiently clear, amount to knowledge of things in themselves.

Kant rejects this view as being obviously wrong. If sensuous knowledge were only conceptual knowledge become confused, then the knowledge of the ethical concept "right" which a layman has, would be sensuous, since it may be said to be confused in contrast to the clear conceptual knowledge of the same thing by a professor of ethics. But it is absurd that we should have a sensuous knowledge of an ethical concept. Moreover, according to Kant, as we have seen, our intuition of things, even when raised to the highest degree of clearness, gives only appearance and can never yield knowledge of things in themselves. The Lockian view of the distinction between appearance and things in themselves may be illustrated by the distinction between the coloured appearance of the rainbow and the drops of rain of which it actually consists. This distinction is really the distinction between the primary and secondary qualities and may be justified from the standpoint of physical science. What is to be noticed in this connexion is that the distinction falls entirely within appearance in which both the coloured appearance and the round shapes of the raindrops are given. Kant's distinction goes deeper, and marks out on the one hand, all that is given within experience (appearance) and, on the other, what from the nature of the case can never be so given (things in themselves). For Kant the whole world of space and time is an appearance, and so for him the drops of rain (with all their spatial characteristics), which are for Locke things in themselves, are equally an appearance.

Kant believes that his view of space and time is not a mere plausible hypothesis but absolutely certain, because the synthetic and *a priori* knowledge of geometry

can be explained only if space is an *a priori* intuition.

II. Kant further supports his view of the ideality of space and time by showing that our representations of space and time contain nothing but relations, such as those of side-by-sideness (in the case of space) and succession (in the case of time). No things in themselves or real existence can be known merely through relations.

It is not merely through outer sense that we get appearance; through inner sense too we get nothing but appearance. The self we know is not the self as it is in itself but only as it appears to the inner sense and therefore only as conditioned by the form of its intuition.

III. When it is said that both by outer sense and by inner sense we know only appearances and not things in themselves, we should by no means understand that these appearances are illusory. The objects of our experience are given, and only because their qualities (spatial and temporal) are dependent on our modes of intuition, they are called appearances. What is illusory is really not given at all, and is peculiar to the particular individual who is under illusion. The appearances on the other hand are given and are the same for all normal individuals. The illusory is merely ideal and altogether lacks empirical reality, which is not the case with appearances.

It is not the ideality of space and time but their absolute reality that would tend to reduce the objects of experience to mere illusion. The view which regards space and time as absolutely real, not only makes eternal and infinite non-entities of them but makes them the necessary conditions of existence of all things, so that space and time are supposed to exist even when things do not. As

a consequence, not only would the reality of outer things be denied, as was done by Berkeley, but even our own existence as dependent on a self-subsistent non-entity (time) would be rendered illusory. When space and time are regarded not as conditions of the existence of things, but as conditions of our knowledge, they cannot affect the reality of anything at all.

IV. When we think of God not only as inaccessible to our sensible intuition, but also as having no sensible intuition himself, we deny in fact that space and time are conditions of his being and knowledge. If space and time were real conditions of the existence of all things they would condition the existence of God also.

Moreover, of things which are spatial and temporal only sensible intuition is possible. That is to say, we have to be affected by them in order to know them. But God does not know things through sensible intuition. He does not need to be affected by the previously existing thing in order to know them. Things exist in being known by God and thus God has no sensible but intellectual intuition of them. In granting intellectual or creative intuition to God, we imply that space and time are not characters of things in themselves but only conditions of our sensible knowledge. We need not suppose that they are peculiar to human sensibility only. They would be true of any intuition which is sensible and derivative (because derived from the existence of things) and not intellecual and original (because creative) like the intuition of God.

TRANSCENDENTAL DOCTRINE OF *ELEMENTS*

PART II
TRANSCENDENTAL LOGIC
INTRODUCTION

I. Logic in General

Our knowledge springs from two sources, sensibility and understanding. The term sensibility stands for the capacity of the mind to receive impressions, and the term understanding for the capacity of the mind to supply concepts out of itself, to be applied to impressions received through sensibility. The ideas of receptivity and spontaneity are associated respectively with sensibility and understanding. We are thus both passive and active when we know.

Sensibility gives us intuitions and understanding gives us concepts. Intuitions and concepts are not themselves cognitions. They are mere elements of knowledge which only in their combination constitute a case of actual knowledge. Both are equally necessary. Concepts require some content (intuition) given through sense, and intuitions require to be brought under some concept or category if they are to form part of any actual knowledge. "Thoughts without content" (i. e. concepts without intuitions) "are empty, and intuitions without concepts are blind." Sensibility and understanding must combine in order to give rise to knowledge. But they cannot interchange their functions. Understanding cannot intuit, just as sensibility cannot think or conceive. The science of the rules of sensibility in general, which is called Aesthetic, is to be distinguished from the science of the rules of

understanding in general, which is Logic. Having dealt with the former first, Kant now proceeds to deal with the latter.

Now logic may be general or particular. General logic deals with the absolutely necessary laws of thought without which the understanding cannot operate at all. It deals with these laws in abstraction from the differences in the objects to which our thought may be directed. Particular logic deals with the rules of valid thinking in regard to a particular class of objects. These rules do not hold good universally but obtain only in a particular science. As instances of particular logic we have the logic of history, the logic of physics, etc.

General logic again may be pure or applied. Pure general logic does not take into account the empirical conditions under which the understanding actually works. It deals with *a priori* principles and draws nothing from experience or empirical psychology. Applied logic however takes into account the subjective conditions which either hinder or help valid thinking. It deals with attention, conviction, doubt, source of error, etc. and derives much help from empirical psychology. If pure logic deals with thinking in the abstract, applied logic deals with thinking in the concrete.

II. Transcendental Logic

The logic which is classified in the previous section may be called ordinary logic. But Kant is not directly concerned, in his *Critique*, with ordinary logic, general or particular, pure or applied. He is chiefly interested to develop a new science, called *Transcendental Logic*. General pure logic abstracts from all objects. "It assumes

*indeed that all objects must conform to its laws but this assumption plays no part in the science itself."** Transcendental logic abstracts from all empirical objects, but not from all objects whatever. It is concerned to determine the origin, limit and validity of our *a priori* knowledge of objects. General logic deals with the laws of the understanding in themselves; transcendental logic deals with the laws of the understanding in so far as they apply *a priori* to objects. General logic applies to empirical as well as to pure rational knowledge. Transcendental logic has nothing to do with empirical knowledge.

III. The Division of General Logic into Analytic and Dialectic.

Truth may be taken to mean agreement of knowledge with its object. Knowledge is false when it does not agree with the object to which it is related, although it may contain something which is valid of other objects. It is thus clear that there cannot be any general test of truth which would apply to all knowledge whatever its object may be. Because such a general test would have to abstract from all particular objects, but it is always some specific object that is the content of knowledge and its truth concerns only this particular content. A general and sufficient test of truth cannot therefore be supplied.

Logic, however, in so far as it expounds the necessary and fundamental rules of the understanding, supplies a formal and negative criterion which all knowledge, if it is to be true, must satisfy. No knowledge is valid which violates the logical rules. But even when it satisfies the

* See N. Kemp Smith: *A Commentary on Kant's Critique of Pure Reason*, p. 171.

demands of logic, it may not be in agreement with its object and so although its form is correct, it may be materially false. Logic thus defines only the formal and negative conditions of truth and it cannot go any further.

General logic, in so far as it analyses the fundamental and necessary laws of thought, may be called *Analytic*. This part of logic supplies us with the negative test of truth. In examining any knowledge we must first apply this test and see whether knowledge is formally right. But logic cannot guarantee material truth and so with the help of logic alone we cannot make any judgement regarding objects. Thus mere logic cannot help us to extend our knowledge. But sometimes general logic, which is a canon of judgement, is wrongly used as an organon to give us new knowledge.* General logic thus wrongly employed is called *Dialectic*.

Dialectic, among the ancients, was nothing but the logic of illusion, a sophistical art to give the appearance of knowledge to the most unfounded assertions. Kant considers it beneath the dignity of philosophy to give instruction in this art and proposes to use the term Dialectic in the sense of *Critique of Dialectical Illusion*.

IV. The Division of Transcendental Logic into Transcendental Analytic and Dialectic

Without intuitions no objects can be given to us and without concepts no objects can be thought. Both are necessary for knowledge. Having dealt with the

* (" By a canon Kant means a system of *a priori* principles for the correct employment of a certain faculty of knowledge. By an organon Kant means instruction as to how knowledge may be extended, how new knowledge may be acquired." —N. K. Smith, *ibid.* p. 170.

pure forms of intuition (space and time) in the Transcendental Aesthetic, Kant comes to deal with the pure concepts of objects or the categories in the *Transcendental Analytic.* The categories are the forms of objectivity and without them no knowledge would be possible, because knowledge would then have no object. But whereas it is legitimate and proper to apply the categories within the realm of experience in which alone any object can be given to us, we are sometimes tempted to apply the categories beyond the sphere of possible experience. *Transcendental Dialectic* considers such unjustifiable use of the categories. Actually, however, in that part of the *Critique* which bears the name of *Dialectic,* Kant gives us a criticism of the dogmatic metaphysical theories, which disregard the Kantian principle that both intuition and concept are necessary for knowledge and venture with the help of understanding alone (without the aid of sensuous intuition) upon synthetic *a priori* judgements.

Division I
TRANSCENDENTAL ANALYTIC

Tsanscendental Analytic is concerned with pure understanding. It analyses all our *a priori* knowledge into the elements which the understanding by itself can yield. It is essential that the concepts thus reached should be pure and not empirical; that they should belong to thought and understanding and not to sensibility and intuition; that they should be really fundamental and not derivative; and finally, that they should cover the entire field of pure understanding. The understanding is an independent self-complete unity and so its

concepts too must together form a systematic unity. The systematic unity of the concepts will be a test for the correctness of the analysis.

The *Analytic* requires two parts, one dealing with the concepts and the other with the principles of pure understanding.

BOOK I

ANALYTIC OF CONCEPTS

The task proposed for the *Analytic* is not an analysis of the known and given concepts with a view to the explication of their meanings, but of the faculty of the understanding itself, in order to find out the *a priori* concepts which make objective knowledge possible. The understanding is the faculty of thought, i. e. of objectifying what is given in sensuous intuition. Such thinking is made possible by the use of certain pure concepts which can be discovered only by an examination of the understanding itself which is their only and real home.

CHAPTER I

THE CLUE TO THE DISCOVERY OF ALL PURE CONCEPTS OF THE UNDERSTANDING

Kant begins here what is known as the *metaphysical deduction of the Categories.* The concepts as they arise from the understanding, which is an absolute unity, are connected with one another according to a principle, and this supplies us with a rule which enables

us to determine their respective places and systematic completeness in an *a priori* manner. We have to find out what this rule or principle is. It is found in the next section to be connected with the nature of the act of judging.

Section I
The Logical Employment of the Understanding

The understanding is a non-sensuous faculty of knowledge, and so different from sensibility. Since intuitions are given to sensibility only, the understanding cannot know by intuition. But we know either by concepts or by intuitions and there is no third way. So the understanding is that faculty of knowledge which operates with concepts. The understanding is a faculty of judgement. The only use the understanding can make of concepts is to judge by means of them. Judgement is the function of the understanding and concepts are essentially connected with judgement. Just as intuitions depend on affection, concepts depend on function. By function is meant the unity of the act or rather the unitary act of bringing several representations under one common representation. In every judgement we use a concept which is true of many representations and refer it to something given in intuition. Thus I may judge: " This is a table". Here the concept 'table' is not only true of what is given in my present intuition, but it is true of many other representations. Since judgement gives us the essence of the understanding, a survey of the different species of judgements will help us to find out the fundamental functions of the understanding, and so the ultimate categories.

Section II
The Logical Function of the Understanding in Judgement

Kant accepts with some modification, from the formal logic of his time, the division of judgements according to *quantity*, *quality*, *relation* and *modality*. Judgements under each of these heads are further sub-divided into three classes. According to *quantity* judgements are divided into Universal (*All S is P*), particular (*Some S is P*) and Singular (*This S is P*); according to *quality* into Affirmative (*S is P*), Negative (*S is not P*) and Infinite (*S is not -P*); according to *relation* into Categorical (*S is P*), Hypothetical (*If S is P; Q is R*), and Disjunctive (*S is either P or Q*); and according to *modality* into Problematic (*S may be P*), Assertoric (*S is P*) and Apodeictic (*S* must be *P*).

In ordinary logic singular and infinite judgements are not separately considered. They are treated respectively as universal and affirmative judgements. But Kant points out that the amount of knowledge we get in a universal judgement cannot be yielded by a singular judgement, the former holding good of a whole class, the latter only of a single individual. The infinite judgement also is not properly affirmative. It does not say what the subject exactly is. The subject (S) is excluded from a certain sphere (P), but the sphere (not – P) in which it is included is practically infinite as it includes an infinite number of things. This is why the judgement is called infinite.

In the categorical judgement we consider only two concepts (subject and predicate); in the hypothetical we consider two judgements. The two judgements entering into the hypothetical judgement may in themselves be true

or false. What is really considered is their logical sequence. In the disjunctive judgement we consider two or more judgements in relation to one another. The judgements in a sense are opposed to each other, in so far as the one excludes the others, but they together cover the whole of a common sphere, each taking up a part of it, and what is left out by one has to be placed in the others. That is, our entire knowledge of a subject-matter finds expression in the alternative judgements which constitute the disjunctive judgement.

The modality of a judgement does not concern the content of the judgement. It rather concerns the relation of the content to our thought. When, e. g. we pass from the problematic to the assertoric judgement, nothing is added to the content of the judgement. We only think of the same content differently.

Section III
Pure Concepts of the Understanding, or Categories

General logic forms its concepts analytically by abstraction from representations which may be given empirically. From our experience of several objects we can form, by analysis and abstraction, the concepts 'table', 'hardness', 'roundness', etc. Transcendental logic abstracts from all empirical content but not from all content whatever. It has before it the manifold of pure *a priori* intuition contained in space and time, and the pure concepts of the understanding with which the transcendental logic is concerned are formed synthetically in reference to this pure manifold. The manifold as such is known without the operation of thought upon it. If this is to be known, it is necessary

that the manifold should "be gone through in a certain way, taken up, and connected". This act of combining and relating, which is the essential function of the understanding, is called *synthesis* by Kant. Without this synthesis there would be given in space and time a manifold of mere sensation but it would not be ordered and connected. It would not be represented as causally or otherwise connected and would indeed constitute no object for us. It would be a mere chaos. But constituted as we are, we have no conscious experience of this chaos or unrelated bare multiplicity. We have therefore to suppose that the manifold of sense, the original chaos, is synthesized for us by blind, unconscious imagination. This function of the understanding, exercised unconsciously, has to be formulated in terms of concepts.

Kant believes that the synthesizing function of the understanding which makes objects for us by combining and relating the ultimate data of sense, is one with the function of judgement. So the different kinds of judgements represent the different synthetic functions and thus the table of categories is derived from the table of judgements found in ordinary logic. The following table gives the different kinds of judgements and the categories corresponding to them.

TABLE OF CATEGORIES

I	II
Of Quality	*Of Quantity*
Universal—Unity	Affirmative—Reality
Particular—Plurality	Negative—Negation
Singular—Totality	Infinite—Limitation

III

Of Relation

Categorical—*Inherence and Subsistence* (Substance and *Accident*)
Hypothetical—Causality and Dependence (Cause and Effect)
Disjunctive—Community (Reciprocity between agent and Patient)

IV

Of Modality

Problematic—Possibility and Impossibility
Assertoric—Existence and Non-existence
Apodeictic—Necessity and Contingency

The term Category is borrowed from Aristotle who made the first attempt to find out these fundamental concepts. He did not however deduce his categories from any single principle, but merely selected them "as they came his way", and so he could not be sure of their completeness. But as Kant deduces his categories from one single principle, namely the faculty of judgement or thought, he thinks that he has succeeded in finding out all the fundamental categories (twelve in number) which underlie our experience.

These are only the primary concepts of the pure understanding. Besides these there are pure derivative concepts also, which can be derived by combining the categories with one another or with the modes of pure sensibility (Space and Time). They would need to be considered in a complete system of transcendental

philosophy, but as Kant is writing only a critical essay he is content with merely pointing out that there are such derivative concepts.

The categories classified under four heads may be divided into two groups called *mathematical* and *dynamical*. The mathematical categories, i. e. the categories of quantity and quality, are concerned with the objects of intuition. The dynamical categories, i. e. the categories of relation and modality are concerned with the existence of these objects in their relation to each other or to the understanding. The categories of the first group have no correlates, while those of the second group have, that is, each of the latter consists of a pair of concepts such as Substance and Accident, Cause and Effect.

It is also to be noted that under each head we have a three-fold division, and not a division by dichotomy, and that the third category in each class results from a combination of the first with the second. Thus Totality means only Plurality considered as Unity. But in this account the third category should not be regarded as derivative, because even the combination of the first with the second in order to give rise to the third requires a special act of the understanding which is different from the act that is exercised in the case of the first or the second category. The third does not result merely from the presence of the first and the second. The concept of number, for instance, which belongs to the category of Totality, is not always possible when we have simply the concepts of Unity and Plurality. We have both Unity and Plurality in an infinite series of units, but it is no number.

We have already seen how the concept of Community is derived from the disjunctive judgement, which at first

sight may not seem to be possible.

In the metaphysical text books of the middle ages the real is spoken of as 'one', 'true' and 'good'. But these concepts are not found in Kant's table of categories' and so it might be considered defective. But Kant shows that these concepts only signify the logical demands of our knowledge of object; they to not express any necessary determinations of the object and are not therefore categories in Kant's sense.

CHAPTER II
DEDUCTION OF THE PURE CONCEPTS OF THE UNDESTANDING

Section I
The Principle of a Transcendental Deduction in General

The term *Deduction* is taken from legal literature where it is used in the sense of proof of right or establishment of legal claim. Deduction thus means nothing but the demonstration of the validity of a legal claim; and when used in an epistemological context, in connexion with the categories, it comes to mean the demonstration of their objective validity. The *transcendental deduction* has to show therefore how the *a priori* categories, though not derived from experience, are still valid of the objects of experience. This deduction is to be distinguished from empirical deduction which merely shows how we, as a matter of fact, come to acquire a concept through experience and reflection, without explaining whether or not it is valid of anything. Empirical deduction is thus concerned with the *fact* of our possessing

certain concepts and not with their objective *validity*. Empirical deduction however is not possible of *a priori* concepts, because they are not derived from experience. Experience only supplies the occasions on which the mind by its free spontaneous activity brings forth these concepts out of itself. We may investigate, as Locke has done, how on the occasion of particular sense-impressions our faculty of knowledge is called into action and yields universal concepts. But an account of such derivation of concepts is not deduction proper, because it does not consider their objective validity.

We have two kinds of concepts which relate to objects in a completely *a priori* manner. They are: (i) space and time as forms of sensibility and (ii) the categories of the understanding. We have just seen that the only deduction possible of *a priori* concepts must be transcendental. Now the question is whether such a deduction is essential. In the case of the *a priori* forms of sensibility, i. e. space and time, it was not necessary to supply a transcendental deduction because space and time being forms of sensibility, if any object is to be given to our sensibility, it can be given only in space and time. Thus there remains no room for the question whether space and time are applicable to objects of sense, and so the need for a deduction to validate their objective application does not arise. The case of the pure concepts of the understanding is different. They belong to the understanding and not to sensibility and claim to determine all objects whatever, quite apart from all conditions of sensibility. They are applied to supersensible metaphysical entities like God and self, inasmuch as we think of them as substances and causes. As these concepts do not depend on experience, we cannot find in *a priori* intuition

any object in which their synthesis may be grounded. *And naturally we are doubtful whether and how far they* are valid of objects. Thus a transcendental deduction of the categories becomes quite necessary.

Such a deduction, however, is particularly difficult because objects can be given (in intuition) without yet being subjected to the categories of the understanding. In the case of intuition we know that nothing can be given which does not conform to the forms of sensibility, that is, which is not spatial and temporal, or at least temporal. So here the given necessarily conforms to the forms of sensibility. But since there may be appearances quite apart from the categories we cannot know that the objects must conform to the categories and are not sure whether the categories are objectively valid. The transcendental deduction seeks to solve this problem.

Transition to the Transcendental Deduction of the Categories

There are only two ways possible in which the agreement between our representations and their objects can be understood. Either the representations are produced by the objects or the objects are produced by the representations. The first is the explanation offered by empiricism and obviously cannot be true of our *a priori* ideas which are not derived from experience. We have therefore to adopt the second alternative when we are concerned to understand the nature of the *a priori* categories. But we should realize that in knowledge there can be no actual production of objects by ideas except in the case of realization of some purpose. The *a priori* concepts produce the objects only in the sense that they make it possible for us to know anything as an object.

"Now there are only two conditions under which the knowledge of an object is possible. *First, Intuition,* through which it is given though only as appearance; secondly, *Conception,* through which an object is thought corresponding to this intuition." We have already seen how it is the *a priori* forms of space and time that condition all givenness. We have seen, that is, if anything is to be given, it must be given in space and time. Space and time thus make possible its givenness. We are now going to see in regard to the categories whether they are the conditions of all objectivity. Kant is undertaking to show that if anything is to be known as an object, it must be known in terms of the categories. The categories are the most general concepts of object and without them no object can be thought. So if we take experience in the sense of scientific experience, implying knowledge of objects, given through sense and thought, the categories "must be recognized as *a priori* conditions of the possibility of experience".

Locke and Hume tried to derive the pure concepts of the understanding from experience. But such empirical derivation cannot be reconciled with the synthetic *a priori* knowledge given by mathematics and physics and is not therefore acceptable.

THE DEDUCTION OF THE PURE CONCEPTS OF THE UNDERSTANDING
(First Edition)

Section II
The a priori *Grounds of the Possibility of Experience*

The problem of the transcendental deduction is to establish the objective validity of *a priori* concepts, that

is, to show how the categories, which in a sense originate in the mind, can yet be true of the objects given in experience. This is the subject matter of the so-called *objective* deduction. But the deduction has another side which consists in the determination of those subjective activities which underlie all objective knowledge. These activities do not belong to the empirical subject and cannot be discovered by psychological introspection. They are discovered by the transcendental method as presupposed in all experience. These generative sources of our experience or knowledge of object are discussed in the so-called *subjective* deduction which was dropped, in spite of its obvious interest and importance, from the Second Edition as not quite essential to the main object of the Critical enquiry.

To understand the deduction which Kant offers of the synthetic activities that make experience possible or generate knowledge, we should have clearly in view the character of our knowledge itself. We should realize first of all that knowledge is essentially a whole or a unity. When ideas come and go without any relation to one another, we have no knowledge in the proper sense of the term. We have no knowledge without intuition, and intuition always offers us a manifold because intuition for us is always in space and time, and what is spatial and temporal must be divisible, i. e. a manifold. But even a manifold is a manifold because of a combination, otherwise it would not be realized as many. Thus the manifold, as a synopsis or unity, implies a synthesis, i. e. an act of the mind which combines the manifold. The receptivity of intuition must be combined with the spontaneous activity of the understanding to yield us knowledge. "Now this spontaneity is the ground of a

three-fold synthesis which must necessarily be found in all knowledge; namely, the *apprehension* of representations as modifications of the mind in intuition, their *reproduction* in imagination, and their *recognition* in concept." These syntheses are the original synthetic activities of the mind which give rise to knowledge. It is only when these have taken place that knowledge arises.

1. *The Synthesis of Apprehension in Intuition*

We should bear in mind that all our representations, whether outer or inner, empirical or *a priori*, belong as modifications of the mind to inner sense, and so are subject to time which is the form of inner sense. They must all therefore be ordered and related in time.

Every intuition presents us with a manifold, and it can be represented as a manifold only in so far as the mind can distinguish in it elements which have occurred one after another. A representation which is contained in a single moment and in which there is no temporal sequence, can never be a manifold but an absolute unity. The unity of intuition, in which a manilold is given, requires that this manifold should be run through and held together, otherwise there will not be one intuition. This act of running through and holding together a manifold given in an intuition is called the *synthesis of apprehension*. It is because of such a synthesis that a manifold can be contained in a single representation.

Space and time are also manifolds and their representations too require such a synthesis. Only space and time being *a priori* representations, we have a pure synthesis of apprehension in respect of them.

2. The Synthesis of Reproduction in Imagination

The synthesis of apprehension requires the co-operation of another synthesis in order to give us the complete representation of an object. The manifold has no doubt to be run through and held together. But since the parts of the manifold come one after another, by the time we arrive at the last part, the earlier parts are not actually present before us. What then are we to hold together and how? It is necessary therefore that when we intuit the last part we should be able to reproduce the earlier parts in imagination, so that all the parts together may constitute a whole. Without this reproduction we cannot experience any object. If, for instance, in drawing a line in thought we always dropped out of thought the preceding representations, i. e. the earlier parts of the line, and did not reproduce them as we advanced to the succeeding ones, no complete representation of a line would at all be possible. Even the most elementary representations of space and time would not be possible without the synthesis of reproduction. "The synthesis of apprehension is thus inseparably bound up with the synthesis of reproduction" which "is to be counted among the transcendental acts of the mind". The faculty to which this act belongs is called the transcendental faculty of *imagination*.

3 The Synthesis of Recognition in a Concept

The synthesis of apprehension and the synthesis of reproduction are not sufficient to give us that unity of representations which constitutes an object. As we go on apprehending the parts of an object the earlier parts may be reproduced in imagination, but such reproduction would not be of any use unless we recognized the

reproduced parts to be the same as what we apprehended before. When a representation is reproduced in imagination, it must be recognized as identical with what we prepiviously apprehended, if such reproduction is at all to serve the purpose of knowledge. As a pre-condition of knowledge Kant therefore adds to the two synthesis already explained the third synthesis of *recognition*. This recognition implies the identification of the representations which are first apprehended with those that are later reproduced. Every recognition implies some identification. This is exactly what happens in conception. A concept is a representation in which a number of representations have become one. So this synthesis is called the synthesis of recognition in a *concept*.

Just as intuitional apprehension is due to sense, and reproduction is due to imagination, recognition is due to my consciousness which remains the same throughout all changes of my states. If my consciousness too became different with my different states, then two representations occurring at different points of time could never be identified. My empirical consciouness is certainly changing along with my states from moment to moment. And consequently the synthesis of recognition is not possible through this consciousness. For it we require a consciousness which remains ever the same in spite of all difference in empirical states. This consciousness, in distinction from empirical consciousness is called *pure* or *transcendental*. Kant calls it *apperception*. It is this which enables us to recognize the identity of several representations. This pure consciousness also implies that our self in some sense remains the same in spite of all change in our empirical states. Mere consciousness without the self is scarcely intelligible. So the pure

consciousness is more exactly determined as the pure original self-consciousness, which Kant variously calls the *transcendental unity of self-consciousness*, the *synthetic unity of apperception*,* etc. The unity of self-consciousness is thus the highest and last ground of our knowledge of object. Without this no unification, and so no objective knowledge, is possible.

We thus see that in knowing any object we are conscious of the unity of several representations, and this unity is grounded in the unity of self-consciousness. But we have no seperate consciousness of the self by itself as remaining always the same. My self-consciousness is really at the same time the consciousness of the synthetic unity of all my representations. "I=I" is of course an analytical proposition. But "I=the unity of all representations" is a synthetical principle which is the basis of all knowledge.

What then is an object of knowledge which we are accustomed to regard as standing outside and independdent of knowledge and to which knowledge is supposed to correspond? If the object remained outside knowledge we could not possibly determine its character. It would at best be a mere indeterminate X. But the object of knowledge is always something determinate. We have to do ultimately with our own representations and the object, if it is to be anything knowable, must be constituted somehow by these representations.

There is an element of *necessity* associated with our notion of object. When we are free to have any representation we like of a thing, it is not an object of knowledge to us. We are merely imagining it. When we know on object, our representations of it are quite restricted.

* 'Apperception' ordinarily means 'self-conscious perception.'

For example, when I know an orange, I cannot represent it as round and black, or now as round and then as black. I have necessarily to represent it as yellow and round. This means that my representations constitute an object when they are associated with one another according to a rule, i.e. in the manner required by a concept or a category. They should be such as can enter into a synthetic unity. *The objectivity of my representations does not mean their reference to something outside them, but only their necessary connexion with one another, which again means nothing but their connexion according to a rule.*

All necessity is traced in the last resort to some transcendental ground. The necessary connexion of representations, which constitutes their objectivity, rests on the fact that they are so connected for pure or tanscendental consciousness. It is this consciousness, as we have seen, which connects our representations synthetically and makes them objects.

4. *Preliminary Explanation of the Possibility of the Categories as Knowledge* a priori

There is only one experience and in it all our perceptions stand in a thoroughgoing and orderly connexion with one another. When we speak of different experiences, we really mean our various perceptions; and all of them must fall within one general experience. The unity of experience rests on the trascendental unity of self-conciousness which synthesizes or combines our representations according to concepts (i.e. in terms of substance and attribute, cause and effect, etc.) and makes them objects. That which makes experience possible also makes objects possible. Experience and object are correlative and they

depend on the unity of self-consciousness.

Now the categories are the concepts according to which representations are sythesized. In other words, it is in terms of the categories that we think of the objects of possible experience. Herein consists their objective validity. There would be no objects without synthesis and the categories are the modes of synthesis. For example, the categories of cause and effect or of substance and attribute are nothing but the ways in which representations are united with one another. Without such synthesis no experience and no object would be possible.

It is impossible to derive these pure concepts of the understanding from experience, not only because they are the presuppositions of experience and without them experience itself, from which they are to be derived, would not be possible, but also because experience, however far it may be extended, can never yield necessity and universality which are associated with these concepts. (E. g. whatever happens requires universally and necessarily something else as its cause.)

We are supposed sometimes to bring together different appearances under a law through the empirical rule of association. Hume tried to explain even the law of causality in this way. But how is this association itself possible? This is supposed to rest objectively on an affinity in the appearances themselves. But we do not understand what this affinity of appearances is that makes them come necessarily under unchanging laws.

This affinity is more easily explicable on the Kantian view. All appearances as representations belong ultimately to the transcendental unity of self-consciousness. This original unity of self-consciousness enters into all syntheses of representations. The affinity of appearances on this

view means nothing but the fact that they are transcendentally united in one consciousness. The empirical unity is only a consequence of this transcendental affinity. The unity of consciousness thus really constitutes the objective bond among diverse representations.

It may be thought a wonder that objective nature should conform "to our subjective ground of apperception" but the wonder ceases when we remember that the nature we are concerned with is not a thing in itself but "an aggregate of appearances" which are after all representations of our own mind. And there is no wonder that representations should conform to the conditions of the representing mind.

Section III
THE RELATION OF THE UNDERSTANDING TO OBJECTS IN GENERAL AND THE POSSIBILITY OF KNOWING THEM *A PRIORY*

Kant does not really make any new point in this section. He merely attempts a more systematic statement of the points he has already made in regard to the transcendental deduction in the previous section.

The possibility of experience rests on three subjective sources of knowledge, namely, *sense, imagination* and *apperception*. As generative conditions of experience, they are of course transcendental and *a priori*, and Kant is primarily interested in them only as transcendental grounds of our experience. But they have also an empirical employment, that is, function in respect of given appearances. In empirical employment sense works in perception, imagination, in association and reproduction, and apperception in recognition. But we can also

know *a priori* how all experience must be grounded in them.

The ultimate ground of all experience is the unity of apperception or self-consciousness. Experience with all its representations or appearances must belong to some consciousness, and that consciousness must be the same in respect of all the items of its experience. If we had a separate and different self for each different fragment of experience, then the experience would be in no sense one experience and so no experience at all. Thus *the identity of self is the primary condition of experience.* We do not and cannot learn from experience that the self in all experience must be identical with itself, nor is it meant that we actually know a self which is so identical. All that is meant is that if we are to understand how experience is possible we have to grant such an idetity of self-consciousness as a pre-condition of experience. The empirical self no doubt changes from moment to moment, but its having any experience depends ultimately on the fact that there is a transcendental identity of self-consciousness in which all items of experience are combined. The unity of self-consciousness is the ultimate synthetic principle which is at the root of all synthetic knowledge. One representation can be combined with another, because in occurring in experience, they are already united in the unity of self-consciousness.

The unity of apperception presupposes the synthesis of imagination. The unity of apperception is significant only in respect of a manifold which is combined by it or in it, and the manifold of representations, which must be in time, cannot be had all at once, that is, as a manifold, without the help of imagination. *Imagination is that*

faculty of the mind which gives us a manifold. We of course speak of the manifold of sense and we are in a sense right. But mere sense by itself cannot give us a manifold. Perceptions of sense take place separately and singly, and so sense by itself is not competent to give us a manifold which certainly requires a synthesis or combination, and sense, which is passive, cannot effect a synthesis. This is the work of imagination. The unity of apperception functions in respect of the manifold provided by imagination with the help of sense. Whatever we know is a manifold and absolute simples are never objects of our knowledge and experience. Thus we find that it is imagination which ultimately provides us with the objects of knowledge, because without imagination and its synthesis no manifold is possible. So this imagination to whose transcendental functioning we owe all objects is called the *productive imagination,* which is to be distinguished from the empirical imagination which is merely reproductive. When we have experienced some objects, we can reproduce them in imagination. But there is a prior functioning of imagination which is transcendental and which in a sense generates objects for us. Before anything can be constituted into an object of experience for us, this productive imagination must have already played its part as a synthesizing activity. Reproductive imagination follows, and is based on, experience; productive imagination precedes, and is the ground of experience itself. We have apperception on one side and sense on the other; imagination is intermediate between them and acts as a link. Imagination gathers up what is offered by sense and submits it to the unity of apperception, and there emerges the object of experience.

The unity of apperception in relation to the synthesis of imagination is the *understanding*. The objects of sense become the objects of the understanding through the imaginative synthesis. There are certain peculiar modes in which all possible appearances can be synthesized by the imagination for the understanding. They are part of the constitution of the understanding, so that if the understanding is to know any appearances, it must know them in these modes. These are the *categories*. Since they are inherent in the nature of the understanding and are not derived from experience, we can know *a priori* that these categories must be true of all possible objects of experience. The categories are the ways in which appearances are synthesized by the imagination for the understanding and made into objects of experience. We know therefore that if anything is to be an object of experience, it must submit to the categorial synthesis, which is as good as to say that the catgories have necessary objective validity.

When appearances are associated with one another, we assume that there must be some objective ground for it. This objective ground, which may be called their affinity, is found ultimately in the fact that the appearances so associated belong to one and the same consciousness. The unity of apperception is thus the ultimate ground that makes appearances associable with one another.

If the above account of the genesis of knowledge is true, then the unity and order, which are characteristic of experience and are found in nature, are derived ultimately from the constitution of our understanding itself. The unity of nature and experience is a reflection of the unity of self-consciousness and the intelligible orderliness of nature is due to the categorial synthesis of

the understanding.

The understanding may be described as the *faculty of rules*. We know it busies itself with appearances only in order to discover some rule in them. But the most fundamental rules (categories) according to which appearances are combined and made into objects of experience come from the understanding itself. It is thus that the understanding in a sense *make*s nature.

It is not of course meant that particular empirical laws of nature can be derived from the understanding. For them we have to study the natural phenomena and not the understanding. But the natural laws are only specifications of the most general laws of the understanding which find expression in the categories. Whether *a* or *b* is the cause of c we have no means of knowing except by a study of nature; but the law of causality is derived from, and found in, the understanding itself.

That the objects of experience should conform to the laws of the understanding may sound strange, but it need cause us no surprise when we remember that by objects only appearances are meant and not things in themselves. The appearances are dependent on the mind to which they appear and they have therefore to accommodate themselves to the laws of the mind. It is because the objects of experience are only appearances that any *a priori* necessary knowledge of them is possible. If they were things in themselves, no *a priori* necessary knowledge of them would be possible. Of things in themselves which are independent of the mind we could know nothing prior to experience, and even through experience we could get no necessary and universal knowledge because, as Kant repeatedly points out, experience is incompetent to yield such knowledge. But of objects

of experience, since they are only appearances to the mind, we can know beforehand how they are necessarily determined by the conditions of our sensibility (space and time) and of our understanding (categories), because only as so determined can they appear at all and be objects of any possible experience.

THE DEDUCTON OF THE PURE CONCEPTS OF THE UNDERSTANDING
(Second Edition)

Section II
The Possibility of Combination in General

Through sensibility we are given merely a manifold of impressions which, when combined in various ways, become obejcts for us. The combination of a manifold can never come to us through the senses. It is the work of thought or the understanding. The combining act whether conscious or not, is called synthesis. Since combination cannot be given by the object, it follows that, if we represent anything as combined, we must have previously combined it ourselves. Combination or synthesis is "an act of the self-activity of the subject", and can be executed by the subject alone.*

Every combination implies a unity besides the manifold which is combined and the act of combining. All combining is uniting. The idea of combination is

* We have just said that combination is the work of thought or understanding; and we are now saying that it can be executed only by the subject or self. The fact is that thought or understanding is not to be conceived as distinct from the subject. We may as well say that a manifold is combined by the self as thinking or understanding. To think or to understand is to combine.

possible only when the idea of unity is added to that of the manifold. But the unity we are speaking of here is not a product of combination but what lies at the basis of combination itself. Combination is possible, and can take place at all only when there is a self-identical unitary combining principle. Combination or synthesis thus presupposes unity.

The unity which is presupposed in all synthesis is more general than, and different from, the category of unity, which is only a mode of synthesis and is therefore of a lower kind than the most general unity pre-supposed in all synthesis. This unity it is which makes understanding itself possible, because understanding is the faculty of judgement and every judgement is a synthesis and this unity lies at the basis of all syntheses.

The Original Synthetic Unity of Apperception

The highest unity is the unity of self-consciousness which underlies all synthesis. We have seen that combination is the work of the self. Combination is thus due to me, but I can combine only my representations and the representations are mine only when they are one and all capable of being brought under or related to one consciousness. I may not be always conscious of them as mine, but if they are to be mine, in which case alone can they be combined by me, they must belong to one consciousness. It must be possible for all representations to be accompanied by *I think,* otherwise there would be representations which would not be thought and would mean really nothing. We thus see that the unity of self-consciousness is the supreme principle under which all the thinkable must be brought and which makes thinking itself possible.

Kant has given different names to this unity of self-consciousness. He calls it *pure apperception* to distinguish it from *empirical* apperception, or again *original apperception*, because it generates the representation *I think* which must be able to accompany all other representations but is also not itself accompanied by any further representations. It is also called the *transcendental unity of self-consciousness*, in order to indicate the possibility of *a priori* knowledge arising from it.

The empirical consciousness, which accompanies different representations is in itself diverse, and is without relation to the identity of the subject. It gets related to one subject in so far as the subject conjoins one representation with another and is conscious of their synthesis. There is thoroughgoing identity of consciousness throughout these representations in so far as they can be synthesized. Kant has expressed this idea by saying that the analytic unity of apperception is possible only under the presupposition of a certain syntheic unity. In other words, the identity of self-consciousness is not by itself possible or intelligible; only in so far as a certain manifold of given representations is synthesized is there identity of self-consciounsness. I am conscious of myself as identical in relation to different representations, because I call them mine and take them thus as already brought under a unity. This means that I am conscious of a necessary *a priori* synthesis under which all representations that are given to me must stand. This is called the original synthetic unity of apperception.

The Principle of the Synthetic Unity is the Supreme Principle of all Employment of the Understanding

The Transcendental Aesthetic has shown that the

manifold of sensible intuitions must fall under the forms of space and time and we have now learnt that the manifold of intuition, if it is to be thought at all, must come under the synthetic unity of apperception, i.e. must belong to the consciousness of some identical self.

Even the consciousness of space is not possible through mere sensibility without the synthetic activity of the understanding. As has been shown, space and time are intuitions, not concepts. A concept (e.g. white) is found contained in many different representations (many white things), whereas space and time contain spatial and temporal parts, but are not themselves contained in them. Space and time as well as their parts are composite manifolds and we require therefore a previous synthesis of them if we are to be conscious of them as unities.

It is the synthetic unity of apperception that makes any use of the understanding possible. The understanding is the faculty of *knowledge*. There is no knowledge without object. But what is an object? "An object", according to Kant, "is that in the concept of which the manifold of a given intuition is united." A table, for instance, is an object, because in the concept of it, the manifold consisting of colour, shape, etc. is united. But all unification demands the unity of consciousness which can combine different elements into a unity. The object is thus seen to depend on the synthetic activity of the self. Without the synthetic unity of apperception no object can be constituted and so there can be no relating of any given representation to any object which knowledge demands. Thus the very possibility of understanding and knowledge depends on the synthetic apperception.

Space itself gives no knowledge but only supplies the manifold of *a priori* intuition for possible knowledge. If we are to know anything in space, e.g. a line, the synthetic activity of the understanding is necessary. We have to draw it in thought, that is, synthesize its different parts into a unity and then only can we know it. Thus the synthetic unity of consciousness is a necessary condition for anything to be an object for human understanding.

This condition is valid for human understanding only, which knows by thinking, and not for every possible understanding. For an understanding which knows intuitively, which through its mere representation brings the object of the representation into being, no special act of synthesis is necessary.

The Objective Unity Of Self-Consciousness

The transcendental unity of apperception, through which the given manifold is combined into an object, and which is thus responsible for the constitution of the object, may be called *objective*. This objective unity of consciousness is different from the subjective unity of consciousness. The objective unity is responsible for the objectification of the given manifold and it is the same in all individuals; the *I think* which accompanies all ideas is the same in all cases. But the manifold is empirically given ultimately in the subjective experiences of each individual. The inner subjective experiences are described by Kant as determinations of the inner sense. There is a unity in these experiences in so far as they are the subjective experiences of one individual. This is the subjective unity of consciousness which is empirical in character and may be different in the case of different

individuals according as they come under different circumstances and their representations are differently combined. This empirical subjective unity of consciousness depends on the original objective unity. It is because of the original objective unity of apperception that my inner experiences can be combined at all, even if they are combined differently from other people's experiences. Even time, which is the form of all inner experiences, is a unity because of the original transcendental synthesis.

"Only the original unity is objectively valid" says Kant; which means that the transcendental unity of apperception is universal and necessary. There is no such necessity and universality in the subjective synthesis of different people. A certain word suggests one thing to one man and a different thing to another.

The Logical Form of all Judgements consists in the Objective Unity of Apperception of the Concepts which they contain

"Judgement" is usually defined as the representation of a relation between two concepts. But this definition does not bring out in what exactly the asserted relation consists. Two concepts may get associated with one another through reproductive imagination. But no judgement expresses such accidental association of ideas. On the contrary, it expresses some objective connexion between ideas. When, for instance, I judge: "Bodies are heavy", I do not mean that the two representations (body and heavy) are found together in empirical intuition or that if I support a body I feel an impression of weight. I mean on the contrary that the two representations are connected *in the object*. The copula "is" is used to distinguish the objective unity of given representations from their

subjective unity. No doubt the two representations may always go together in our subjective experience, but that is not what is meant by the judgement. It asserts their objective connexion and that is possible only on the basis of the objective unity of apperception which enables us to think objective connectedness or make representations into objects.

All Sensible Intuitions are subject to the Categories as Conditions under which alone their Manifold Contents can come together in one Consciousness

The manifold given in a sensible intuition is necessarily subject to the original synthetic unity of apperception. The unity of the intuition demands that the manifold given in it should be subject to the unity of apperception. If the manifold is not brought under one apperception, we do not see how the intuition of it can be one intuition. But to bring the manifold of given representation (whether intuitions or concepts) under one apperception is exactly the logical function of judgement. The manifold then in so far as it is given in an empirical intuition must be determined in respect of one of the logical functions of judgement if it is to be brought under one consciousness. Now the categories are nothing but these logical functions of judgement in so far as they determine the manifold of a given intuition. Thus it follows that the manifold of a given intuition is necessarily subject to the categories. The long and the short of the argument seems to be that the manifold has to be combined in being brought to one consciousness, and the categories are the modes of combination; therefore, since the manifold must be combined (otherwise it would not be known at all), it is necessarily subject to

the categories. This means that the categories have objective validity.

The above argument gives the gist of the *transcendental deduction.* Kant has proved that the manifold of intuition is subject to the categories; but he admits that it must be given to intuition prior to the synthesis of understanding and independently of it. That is to say, the manifold is given before the categories are applied to it, but how it is given is left undetermined. Our understanding thus merely combines the stuff given to intuition.

The Category has no other Application in Knowledge than to Objects of Experience

To *know* and *think* are not one and the same. Knowledge involves two factors, concept and intuition. The concept or the category has to be applied to the content given in intuition in order to constitute knowledge. Without the content supplied by intuition the concepts remain mere thought and cannot amount to knowledge. Now the only intuition possible for us is sensible intuition, and so in order to give knowledge to us the pure concepts of the understanding must be applied to the objects of the senses. Even mathematical concepts, which are concerned with pure intuition (space and time) cannot by themselves give us knowledge. They give us knowledge only in so far as they are applicable to empirical intuition, i. e. to things in space and time. Thus the categories give us knowlege only through their application to objects of empirical intuition, i. e. to things given through sensation in space and time. If the things are not actually experienced, they must at least be capable of being experienced if the categories are to be validly applied to

them. The categories have no application, at least in the interest of knowledge, to things that are not objects of possible experience. In plain words we can know only what can bs sensed.

The pure forms of sensibiliy, space and time, can be applied only to the objects of sensible intuition. The pure concepts of the understanding have a wider scope inasmuch as they can be applied to objects of intuition in general, whether the intuition be like ours or not. But as a matter of fact we can apply the categories only to the kind of sensible intuition of which we are capable, and they have meaning for us only in their application to such intuition. We may indeed *think* of an object of a non-sensible intuition, but we can describe it only negatively (as non-spatial and non-temporal, etc.), and can never be sure that it is real.

The Application of the Categories to Objects of the Senses in General

It is already clear that the essence of the understanding is synthesis or combining. The categories are nothing but modes of synthesis. Taken by themselves they are mere forms of thought by which alone we cannot know any determinate object. The synthesis of the manifold which the categories effect is purely intellectual in the sense that it is an affair of the understanding. The synthesis is also called transcendental because it is the basis of our knowledge of objects. It is the synthetic unity of apperception which in the form of categories applies to objects in general. Even without actually experiencing an object we can say that it must come under the unity of apperception and submit to the synthesis

of the categories.* The synthesis of the categories is thus the ground of the possibility of *a priori* knowledge.

Now although we know that the categories of the understanding must be applied to the manifold given in intuition in order to give us knowledge, we do not yet understand how this is possible. The difficulty arises in this way. The understanding has to combine the manifold in its own characteristic ways (i. e. apply the categories), but the manifold is given in intuition, and the intuition is different from undertanding. How can the understanding then combine something which is not available to itself? The problem is tackled in the theory of *Schematism*. Meantime Kant suggests that the synthesis of the understanding is made possible by a transcendental synthesis of imagination, which is also called *figurative* synthesis. This synthesis, being synthesis, is effected by the understanding (because nothing else can combine), but with the help of imagination, unlike the intellectual synthesis which is done by the understanding alone. In order to effect this figurative synthesis, the understanding does not need to go out to the manifold which can be given only to sensible intuition. There lies in us a certain *a priori* form of intuition (time) and through it the understanding determines the inner sense in accordance with the synthetic unity of apperception. The understanding acts on the inner sense and gives it a determination which conditions all objective appearance. This is the first application of the understanding which is the ground of all its other applications. We have to realize

* The unity of apperception and the synthesis of the categories are not two different things. The categories are the ways in which intuitions are united in one apperception. The unity of apperception shows itself in categorial synthesis.

that what we can experience must ultimately come to us through inner sense, i. e. as subjective experiences. Time is the form of inner sense, and hence all our experiences are subject to time. And the understanding can think the objects of experience in terms of the categories because it has already determined the inner sense in accordance with the synthetic unity of apperception and the inner sense is thus made to present its objects as ready, as it were, to receive the stamp of the categories. The manifold can be thus synthesized in terms of the categories because there is a foregoing synthesis of imagination, which is the same thing as the determination of the inner sense by the understanding. Kant illustrates this point by the example of a line. He says that we cannot think a line without drawing it in thought. This drawing of the line in thought is the imaginative synthesis which is the pre-condition of our thought of the line as an object. And the imaginative synthesis is nothing but the determination of the inner sense by the understanding. It is imaginative because it represents a drawing which is not actual. Whenever thus we know anything there is first an imaginative or figurative synthesis, and then only arises the knowledge of the thing as a determinate object.

The imagination which is thus instrumental in providing objects for our thought is called *productive* and is to be distinguished from the *reproductive* imagination which only brings together ideas according to empirical laws, i.e., the laws of association. The productive imagination, as the basis of all objective experience, belongs to transcendental philosophy, while the reproductive imagination falls within the scope of empirical psychology.

Kant takes this opportunity to explain why we can know ourselves only as appearance and not as we are. Kant lays emphasis on the distinction which must be already clear, between the unity of apperception and the inner sense, and his theory is that we know ourselves only through the affections of the inner sense by ourselves. But the inner sense is not a transparent medium that can enable us to see a thing as it is. The inner sense has its own form to which all that can be given to it must submit and so when the inner sense represents any object to us, the object does not stand out in its naked character, but only under the garb which the inner sense puts upon it. In other words even through inner sense we get nothing but appearance. Kant does not explain how the thinking self is taken to be one with the self that is given as appearance. He merely says that this problem is no more or less difficult than the question how the self can be thought as object at all.

Now although the self known through inner sense may be an appearance, it might be supposed that the self is known as it is in the unity of apperception. But according to Kant, even in the unity of apperception we do not know the self as it is. He says that "in the synthetic original unity of apperceptiou I am conscious of myself not as I appear to myself, nor as I am in myself, but only that *I am*. This representation is a *thought*, not an *intuition*." Thus in the unity of apperception we have a thought of the existence of the self, but this thought never amounts to knowledge unless it is joined to a given intuition. The only intuition possible of the self is the intuition of the inner sense, and we have seen that through the inner sense, although we may know the self, we know it only as an appearance.

Thus we have either knowledge of the self as an appearance or mere thought of the self which is not knowledge.

Transcendental Deduction of the universally possible Employment in Experience of the pure Concepts of the Understanding

Kant proceeds to explain how the understanding not only prescribes laws to nature, but even makes nature possible. By 'nature' is understood not a system of things in themselves existing independently of us, but only the world of appearances. Nature then is constituted by the objects of empirical knowledge. Thus to explain how experience is possible is the same thing as to explain how nature is possible. So if we show that it is the understanding which makes experience possible, we show that the understanding makes nature possible. Now experience is nothing but "knowledge by names of connected perceptions", and since in every perception there is synthesis in terms of the categories, the categories are conditions of the possibiliy of experience. No perception is possible without the synthesis of apprehension, which means combination of the manifold in an empirical intuition by imagination, and imagination depends for the unity of its synthesis on the understanding which, therefore, lies at the root of all experience. The synthesis of imagination is not sufficient to make the manifold our object; it requires for this purpose the synthesis of the understanding in terms of the categories.

It seems there is a two-fold synthesis. First there is a synthesis involved even in intuition, and then there is a further synthesis by thought in terms of the categories. We have seen that in order to be known an object must be both sensed and thought, sensed in space and time,

and thought in terms of the categories. Now space and time are not mere forms of intuition, they are themselves intuitions, each containing a manifold of its own, and so they cannot be represented without a unification or synthesis. Thus it is plain that the representations of space and time and their parts as unities require synthesis. So in merely intuiting a thing as spatial or temporal there is already involved a synthesis, and the thing thus intuited has further to be conceived in terms of the categories and then only does knowledge arise. The first is the synthesis of imagination which, as we have seen, takes place in accordance with the unity of apperception and the categories, and thus prepares the raw material of sensations for the intellectual synthesis of the understanding. We see here how imagination works as a link between sense and understanding. Kant illustrates these points by two examples.

When I perceive a house, a thing in space, "the *necessary unity* of space and of outer sensible intuition in general lies at the basis of my apprehension, and I draw, as it were, the outline of the house in conformity with this synthetic unity of the manifold in space." The house consists of different parts and they must be combined into a unity in order to give us the representation of a house or, more strictly, our several sense-impressions have to be combined in order to obtain the representation of a house, and this is done by the synthesis of apprehension. This synthesis is not arbitrary, but is "in conformity with the synthetic unity of the manifold in space." Now this synthetic unity when abstracted from the form of space is found to have its seat in the understanding as the category of quantity (synthesis of the homogeneous). The synthetic apprehension of perception must conform

to this category.

Similarly when I perceive the freezing of water, I apprehend two states of water (liquid and solid) in temporal sequence, and this synthetic apprehension is in conformity with the synthetic unity of the manifold in time. This unity when abstracted from the form of time is found to be the same as the category of cause and effect, (more correctly, ground and consequent), to which our perception of an event must conform.

Thus we see how experience, and therefore nature, are subject to the categories of the understanding. Since nature is taken here as appearance and not as a thing in itself, there is nothing absurd in the supposition that it should be subject to the conditions under which alone it can appear, the forms of sensibility (space and time) and the categories of the understanding. It is because of these that we can make *a priori* judgements about nature. It is however not to be supposed that everything about nature can be learnt from the categories. We can learn from the categories only what is involved in the idea of nature in general; the special laws of nature, although subject to the categories, have to be learnt from experience only.

When it is found that our experience conforms to the categories of the understanding, there are three possible hypotheses which can explain this fact: (1) Either the categories are derived from experience; or (2) experience is dependent upon the categories; or (3) both experience and the categories are independent of each other, but through divine ordinance, the laws of nature as a matter of fact agree with the categories which in themselves are nothing but subjective dispositions. Kant rejects the first alternative, as it does not explain the elements of

necessity and universality in our judgements. He rejects also the third alternative, because it sets "no limit to the assumption of pre-determined dispositions to future judgements", and sacrifices the element of necessity which is essential to the categories, because the third hypothesis turns the categories into subjective dispositions—which means that although we have to think in terms of them, there is no guarantee that there are any such necessary objective connexions. Kant accepts the second hypothesis that it is the categories which make experience possible.

TRANSCENDENTAL ANALYTIC

BOOK II

THE ANALYTIC OF PRINCIPLES

Logic in its Analytic deals with concepts, judgements and inferences corresponding to the three higher faculties of knowledge, understanding, judgement and reason. As formal logic abstracts from all contents, it can include the consideration of reason in its analytic part; we have merely to analyse the procedure of reason in order to find out what are its valid rules, without any reference to its object. But transcendental logic does not abstract from all contents and as it is found that the transcendental use of reason is not objectively valid, reason is excluded from the logic of truth, i. e. the Analytic, and a separate part, under the title of *Dialectic*, is found for it.

In Book I of the Analytic, Kant was concerned with the discovery (metaphysical deduction) of the *a priori* concepts and the demonstration of their objective validity (transcendental deduction). In Book II he will be

concerned to deduce from the categories those *a priori* principles or judgements which underlie our objective experience. In this way, he shows how synthetic *a priori* judgements are possible. But their validity is confined only within experience, that is, they are true of appearances only and not of things in themselves.

INTRODUCTION

Transcendental Judgement in General

The understanding is elsewhere defined as the *faculty of judgement*, but here, as in the previous section, a distinction is made between understanding and judgement. In fact they are now treated as separate faculties. Understanding is defined as "the faculty of rules", and judgement as "the faculty of subsuming under rules, that is, of distinguishing whether something does or does not stand under a given rule." Our understanding may be easily instructed in abstract general rules, but where in concrete cases the rules are to be applied we must judge for ourselves. We may learn from others various general rules with great precision, but in order to decide whether in our actual experience an occasion has arisen for the application of any of the rules we know we have to depend entirely on ourselves. It is the work of our judgement. "It is the specific quality of the so-called mother-wit; and its lack no school can make good." In this connexion Kant makes the interesting observation that stupidity may co-exist with great learning.

It is clear that general logic, which abstracts from all contents, can provide no rules for the exercise of judgement. But the case is different with transcendental logic which does not abstract from all contents. It

possesses a content in the pure forms of sensibility, and "can also specify *a priori* the instance to which the rule" given in the pure concept of the understanding, "is to be applied".

In the Analytic of Principles Kant proposes first to define the sensuous conditions under which alone the pure concepts of the understanding may be employed. This is the problem of the schematism of the pure understanding, dealt with in the first chapter. In the second chapter he proposes to deal with the synthetic judgements or principles which under these conditions follow *a priori* from the pure concepts and are at the basis of all our objective knowledge.

CHAPTER I

THE SCHEMATISM OF THE PURE CONCEPTS OF THE UNDERSTANDING

Knowledge arises when the categories are applied to sensible intuitions, that is when sensible intuitions are subsumed under categories. Subsumption implies some common character. When, for instance, a plate is subsumed under the concept circle, we find that a common element, roundness, is present in them both. But there seems to be nothing common between a sensible intuition and an intellectual category, and so, if nevertheles a category is to be applied to a sensible intuition, it is clear that we are in need of a third something which will mediate between them and make the application of an intellectual category to sensible intuition possible. This third something is the *transcendental schema.*

The schema is nothing but a transcendental determination of time. Time is eminently fitted for the work

of mediation between the category and what is sensibly given. It is like the category because it is pure, and as a form of intuition, it is also contained in whatever is given empirically. Time, as the form of the inner sense, gives us the condition of all sensibility. If anything is to be intuited sensibly, it must be intuited in time. So a determination of time is a determination of the condition of sensibility. Thus by a determination of time we get an *a priori* determination of the sensible content itself. So if there are determinations of time according to different categories, we get corresponding determinations of the sensible contents to which the categories may be easily applied.

Our problem was to understand how the categories are applicable to sensible content. We now see that, by determining the condition of sensibility, time, or inner sense, in accordance with the categories, we get an *a priori* determination of the sensible content in such a way that the categories can by easily applied to it. The categories are applicable to sensible content because, in being sensed, it has been already so determined (by imagination) as to be fit for categorical synthesis. We thus see how the schema or the determination of time according to the categories makes possible the application of the categories to sensible intuition.

The schema may as well be described as the representation of the procedure of the understanding by which the sensibility is so determined as to give us a content suitable for the application of the cotegories. The schema of a concept enables us to have a sensible image of the concept, but it (schema) is not the image itself. The schema is more general than the image. If we put down five points one after another, we can have an image of

the number five; but the method by which this image is produced, namely, the successive combination of units into a whole, is the same whether the number be five or hundred. "This representation of a universal prodedure of imagination", says Kant, "in providing an image for a concept, I entitle the schema of this concept." We thus see clearly how the image is different from the schema. The image is a particular object, the schema is a general procedure of the understanding in producing objects of a certain kind (image corresponding to a concept). The image is a product of the empirical faculty of reproductive imagination; the schema is a product of the pure *a priori* productive imagination. In schematizing a category we do not try to reproduce in imagination what we have experienced before but we attempt an original synthesis of imagination according to a rule of unity given by the category. No image is ever adequate to a concept. We can never have, e.g., an image of a triangle which will possibly represent triangles of different kinds, but we can have a schema of the triangle which represents the self-same procedure of the understanding in drawing in imagination triangular figures in space. The schema is "a rule of synthesis of the imagination", which is illustrated in many images.

The categories are themselves modes of synthesis, and when they are schematized, we have to conceive them as so determining the inner sense that whatever is sensibly intuited, (since sensible intuition is ultimately subject to the condition of the inner sense), is capable of being brought under them. The synthesis of a category is merely logical, quite abstract and general; the synthesis of a schema is relatively concrete as it is restricted to the condition of sensibility, time. The schema of a particular

category stands for the same kind of synthesis as the category itself, only with this modification—that it is understood in reference to time. The categories conceived or interpreted in relation to time or, as one writer has graphically said, "sunk in time"* are the schemata. The schemata are products of the transcendental synthetic imagination which not only produces objects for us (by combining sense-intuitions), but, in yielding us objects as temporal unities, even generates time itself as a unity or or a principle of unification.

Let us now consider the schemata of some of the categories.

The schema of magnitude or quantity is *number*. Number means the successive addition of homogeneous units. In sensible experience we can never have quantity without the successive combination of homogeneous units. More precisely, number is the schema of the category of totality. It is to be noted that number is not taken here in the arithmetical sense. It is the name of a kind of synthesis found in the successive addition of homogeneous units.

The schema of reality is filled (by sensation) time; the schema of negation is empty time; the schema of limitation is degree or intensive magnitude, i.e., more or or less of sensation during a certain time.

The schema of substance is persistance in time; the schema of causality is ordered succession in time; the schema of community is the reciprocal relation of co-existing objects.

The schema of possibility is compatibility of a thing with the general conditions of time; the schema of actuality is existence of an object at a determinate time; the schema of necessity is existence of an object at all times.

* Reininger: *Kant: Seine Anhanger und seine Gegner'*, p. 101.

We see thus that schematism at every stage has to do with time. In the schema of quantity we have, so to say, the generation of time itself, for this schema gives us the synthesis of successive apprehensions of an object ; and time is nothing but a synthesis of succession. In the schema of quality we have the synthesis of sensation with time or the filling of time. But this is not filled in the same way by all different appearances. There are some determinate relations between appearances. Either one appearance remains while others change (*substance*), or one appearance is followed by another (*causality*), or they are present together (*community*). Thus in the schema of relation we have to do with the order of time, as in those of quantity and quality we have to do with the series of time and the content of time respectively. Lastly, in the schema of modality we get what may be called the comprehension or scope of time, for in this schema we know how the existence of an object is grasped in time, whether at any time (*possibility*), or at some determinate time (*actuality*), or at all times (*necessity*).

The categories themselves are nothing but logical functions of the understanding without any objective content, and therefore are not usable for purposes of knowledge. Only when they are schematized do they become fit for such use. Substance, for instance, means logically only what can be used as a subject and never as a predicate. But this concept is of no use to us, unless we know what it is that can be used as a primary suject. We get this in the schema of substance. Thus our actual knowledge is determined by schematized categories or schemata. The term category is sometimes used also for the schema or the schematized category, but then we should note its distinction from the pure form of understanding.

CHAPTER II

SYSTEM OF ALL PRINCIPLES OF PURE UNDERSTANDING

In the previous chapter Kant has considered the general conditions under which alone the pure concepts of the understanding can be used for synthetic judgements, i. e. can be applied to objects of experience. He is now going to consider the synthetic *a priori* judgements which are possible under these conditions. These *a priori* judgements are called principles because they are not grounded in any higher judgements, but other judgements are grounded in them. Still, they require to be proved; otherwise they might be considered mere "surreptitious assertions". They cannot be proved in an objective fashion but admit of a subjective proof in the sense that our knowledge of objects can be shown to presuppose them.

Although Kant is directly concerned with the principles of synthetic judgements only, he considers the prniciple of analytic judgements also, in so far as it can, by contrast, clarify our understanding of the former.

Section I
The Highest Principle of all Analytic Judgements

The principle of non-contradiction is a universal negative condition of all judgements. It says that "no predicate contradictory of a thing can belong to it". Whatever may be the content of a judgement, it cannot be true if it contradicts itself, that is, if it asserts a predicate which is inconsistent with its subject. But a judge-

ment need hot be true when it is merely free from self-contradiction. The judgement "the Earth is flat" does not involve self-contradiction and is yet false. But in the case of an analytic judgement which merely analyses a given concept, the principle of non-contradiction supplies us with a sufficient test of truth. It is true if it does not contradict itself. This principle is sometimes formulated as "it is impossible that something should *at one and the same time* both be and not be." Kant considers this formulation defective because, in his opinion, a pure formal principle of logic should have no reference to time which is inconsistent with its obsolute generality.

Section II
The Highest Principle of all Synthetic Judgements

In a synthetic judgement we advance beyond a given concept and relate it to what is not already thought in it. So by mere thinking or considering the judgement by itself we cannot determine whether it is true or false. If it is to give us real knowledge it must refer to an object that is, or can be, given in experience. Thus experience, actual or possible, gives meaning to a synthetic judgement. It is only on the basis of experience that we can relate one representation with another which is not contained in it or related with it by identity or contradiction. The principle of the possibility of experience then is the principle of all synthetic judgements. "Experience, however, rests on the synthetic unity of appearances, that is, on a synthesis according to concepts of an object of appearances in general." Without connectedness or unity there is no experience in the real sense of the term. This implies that the representations should be connected

according to rules (categories) and should conform to the transcendental unity of apperception. Since the representations must be given in experience, they also imply the forms of intuition. Thus the conditions of the possibility of experience are the forms of intuition (space and time), the categories (schemata), and the unity of apperception.

Synthetic judgements in every case refer to experience. Synthetic *a priori* judgements are possible in so far as they are concerned with what is necessary for the possibility of experience. Since the necessary conditions of experience must be illustrated in all experience, we can make *a priori* judgements relating these conditions to a possible experience. The highest principle of all synthetic judgements is formulated by Kant thus: "Every object stands under the necessary conditions of synthetic unity of the manifold of intuition in a possible experience." There is no object properly speaking which is unrelated to any possible experience and which will not submit to the forms of intuition and understanding. The object must fall within some experience, that is, it must belong to a unity of apperception. Also there is no object in which there is no synthesis of imagination, some combinations of a manifold according to a rule (schema). Moreover, the object must be given and in being given it submits to the forms of intuition. These are the conditions of experience itself. In fact the conditions of the possibility of experience in general are likewise the conditions of the possibility of the objects of experience. That which makes experience possible also makes objects possible. This is why the synthetic *a priori* judgements which are concerned with the conditions of experience are said to have objective validity.

Section III
Systematic Representation of all the Synthetic Principles of Pure Understanding

The understanding is the source of principles which demand that an object must conform to the rules, with. indeed no objective knowledge is possible. The element of neccssity associated with the laws of nature is due to the fact that they illustrate the application of the principles of the understanding to special cases in the field of appearance. The laws of nature in so far as they are merely empirical nan have no element of necessity in them. They derive this element from the principles of the understanding which they illustrate and which are certain before all experience.

Principles which are merely empirical may be easily distinguished, by reason of the'r lack of necessity, from the principles of pure underetanding which are necessary. But the fundamental propositions of mathematics may not be so easily distinguished; still they should be distingu shed from the principles of pure understanding as these are derived from pure concepts, while the fundamental propositions of mathematics derived from pure intuition. Nevertheless there are some principles of pure understanding on which the objeccive validity of mathematical science is based and these may be called mathematical principles.

As in the case of categories, Kant makes a four-fold division of the principles. These are : I. Axioms of Intuition, II. Anticipations of Perception, III. Analogies of experience, and IV. Postulates of Empirical Thought in general. The Axioms and anticipations are called *mathematical*, while the Analogies and Postulates are

called *dynamical.*

The mathematical principles determine the conditions of intuition and so the absolutely necessory conditians of any possible experience. They are thus unconditionally necessary. The dynamical principles determine how we must think the existence of an object in relation to others. They too are no doubt necessary but only under the condition of empirical thought. If we are to think of the existence of an object as determined by other objects, we have necessarily to think in terms of the dynamical principles. But these and other characteristics of the principles will be clear when we have studied the principles themselves.

I
AXIOMS OF INTUITION

Their principle is: *All intuitions are extensive magnitudes.* Or, as it is expressed in the First Edition : *All appearances are, in their intuition, extensive magnitudes.*

All objects of experience must be first of all intuited, and they can be intuited only as in space and time, because space and time are the forms of our intuition. But to be in space or in time is to be extended. What is not extended cannot be said to be in space or time. To be extended really means to consist of parts which are put together one after another. This is the case with all spatial and temporal wholes, however small they may be. A line, however small, can be understood or perceived only as it is drawn in thought. That is to say, starting from a point we have to produce a line part after part and synthesize these parts into a whole if we are to have

the idea of a complete line. This is the case with a temporal whole also. By extension Kant means both spatial and temporal extention. He seems to think that a whole of parts can be perceived only as the parts are put together one after another. The objects which we can intuit are such wholes, whether they are external objects in space or successions of events occurring in time. This means that in the perception of objects the schema of *number* is involved, for this also means the imaginative synthesis of homogeneous units. Kant does not mean to say that there are no unextended objects; he only means that if they are to be perceived they be must extended.

The pure figures in space with which geometry deals are synthetic constructs. The figures are understood as they are produced or drawn in thought. All the universal and necessary judgements of geometry are thus synthetic. Arithmetical judgements, e,g. $7 + 5 = 12$, are, as we have already seen, also synthetic. But according to Kant arithmetical judgements are singular whereas those of geometry are universal.

Mathematics has objective validity because the objects of perception are subject to the condition of pure intuition with which mathematics deals. What holds good of pure intuition holds good also of the object of empirical perception, which cannot violate the conditions of pure intuition. We have seen that at the basis of the mathematical sciences of geometry and arithmetic there is the synthetic function of the understanding. The schema of number is involved in constructing both geometrical figures and arithmetical aggregates or numbers. And the objects of ordinary perception as extended magnitudes are also constructed in the same way, thus making it possible for mathematics to be applied to them.

Mathematics applies to objects of experience because the objects are only appearances. If they were things in themselves, no such synthetic *a priori* judgements as mathematics supplies would be possible of them. We have either to deny the objective validity of mathematics or to accept the position that the objects of experience are only appearances. Kant accepts the latter alternative.

II

THE ANTICIPATIONS OF PERCEPTIONS

Their principle is: *In all appearances the real, which is an object of sensation, has intensive magnitude, that is degree.*

All synthetic *a priori* principles are in a sense *anticipations* because they assert something of appearance independently of experience. But this principle is an anticipation in a special sense because it concerns sensation about which we can learn only from experience. Whether a thing is red or white, hard or soft, we can learn only from actual experience. But although it is impossible to know prior to experience what the content of a sensation would be, we can know this about it quite *a priori*—that whatever be its nature it will have an *intensive* magnitude or degree.

Perception is an awareness in which sensation is involved, and we know that what corresponds to sensation is the real, or that the real is the object of sensation. The real is the sensible which alone is perceived. And Kant says that if anything is to be perceived, it must have intensive magnitude or degree, that is, it must have a quality which admits of being more or less. What we perceive may be light or sound or something

else. But whatever it be, it must be something of which there can be more or less. The sound we perceive is loud or low, the colour bright or faint. When we have an apprehension through sensation, the moment of time at which the apprehension takes place is, as it were, filled by the sense-quality. But there is no necessity that it should be filled in one uniform way always. On the contrary, there is the opposite necessity that there should be an infinite variety of ways in which it can be filled, beginning from a null point in which the sensation is absent, to any conceivable higher degree.

An *extensive* magnitude is possible by the synthesis of many constituent parts which are first given. But an *intensive* magnitude is not generated in this way. A loud sound is not a synthesis of many low sounds. The sort of synthesis necessary in the case of extensive magnitude is not possible in the case of a sensation, because it takes place at one moment, and there is no temporal succession in which the parts may occur and be synthesized. How do we then know the magnitude of a sensible quality? We know it in this way: When there is a sensation of a particular intensity, we can imagine many others which would have a place between it and the zero point in the scale of intensity. In the case of all magnitudes we have to do with a multiplicity in unity. In the case of extensive magnitude the many parts are prior and are actually given, and the unity of the whole is constructed out of them. In the case of intensive magnitude, the whole (of sensation) or unity is given and the multiplicity is imagined in the grades through which the given sensation can approach the null point. Between a given sensation and no sensation we can imagine many others which are less and less intense than the given sensation. Thus a

sensation however faint always has an intensive magnitude or degree which can always be diminished. "Between reality and negation there is a continuity of possible realities and of possible smaller perceptions." Reality for Kant means what corresponds to sensation and negation means absence of sensation.

In this connexion, Kant explains his notion of *continuity*. "The property of magnitudes according to which no part of them is the smallest possible, that is, no part is simple, is called their continuity." Space is thus continuous because between any two points, however near one another they may be, there is space which can be further divided. Similarly in the case of time. However small an interval of time may be, there will always be others which are smaller than it. It is to be noted that space is not made up of points nor is time of instants. "Points and instants are only limits, that is, mere positions which limit space and time." They presuppose space and time which are limited by them and which are therefore prior to them and are given in intuition.

We find the same continuity in intensive magnitude also. Every sensation has a degree which is never the smallest. Between any two sensations of different degrees we can imagine others which will be less than the one and more than the other. Thus all appearances, in their extensive and intensive aspects, that is, in their spatial and temporal character and in their sensible character, are continuous magnitudes.

Kant points out in this connexion that an empty time or an empty space can never be proved from experience. For we can never perceive any such space and time, because perception always requires some sensible quality. The natural scientists of Kant's time

used to suppose that any difference in quality was explicable only by a like difference in the quantity of matter. Kant on the contrary holds that there is no such correlation between extensive and intensive magnitudes. According to the scientists of those days difference in sensible quality is due to the difference in the way in which space is filled by matter. According to Kant space may be filled in the same way, even when the qualities are different. A difference in intensive magnitude or quality does not mean a corresponding difference in the filling of space. "Thus a radiation which fills a space, as for instance heat, can diminish in its degree *in infinitum*, without leaving the smallest part of this space in the least empty." The point in Kant's argument seems to be that matter has both extensity and intensity and not merely extensity.

III

ANALOGIES OF EXPERIENCE

Their principle is: *Experience is possible only through the representation of a necessary connexion of perceptions.*

We have seen that without connectedness or unity there is no experience in the real sense of the term. We get no doubt one perception after another; but mere succession of perceptions without any rule or connexion among them does not constitute experience. It is only when we conceive the perceptions to be bound together according to certain rules that we may be said to get knowledge of objects through them. If the perceptions came in any fashion they chose and remained altogether arbitrary and accidental, they would determine no objects

for us and would not amount to experience. At the same time we cannot say that there are any necessary connexions *given*. No necessity is ever seen in any perceptions. The necessary connexions are effected by our understanding and they are ultimately due to the synthetic unity of apperception. Still they are objectively valid in the sense that without them no objective experience is possible.

Now all appearances are in time and are perceived in time. Every perception takes place through the successive apprehensions of particular sensations and represents a time-sequence. Appearances are objectified when they or their perceptions are necessarily connected. Since these are all temporal, their necessary connexions too represent necessary time-relations, and these are of three different kinds according to the three modes of time, viz., *duration*, *succession*, and *co-existance*. The three *analogies* of experience give us the three rules of necessary connexion by which we organize our perceptions into objective experience.

We have to understand why they are called *analogies*. The term analogy has a special sense in mathematics. If 5 is to x what 2 is to 4 then we know that x is 10. This is analogy by which we determine a fourth term from three given terms. Kant uses the term analogy in a different sense. In an *analogy of experience* we have a rule by which we are enabled to determine not an un-given term, but only the relation to a term not given. When it is said that a given event stands to an antecedent event as effect to cause, we merely determine the relation of the given event to the antecedent event, but we do not thereby know the antecedent event itself. According to some these principles are called analogies because they

express in time-relation what correspond or are analogous to the necessary connexions of the categories of the understanding. We know that the analogies correspond to the categories of relation.

The *axioms of intuition* and the *anticipation of perception* determine the possibility of an appearance or perception. Without extensive and intensive magnitudes nothing can appear to us. So they may be called *constitutive* principles. The *analogies* do not condition the possibility of perceptions or appearances. Perception would not be impossible without the *analogies*, although they certainly enable us to organize the perceptions into objective experience. So these *analogies*, as also the *postulates of empirical thought*, may be called *regulative* principles, inasmuch as they only serve as rules to order or organize our perceptions or appearances. (Kant uses these terms *constitutive* and *regulative* in a different sense in the *Dialectic* where all these principles are referred to as constitutive, in contrast with the ideas of reason which are there called regulative.)

Kant adds that the *analogies* like other principles are applicable to appearances only and not to things in themselves.

A. FIRST ANALOGY

Principle of the Permanence of Substance

In all change of appearances substance is permanent, and its quantum in nature is neither increased nor diminished.

"All appearances are in time." They co-exist with one another or succeed one another. Co-existence and succession are time-relations, and they are intelligible

only in reference to a standing time. All changes of appearance occur in time which itself does not change. Time is the substrate of all temporal appearances and to us all appearances are temporal. But time by itself is never perceivable by us. We must therefore find in the appearances themselves something that represents time, i. e. remains permanent and makes the co-existence and succession of appearances intelligible. This something which makes change intelligible and is not itself liable to change may be called *substance*. Being unchangeable it can neither increase nor decrease.

All our apprehension of the manifold of appearances is necessarily successive. We cannot apprehend a manifold all at once; we must apprehend it part by part. The manifold however as an object may be co-existent as well as successive, but from our mere successive apprehension we cannot determine its objective character, that is, co-existence or succession, unless there is in it something that persists and remains the same amidst change.

Simultaneity and succession are the only relations in time and they are possible only in the permanent. The permanent is thus required to make time-relations possible. Time is an essential element in our experience. We can experience only appearances which are in time. Our experience thus presupposes the permanent as the underlying ground of all appearances. Without the basis of the permanent the appearances would not be in time and not being in time, they would not be experienced by us at all. Thus the idea of the permanent or substance is seen to be quite necessary to the possibility of experience.

We should not express the principle by saying that substance is permanent, for that would be a tautology, for substantiality and permanence mean the same thing.

We should rather say: "In all appearances there is something which is permanent." This is a synthetic judgement (because the idea of appearance does not contain the idea of permanence), which is true *a priori* of experience.

From the above it is clear that *change requires permanence* and, paradoxical as it may sound, *it is the permanent alone that can change.* That which comes into being or passes out of being is not what changes; but change is properly predicated of that which remains the same after something else has come into being or passed out of being. It is only on the basis of some underlying permanent substance that such alteration or change can take place. The substance itself does not come into being or pass out of being, but only its states or modes of existence.

This principle may seem to militate against the theory of creation. But in fact there is no opposition between them, because the theory of creation refers to things in themselves, whereas the principle of substantiality refers only to appearances within the field of actual or possible experience.

If new things or substances could come into being, the unity of experience would be lost and so there would be properly no experience at all. We can experience only in one time. We cannot conceive of different times. But the unity of time requires the identity of the underlying substratum on the basis of which all temporal changes can take place. Time itself can run its course only in the breast of the permanent. We should not even know time if the permanent were not there to show it forth. But the abrupt beginnings of substances would give rise to different times which would render our experience meaningless. The point of the

argument seems to be as follows :

We require a standing something in reference to which we can perceive succession or change. But this standing something cannot be time itself, because time by itself cannot be perceived. This standing something is substance which represents as it were the standing time. So the birth of a new substance would mean the birth of a new time, which is inconceivable to us and which, if it happened, would destroy the unity of experience and make it meaningless.

It is not, however, meant that there is no change. Change certainly there is, but it occurs only on the basis of some underlying substance. What is permanent is the substance and what is transitory is a mode of its existence which may be called its *accident*. A substance may pass through many modes and new modes may arise in it, but the substance remains the same. The accidents do not enjoy independent being, nor is the substance really bereft of all its accidents. The accidents merely determine positively the existence of the substance.

B. SECOND ANALOGY

*Principle of Succession in Time in accordance with the Law of Causality**

All changes take place in conformity with the law of the connexion of Cause and Effect.

Kant enunciates here the principle of *causality;* and

* This is the name given to the *Analogy* in the Second Edition. In the First Edition it is called *The Principle of Production* and its principle is stated as : "Everything that happens, i.e. begins to be, presupposes something upon which it follows according to a rule."

the proofs he offers of it are his answer to Hume's cirticism of the causal principle.

Kant gives several proofs of this principle. The main point in them all seems to be that succession in the object or objective succession can be understood only as causally connected. The principle of causality thus instead of being derived from our experience of succession, as Hume supposed, is presupposed by such experience. Let us see how this is so.

We can apprehend a manifold only successively ; the representation of one part must follow the representation of another part. But although the apprehension of a manifold is always successive, we cannot say that the manifold itself is in every case successive. A house for instance is a manifold, and in order to apprehend it we have to begin with one part and end with another. We may begin with the roof and end with the basement. But the different parts of the house which are perceived successively are not themselves successive. The parts are not supposed to follow one another in time, but are supposed to exist at the same time. Certain manifolds, however, are themselves successive. When we perceive a ship moving down a stream, its movement constitutes a manifold which is perceived successively and we know that the different positions of the ship along the stream are themselves successive. The perception of the different positions of the ship is successive as well as the perception of the different parts of the house, but whereas there is no succession in the parts of the house, there is succession in the positions of the ship. Now the question is: How are we able to make this distinction between two manifolds both of which are perceived successively but only in one of which is the succession taken to be

objective? The succession in the perception of a house is merely subjective corresponding to no succession in the object, whereas the succession in the perception of the movement of a ship is taken to correspond to a succession in the object. What is it that makes succession objective in the one case and not so in the other?

Kant points out that in the one case our successive apprehension follows no fixed order, while in the other case it is bound to a fixed order. In perceiving a house, we may begin with the roof and end with the basement, or we may as well begin with the basement and end with the roof. In the case of the movement of a ship, we can perceive it only in one order. We perceive its position higher up the stream first and its position lower down the stream only afterwards, and cannot perceive its lower position first and higher position afterwards. Subjective succession is reversible, objective succession is not so. There is no rule which necessarily determines the order of succession when it is merely subjective, but such a rule prevails when it is objective. *It is the presence of a rule necessarily determining the order of succession that makes it objective.* When there is such a rule we understand that the succession is objective in the sense that what follows can occur only when what precedes it has taken place and not otherwise. This means that the condition of being for every event or happening is contained in that which precedes it, so that it cannot take place unless what precedes it has already taken place, and also must follow upon it. This rule is the rule of *causality*.

If there were no such rule which determined necessary sequence we should be unable to distinguish between subjective and objective successions. We should then

have no right to assume any succession in the object and could not say that anything actually happens or follows upon anything else. That would make experience impossible in which objective succession or happening of events is clearly assumed. Thus it is clear that experience presupposes a law regulating succession; and we cannot suppose that the law is derived from the experience of succession. If it were so derived, it would be a mere empirical law and no genuine universal validity would belong to it, so that its validity might sometimes be questioned. But we can raise no question about the validity of a law without which experience would not be possible. The actuality of experience proves the validity of the law. We no doubt gain a clearer idea of the law through experience, but that is because the law is already there at the basis of experience.

It is a necessary law of time that every moment is determined by its predecessor, so that we can never arrive at a later moment without passing through the moment that precedes it. Now, time is never experienced in and by itself. It is experienced only in successive events which constitute the manifold of temporal appearance, and so the essential characteristics of time must be capable of being represented in terms of appearance. The above law of time that every successor is determined by its predecessor, when understood in terms of appearance becomes the law of causality. Since every appearance must be subject to the condition of temporality, i.e. must be capable of being subsumed under time, and since it is essential for time that what succeeds must be determined by its predecessor, it seems plain that every appearance that succeeds must be determined by what precedes it. If time could be perceived by itself, we could understand

events as later and earlier by directly relating them to later and earlier moments of time. But since time by itself is not perceptible at all, we can understand an event as later than another only in the sense that it is causally determined by the earlier one.

We perceive that appearances follow one another. In so perceiving we are really connecting two appearances in time. But connecting is not the work of mere sense or intuition; it is brought about by the synthetic faculty of imagination. In fact, the synthesis of imagination is implied in all empirical knowledge. But in the imaginative synthesis I am only conscious that one state has been put before another, but I do not thereby know whether in the object the order of the states is so determined. As time itself is not perceived, we cannot determine the objective order of succession or precedence between the states by empirical observation. The fact that we perceive one state after another cannot decide anything because even when they are co-existent, we have to perceive them one after another. If we are to conceive the relation of succession between two states as objectively determined, we have to think of the relation as determining necessarily which of them should be placed before and which after, without their being able to interchange their relative positions. What is earlier objectively has necessarily to be put before its successor. Such necessary connexion cannot be given by perception; it has to be supplied by the understanding. Objective succession which is essential to our experience is thus possible only through a determination of the understanding which is conceived as the relation of cause and effect. Experience or empirical knowledge of appearances is possible only in so far as we subject the succession of appearances to the

law of causality.

We may summarize the position in this way. Experience, in which succession is undoubtedly involved, implies objectivity, and succession in the object is possible only through a necessary connexion. The necessary connexion is the relation of cause and effect. This relation, because it is necessary and is a connecting, cannot be given by sense, but is the work of or is supplied by the understanding. The understanding thus makes experience possible by its causal synthesis, and it is therefore a mistake to suppose that we can derive the causal principle, however illegitimately, from experience.

It may be pointed out here once again that the primary function of the understanding, according to Kant, is not merely to clarify by analysis our notion of the object which may be conceived to be wholly given, but rather to make the object itself by creative synthesis out of elements which are scarcely known to us at all. (The elements are taken by some to be our unsynthesized sensations, by others as noumenal factors. In either case we can claim no *knowledge* of them in the proper sense of the term.)

A difficulty arises here. It has been held that there is causality wherever there is objective succession. But in many cases we find that the cause and the effect are co-existent and there is no succession between them. When there is a burning stove in a room, the room becomes heated. Here the cause and the effect, namely the stove and the heat in the room, are simutaneous. Kant solves this difficulty by pointing out that causality does not require any lapse of time between the cause and the effect, but only an order of time between them. The order is such that when the cause has occurred the

effect must also occur, and not vice versa. When a leaden ball is placed on a soft cushion a depression occurs; but if somehow there is a depression in the cushion, the leaden ball does not appear. Thus although there need be no time-interval between cause and effect, there is undoubted sequence between them.

Causality leads to the notion of *activity*, and that in its turn to the idea of *substance*. For, in order to produce an effect, a thing must be active and only a substance can be active. To produce an effect is to produce a change of appearance. The change can be ultimately grounded in a subject that does not itself change. If that were to change, then other actions and another subject would be necessary to account for this change. Thus a changeless or permanent substance is ultimately the cause of any effect.

The causal relation is a relation in time, in which what precedes is the cause of what follows. The state of the world at this moment is the cause of the state of the world at the following moment. But in the infinite time-series there is no next member. Between any two members, a third can always be found. This is the meaning of the *continuity* of the series. This also means that there is no interval of time which is absolutely the smallest. There can always be smaller and still smaller intervals. From this we understand how a cause does not produce its effect suddenly. Just as there is no jump from one moment of time to another, but only a continuous passage, so a process of causal effectuation covers a certain interval of time throughout which the process is continuous. Some time, however short, is thus required to produce a definite effect.

C. THIRD ANALOGY

*Principle of Co-existence in Accordance with the Law of Reciprocity**

All substances, in so far as they can be perceived to co-exist in space, are in thoroughgoing reciprocity.

The question to be decided by this principle is how two or more objects can be regarded as co-existent when we can perceive them only in succession. We have seen in the case of the second analogy that when there is objective succession, the order of perception is irreversible. So when the order is reversible, that is, when of two objects we can indifferently perceive whichever we choose first and the other afterwards, we understand that there is no objective succession and so they are co-existent. When a number of things are co-existent we can perceive them in any order. This is possible because there is no one-sided determination between them as in a causal series in which our perceptions of objects can follow only in one order.

If there is no one-sided determination, should we suppose that there is mutual determination? We have to answer, Yes, because without such determination the time-position of an object in respect of another object cannot be determined. Time by itself is not perceived and so the time-position of an object in respect of another cannot be directly seen. It can be determined only by the action of one object upon the other. If the action is one-sided or causal, the objective time-relation is

* In the First Edition, *Principle of Community:* "All substances so far as they are co-existent stand in thoroughgoing community, that is, in mutual interaction."

succession. If the action is reciprocal, the objective time-relation is co-existence. To say that there is neither one-sided nor mutual determination between two objects is to say that they are neither successive nor co-existent, that is to say, that they are not in one time, which to us is inconceivable.

Two or more objects are said to be co-existent when they exist at the same time, that is, when the time of the one is also the time of the rest. For their co-existence something more is needed than their mere existence, and that is their mutual determination. When a number of objects reciprocally determine one another to be what they are, we cannot say that any one of them is either antecedent or subsequent to any other ; and so by mutual reference the time-position of each may be determined to be the same as that of the rest. Thus the principle of reciprocity determines objective co-existence just as the principle of causality determines objective succession. Co-existence of objects is certainly involved in our experience, and as this cannot be given by sense, we require for its determination a principle of understanding which is here called the principle of *reciprocity* or *community*.

We perceive the world as existing in space. Now since all parts of space are co-existent, the world too has to be conceived as consisting of parts which are co-existent and this is possible only when there is a thoroughgoing determination among all the parts. We thus arrive at the notion of a unity of the world in which no part is separated or let loose from all the rest.

It would seem that according to Kant the time-relation is dynamical and is not separable from spatial co-existence. This seems to agree very much with the modern notion of Space-time.

IV

THE POSTULATES OF EMPIRICAL THOUGHT IN GENERAL

FIRST POSTULATE

That which agrees, in intuition and concepts, with the formal conditions of experience, is possible.

The categories of *modality* (*possibility, actuality*, and *necessity*) are different from all other categories in that they do not determine anything in the object. The categories of quantity and quality determine the contents of the objects of experience, and the categories of relation determine the relations of these objects to one another; but the categories of modality determine only the relation of the objects to the understanding, that is, they express the different attitudes of the knowing subject to the object. The characterization of any object as possible, actual, or necessary does not add anything to our notion of the object. The principles of modality therefore do not explain how the objects of experience are constituted but only how we are to use the concepts of possibility, actuality, and necessity in regard to them.

An object can be regarded as *possible* only when it agrees with the formal conditions of experience. Kant has already determined the conditions which make experience possible. They are the forms of intuition, i. e. space and time, and the categories of the understanding. What makes experience possible is exactly what also makes objects possible. There is no experience which is not an experience of some object and nothing is an object which is not given, or is not capable of being given, in experience. Hence it follows that we can conceive of an object as possible only when it conforms to the conditions

of space and time and the syntheses of the understanding.

It used to be supposed that an object was possible only if it could be conceived, i. e. was free from self-contradiction. Kant does not agree with this rationalistic notion of possibility and he points out that although the idea of two straight lines enclosing space does not involve any self-contradiction, it cannot still be regarded as possible. There is nothing in the idea of a straight line as such to show that it should not meet another straight line at more than one place. Still the idea of two straight lines enclosing space is not possible, because it is not in conformity with the conditions of perception. Possibility then, according to Kant, is not mere conceivability, as Leibniz and others supposed, but should mean conformity to the forms of thought and intuition which make experience possible.

SECOND POSTULATE

That which is connected with the material conditions of experience, that is, with sensation, is actual.

A thing cannot be determined as actual merely from the fact that it conforms to the conditions of experience. That only decides its possibility. To be *actual,* a thing, besides being possible in the above sense, must be connected with perception. Kant does not of course mean that we must actually perceive a thing in order to determine it as actual. We know there are many things in the world which are actual and which yet we either do not or cannot perceive. This postulate does not demand that all actual things must be immediately perceived, but only that they must be either immediately

perceived or connected with what is so perceived in accordance with the principles of empirical connexion described by the *analogies*. That is to say, a thing, in order to be actual, must be either given in direct perception or be capable of being reached through legitimate inference from what is given in perception. We may even say that *what is perceived or is capable of being perceived is actual.* This might seem to limit unduly the range of actuality to a very narrow field, for there are many things which we take to be actual and which yet are not capable of being perceived by us. To obviate this difficulty, we should understand "capable of being perceived" not in the sense of being perceivable by us with the present constitution of our sense organs, but in the sense of being perceivable by means of sense organs when they are suitably developed to the appropriate degree of fineness.

This position of Kant—that actual things are perceived—goes against the idealistic position that we do not meet with reality in external perception. So at this stage he deems it proper to offer a *Refutation of Idealism.*

REFUTATION OF IDEALISM

The idealism which he refutes is described by him as *material* idealism, meaning thereby an idealism which either doubts or denies the existence of material things given in external perception. Accordingly there are two varieties of it, called *problematic* idealism and *dogmatic* idealism, associated respectively with the names of Descartes and Berkeley. Idealism in either form believes in the existence of the self, but the existence of external objects is doubtful and indemonstrable, according to one

view (*problematic* idealism), and false and impossible according to the other (*dogmatic* idealism). Kant's refutation consists in showing that our knowledge of the self implies the knowledge of external objects and so I cannot consistently maintain that I know that I am, but do not know whether the external things exist.

So Kant puts forward the thesis:

The mere but empirically determined consciousness of my own existence proves the existence of objects in space outside me.

And he substantiates this thesis by the following arguments. I am conscious of my own existence as determined in time. The self can be known only through inner intuition, and time is the form of that intuition. To know the self in time is to know it as changing, and this is possible only when we have the perception of something permanent, in contrast with which any temporal determination is intelligible. Thus it is clear that when I know the self in time, I must know something permanent. The permanent cannot be found in me, not only because nothing permanent is intuitable in the empirical self, but also because the permanent required here is for the purpose of determining by contrast the temporal character of the self itself. "Thus perception of this permanent is possible only through a *thing* outside me and not through the mere *representation* of a thing outside me; and consequently the determination of my existence in time is possible only through the existence of actual things which I perceive outside me." It is thus clear that the consciousness of my existence is necessarily bound up with the consciousness of what makes time-determinations possible. And if it is true, as Kant holds it is, that it is the consciousness of things in space that renders time-determina-

tions possible, then it must be conceded that the knowledge of my existence gives at the same time the knowledge of other things outside me.

Idealists assume that the only immediate experience is inner experience, i.e., the experience of the different states of the self, from which, in a more or less illegitimate way, the outer things are only inferred. Kant reverses the whole position and shows that outer experience is really immediate and is presupposed by inner experience.

Kant does not here go back upon his position that the representation *I am* accompanies all thought, and is the presupposition of all experience, inner or outer. But he contends that this representation is merely intellectual and lacks all elements of intuition, and therefore does not amount to any knowledge of the self. Without the element of intuition there is no knowledge, properly so called; and therefore if the self is to be known it must be known through some intuition. Now the only intuition proper here is the inner intuition, the form of which is time; therefore if we are to know the self, we must know it as in time. But such knowledge is possible only through the knowledge of things in space; therefore when we assert any knowledge of the self we have also to admit the knowledge of things in space.

But the fact that the knowledge of outer things is necessary for the knowledge of the self does not mean "that every intuition and intuitive representation of outer things involves the existence of these things, for their representation can very well be the product merely of the imagination (as in dreams and delusions)." Such representations, however, would be only reproductions of previous perceptions and these perceptions would require for their possibility the reality of outer things. "All that

we have here sought to prove is that inner experience in general is possible only through outer experience *in general.* Whether this or that supposed experience be purely imaginary, must be ascertained from its special determinations and through its congruence with the criteria of all real experience."

THIRD POSTULATE

That which in its connexion with the actual is determined in accordance with universal conditions of experience, is (that is, exists as) necessary.

We are concerned here with what Kant calls *material necessity*, that is, with necessity concerning sensible objects. The existence of a sensible object cannot be determined completely *a priori.* Without the help of experience, merely by thinking, we can never determine the existence of a sensible object, that is to say, we can never know where and when it should exist and what intuitable character it should possess. So from mere concepts we cannot determine the necessity of any sensible object. But relatively to an object given in experience we can determine the necessary existence of another object, if we know that the given object stands to the other object in the relation of cause and effect. We know that the effect follows necessarily from the cause, so that the existence of one object (effect) is rendered necessary by the existence of another (cause), when they are causally related. Thus we know an object to be necessary when we know it to be related to another object, given in experience, as effect to cause.

It should be noted here that this necessity obtains only in a context of experience. Apart from a relation to

experience, we are not aware of any necessary connexion. Only within the field of possible experience we know an object to be necessary when, and so far as, it is the effect of a cause given to us in experience. Even within this field the necessity does not extend to things as substances, which are never effects, but only to their states which alone can happen or come to exist. Thus it is clear that the law which says that whatever happens is determined *a priori* through its cause is valid only within the field of possible experience.

These principles of modality are called *postulates* not in the sense of propositions taken to be immediately certain without justification or proof. The term "postulates" is used in the mathematical sense. When the mathematician says: "Describe a circle with a given line from a given point," he does not say anything to be proved or disproved, but makes a demand to intuit a given concept. This is *a postulate of intuition,* which is nothing but a practical proposition, showing us how we get the intuition of a given concept. In the same way, the principles of modality make the demand that we should synthesize experience or elements in experience in some particular ways, and thus they show us how the concepts of possibility, actuality, and necessity are generated and how we empirically think or judge of objects from the stand-point of experience. This is why they are called *"postulates of empirical thought".*

Every one of the principles of the understanding (*Axioms, Anticipations,* etc.) implies that its opposite is impossible. The law of continuity negatively expressed says that there are no jumps in nature (*non-datur saltus*). From the continuity of magnitude and change, we know that there are no gaps in nature (*non-datur*

hiatus). From the law of causality and necessity, it follows that there is neither chance nor blind fatality. Since whatever happens happens according to a law, there is no room for blind chance (*non datur casus*), and whatever necessity there is, being conditioned and so intelligible, there is no blind fatality (*non datur fatum*).

GENERAL NOTE ON THE SYSTEMS OF THE PRINCIPLES

Kant again emphasizes that mere categories do not make possible any synthetic *a priori* judgements. The categories, which are mere forms of thought, require intuitions in order to constitute knowledge.

One might suppose that we know, from mere concepts, without the aid of intuition, that what is contingent is produced by a cause, but a little reflection will show that the proposition is analytilical and gives no real knowledge in Kant's sense, because the term *contingent* is already understood in the sense of what is produced by a cause.

Kant shows further that not only intuitions but *outer* intuitions are needed to give validity (objective reality) to the categories. It would not be possible for us to know whether there was anything in reality corresponding to the notion of substance, if we had not intuition of matter in space, for by inner intuition, as we have seen, nothing permanent can be apprehended. Similarly in the case of causality. In order to know that in reality there is causal effectuation, we require the corresponding intuition of change. But change is not intelligible at all without the outer intuition of motion. Change implies

contradictory states in the being of one and the same thing which our understanding cannot grasp, and it is first made comprehensible only by the intuition of motion of a point in space, which, being the same, is yet seen in different places. In the same way Kant shows that we can understand the community of substances implying their action and reaction upon one another, only because we intuit substances in space which already contains external relations that can serve as the conditions of the possibility of mutual action. It follows from all this, as Kant has shown in his *Refutation of Idealism*, that we cannot know even ourselves without the help of outer intuition.

Kant concludes the whole discussion by pointing out again that "all principles of the pure understanding are nothing more than principles *a priori* of the possibility of experience", that they apply and relate to experience alone, and that outside experience they have no validity or meaning.

CHAPTER III

THE GROUND OF THE DISTINCTION OF ALL OBJECTS IN GENERAL INTO PHENOMENA AND NOUMENA

The categories and principles of the understanding are not, it is true, borrowed from experience, but are produced by the understanding out of itself. But they have yet no other use than that of being applied to experience. By themselves they constitute, as it were, only a frame-work which has to be filled by matter drawn from sense-experience. Apart from such matter or content, which in the case of us men can be supplied ultimately by sense-intuition only, the categories and principles of the under-

standing have no objective meaning or significance. Their sole use is to organize or systematize our experience and so they apply only to objects within experience. That which transcends our experience cannot be determined by any of the categories or principles of the understanding. They thus apply only to appearances and do not apply to things in themselves. Kant expresses this fact by saying that the categories have only an *empirical* use and have no *transcendental* use. Indeed, Kant shows that the categories have no meaning or significance unless we can make them sensible, unless that is, we can point to the corresponding objects in sense-intuition. All categories and principles, however high the degree of their *a priori* possibility, must after all be related to the empirical intuition. Without such relation they are quite empty. Just as sense-intuitions are made intelligible only through the application of the categories and principles of the understanding, these latter too acquire their significance only from such application. These are after all meant to be used in our thinking, and if we are to think and not merely to imagine, we must have some object given to us. Without this object there can be no thinking and so no scope for the categories. But the object can be given to us only through sense-experience, and hence it is clear that the principles of the understanding have their scope entirely limited to the sphere of sense-experience. The principles in fact merely interpret what is given in sense-experience. They do not describe the real properties and relations of things in themselves apart from all relation to sense-experience. The synthetic *a priori* principles of the understanding describe only the forms of objects of possible experience, and so the utmost the understanding can achieve is to anticipate the form of a possible

experience in general ; it cannot give us *a priori* synthetic knowledge of *things* in general. Kant is therefore content to call that part of his treatise which treats of these principles an *Analytic* of pure understanding and lays no claim to the proud name of *Ontology*.

The categories themselves, however, do not mean that they are the forms of sensible things. They can be in a way understood apart from the conditions of sensibility. They are therefore said to have a transcendental *significance*, but no transcendental use. What is meant is that the categories, which are really the ways of combining the manifold, have a meaning of their own, which has no necessary reference to the manifold of sense with which alone we are acquainted. This is their transcendental significance. But this meaning does not enable us to make use of the categories anywhere else except within the limits of possible sense-experience, for the simple reason that the manifold to be combined by them is available for us only within sense-experience. This is how they have no transcendental use.

However, the categories are only forms of thought and, unlike the forms of intuition, are not dependent on our sensibility. We may well imagine that there are things which are merely objects of thought and are not given to sense. If what is given to us in sense-experience is called appearance or *phenomenon*, then by contrast with it, what is not so given, but is merely thought, may be called *noumenon*. The very idea of appearance carries us to the idea of something that appears. What appears must be something in itself in order that it may appear in our sense-experience. The sensed appearance must be referred to some unsensed being which is thought. Thus we make a distinction between objects of sense or

phenomena and objects of thought or noumena. Now the question is whether our categories are applicable to noumena. We have just said that from the idea of appearance we are led to think of that which appears without any reference to the conditions of appearance. But it should be understood that our idea of something that underlies appearance is not at all definite like the idea of any given appearance. We merely think of it as an indeterminate something outside the range of our sensibility and can form no definite idea of it which might amount to knowledge.

The term Noumenon can be understood in two senses. In the negative sense it is understood only as what is not given to our sense-intuition, and in the positive sense it stands for an object of non-sensuous or intellectual intuition, i. e. of an intuition which is totally different from ours (our intuition being always sensuous). It is only in a negative sense that the term is useful or significant for us. As we have no power of intellectual intuition, the noumena cannot be given to us and so we cannot apply our categories to them. Our categories are significant as forms of thought only in respect of materials supplied by sense. We understand their meaning only in terms of spatial and temporal appearance. So they cannot be applied to noumena and we have no positive knowledge of them.

Noumenon in the negative sense is very useful as a *limiting concept*. The concept of a *noumenon* is quite valid because it suffers from no self-contradiction. We can never claim that sense-intuition is the only possible mode of intuition, and so we cannot say that what is not so intuited is nothing at all. This concept enables us to limit our knowledge to the sphere of sense-experience. If

we had no idea of noumenon, we could supposed that our sensibility covers the entire field of reality. But when we *can think of something not intuitable through sense, we understand thereby the limitation of sense-intuition.* The understanding thus gets a sort of extension beyond the sphere of sense inasmuch as it can posit something (i. e. noumenon) beyond sense-experience. This, however, does not result in any actual extention of its knowledge, because the unsensed noumenon can be thought only as something unknown, and so the actual knowledge we can ever attain through understanding is always confined within the sphere of appearancc or sense-experience.

When we say that sense represents objects as they appear and understanding represents objects as they are, the latter expression should be understood only in an empirical sense, and not in a transcendental sense as applicable to things in themselves. To know, through understanding, objects as they are, is to know them as objects of experience (i. e. as appearances in thoroughgoing connexion with one another). In no case do we know them as they may be apart from all relation to a possible experience.

Sensibility and understanding only in combination can determine objects for us. If we separate them we get either mere intuitions or mere concepts, and in both cases mere representations which cannot be related to any determinate object.

The view seems to be that sensibility gives us mere appearances and they are understood as objects when conceived as systematically connected with one another in terms of the categories. This seems to be the meaning of the statement that sensibility gives us appearance and by understanding we know the object as it is. By the

"object *as it is*" we understand merely what it must be for *consciousness in general,* and not for this or that individual, knowing under some peculiar subjective conditions.

APPENDIX
THE AMPHIBOLY OF THE CONCEPTS OF REFLECTION

The outcome of the *Analytic* is that we know only appearances and do not know the things in themselves. The concepts of the understanding are applicable to appearances only, that is, are valid only within the sphere of sense-experience. The understanding by itself can give us only empty concepts which never amount to knowledge. For knowledge we require content as well as concept, and content for us can be supplied by sense-experience only. Sensibility and understanding are two distinct faculties of knowledge both of which are equally necessary.

This result of Kant's philosophy stands in marked contrast with the Rationalistic philosophy of his time which drew its inspiration form the teachings of Leibniz. Leibniz believed that we could know reality by mere thought, i. e. by the understanding alone. In fact he did not recognize in sensibility any distinct faculty of knowledge, but only a confused form of the understanding itself. In this Leibniz was wrong and fell a victim to the fallacy which Kant calls the *Amphiboly of the Concepts of Reflection.* The word "amphiboly" literally means double meaning, and when treated as a fallacy, it signifies the wrong application of concepts, which are valid in one sphere, to

another sphere in which they are not valid at all. There are certain concepts in reflection in terms of which we relate our representations to one another. These are (i) *identity* and *difference,* (ii) *agreement* and *opposition,* (iii) *inner* and *outer,* and (iv) *determinable* and *determination* (matter and form). When the representations are intellectual or belong to the understanding, these concepts will be true of them in a sense in which they will not be true of sensuous representations. Leibniz understood these concepts in reference to intellectual representations, in which no element of sense was present, and took them to be true in the same way also of sensuous representations. Therein lay his mistake. What was true of mere ideas or noumena was taken by him to be true of sensible contents or phenomena as well; and this was unjustified. Kant points out Leibniz's mistake under four heads corresponding to the concepts enumerated above.

1. Identity and Difference. Leibniz maintained that if in the ideas of two things, we cannot discern any difference, then the two things are identical. This he asserted in his famous principle of the Identity of Indiscernibles. And in fact when we view things from the standpoint of the understanding alone, and find the same characteristics in two things, we cannot but take them to be identical. Kant therefore points out that the Leibnizian principle is quite true so long as we abstract completely from the sensuous conditions of existence. However, as soon as we take these conditions into consideration, the principle fails to justify itself. There is nothing to distinguish two cubic feet of space from each other, so long as we are concerned with mere ideas of them. Still no two cubic feet of space are identical. Similarly two

drops of water may be perfectly alike and we may not find any differenee between them which can be grasped by the understanding *without the help of sense-experience*, and still the two drops will not be identical. Leibniz was thus wrong in asserting of all things, sensible and intelligible alike, what is true only of intelligible things.

2. *Agreement and Opposition.* The only form of opposition in the sphere of the pure understanding or the realm of concepts is that of logical contradiction. *A* can be opposed only by *not-A*. An affirmation can be opposed only by a corresponding negation. Since the understanding can view reality only as pure affirmation, reality as represented by the understanding cannot contain any negation in it, and so it is easy to see the truth of the Leibnizian view that realities cannot conflict with one another. But although this view may well be true of the intelligible world, it is quite false of the actual world disclosed in sense-experience. Here two forces equally real, acting in opposite directions, do come in conflict and may nullify each other.

3. *The Inner and the Outer.* The inner as conceived by the understanding is something that has no relation with, and is not dependent upon anything other than itself. It must be self-subsistent and not subject to any external influence. This is the notion of substance which Leibniz entertained. It follows from this notion that substance should allow of no such determinations as those of position, magnitude, contact or motion, for all involve external relations. But when substance is relieved of all these determinations, how are we to conceive it at all? The only alternative left open to Leibniz was to

conceive it after the fashion of our own selves which have their inner determinations in the form of representations or ideas. This gives us the notion of a *monad* or spiritual substance, self-subsistent and independent, *receiving no influence from without and exercising none* in its turn on others. A noumenon apprehensible to pure understanding alone may answer to this description. But in the field of appearance which alone is open to our knowledge, this notion is quite inapplicable. The substances we know of in space are all conceived through external relations, that is, in terms of their relations to other objects external to them. We know matter or substance in space through its attraction, repulsion or impenetrability, and all these involve external relations. Leibniz made no radical distinction between noumenon and appearance and applied the notion of monad even to material objects. He considered even sensible objects as ultimately composed of spiritual monads which he had conceived through mere understanding without any reference to sense-experience. He thus committed the fallacy of Amphiboly.

4. *Matter and Form.* The concepts of *matter* and *form* are indispensable to the understanding. By "matter" we understand that which is to be determined, and "form" is the determination. Viewed in the light of pure thought, we clearly see that matter must be already something determinable so that any determination of it may be possible.

Leibniz understood space as a form of external relation among substances, and time as an order of dynamical sequence in their states. (Our perceptual space and time are, according to Leibniz, nothing but

confused representations of a certain relation among substances and an order among their states). The substances already exist in order that any relation among them or order in their states may be possible. Matter (substance) in this view must precede form (space and time). This would no doubt be the case if the pure understanding could relate to objects immediately and space and time were determinations of things in themselves. But as a matter of fact, Kant contends, we only determine objects as appearances in sensible intuition. Space and time are nothing but the forms of our sensibility, and whatever we sensibly intuit is altogether determined by these forms. These forms do not supervene upon objects which already exist, but on the contrary, the forms of intuition as part of our subjective constitution must already be there if any appearance of sensible objects is to be possible.

The fundamental mistake of Leibniz lay in the fact that he did not recognize any radical difference between uderstanding and sensibility, and did not therefore takes into account the peculiar conditions of our sense-experience. Leibniz intellectualized all appearances, just as Locke committed the opposite mistake of sensualizing all concepts of the understanding. Leibniz judged even of appearances, i. e. objects of sense-experience, only in terms of pure thought, and we can easily see how he was bound to go wrong when we reflect that many elements enter into our sense-experiences which do not enter into thought and are not determinable.

TRANSCENDENTAL LOGIC

Division II

TRANSCENDENTAL DIALECTIC

INTRODUCTION

I. TRANSCENDETNAL ILLUSION

Dialectic is described as a *logic of illusion.* Now *illusion* is to be distinguished from both *probability* and *appearance*. *Probability* gives us some truth, although the truth it gives is imperfect, because based on insufficient grounds. It is however not deceptive. And *appearance* is objective. But *illusion* is not anything in the object itself. It occurs in our judgement about an object, that is, in the relation of an object to our understanding. The senses do not err, because they do not judge. And even understanding, in proceeding according to its laws and in making its judgements, does not err, unless it is influenced by sensibility and is led to regard what is merely subjectively necessary as an objective fact.

We are concerned here not with empirical illusion, such as the bent appearance of a straight stick half immersed in water, but with the *transcendental illusion.* When for instance one asserts that the world must have a beginning, one is a victim to this kind of illusion. There may be, and indeed is, a subjective demand in us to envisage the world as a rounded whole. We are misled by this subjective necessity to regard the object itself as so constituted. Herein lies the illusion. There is a natural tendency in us to apply, beyond the sphere of all possible experience, certain principles which have their origin only in the subjective demand of our reason to connect our ideas of reality in a particular way. This

leads to transcendental illusion, and because it arises from a natural tendency in us, it is scarcely avoidable.

Transcendental illusion differs from *logical* illusion (the illusion of formal fallacies) in this, that it persists even when it is clearly shown to be illusory, whereas a logical illusion disappears as soon as we realize its illusory character. Logical errors are committed through inadvertence and can be avoided with sufficient care. But we are all naturally prone to transcendental illusion which cannot be avoided even by the most intelligent.

Transcendental Dialectic does not therefore aim at curing us of transcendental illusion, but merely at demonstrating the invalidity of *transcendent* judgements and at warning us against their deceptive character.*

II. PURE REASON AS THE SEAT OF TRANSCENDENTAL ILLUSION

A. REASON IN GENERAL

Reason is conceived here as distinct from the understanding. Reason is called the *faculty of principles* whereas the understanding is the *faculty of rules*. In their logical use, the understanding and reason give us judgements and inferences respectively.

Knowledge from *principles* is only that knowledge in which the particular is apprehended in the universal through concepts. We get such knowledge in a syllogism

* By *transcendent* judgements are meant judgements in which we pass beyond the limits of possible experience. We have learnt that the principles of pure understanding are valid only within experience and have no application beyond the limits of experience. "A principle, on the other hand, which takes away these limits, or even commands us actually to transgress them, is called transcendent."

in which the major premise represents the universal from which the conclusion (particular) is deduced with the help of the minor premise. We are led to the conclusion through mere concepts, and no appeal to intuition or experience is necessary.

The so-called principles of the understanding do not represent knowledge from concepts. The principle of causality, e. g. that which says that whatever happens must have a cause, does not establish itself through mere concepts but is valid only as a necessary condition of possible experience. *Principles* in the true sense must represent synthetic knowledge from concepts and should not refer to sense-experience. The universal propositions which the understanding yields are principles in a relative sense and should properly be called *rules*. For principles in the true sense we require a different source which is called reason.

The rules or concepts of the understanding apply to appearances and bring about a unity which is necessary to experience. They have thus an empirical use. The principles of reason are not directly applied to experience or to any object. They are applied to the rules of the understanding and confer a unity upon them. The unity so obtained is merely ideal and is altogether different from the unity of the manifold of experience which the understanding effects.

B. THE LOGICAL EMPLOYMENT OF REASON

There is a distinction between what is immediately known and what is merely inferred. We immediately know that there are three angles in a triangle, but it is only by inference that we know that they are equal to

two right angles. We may however become so accustomed to the inference that we fail to distinguish it from immediate experience as in the so-called deception of the senses, where what is merely inferred is taken to be immediately perceived.

Inference may be immediate or mediate. Kant prefers to call immediate inference, inference of the understanding; and mediate inference inference of reason (syllogism). In the latter kind of inference, the understanding gives us a rule in the major premise (*All men are mortal*), and then by means of our faculty of judgement we subsume in the minor premise something known under the condition of the rule (*So and so is a man*), and finally, we determine what is so known (i. e. as man) by the predicate of the rule (mortal) quite *a priori* through reason (*So and so is mortal*).

Just as starting with a rule (major premise), with the help of a minor premise, we can arrive at a particular judgement (conclusion), so in the opposite direction too, starting with a given judgement, we may try to discover a rule from which under certain conditions the given judgement as well as many others will follow. Reason can thus seek to bring the manifold knowledge of the understanding under the smallest number of principles and thereby to unify it as far as possible.

C. THE PURE EMPLOYMENT OF REASON

The question now is whether the principles or the forms of unity which reason introduces in its effort to bring about a unification of our knowledge of the understanding, are objectively valid or they have only a subjective use in ordering our ideas. Kant points out that

reason is concerned with the understanding and its judgements, and has no direct concern with intuition or the matter of experience supplied by it. The understanding through its categories and principles orders or unifies the manifold supplied by intuition. Reason seeks to unify the concepts and the judgements of the understanding. Pure reason thus relates itself to objects not directly but indirectly through understanding. We find already in syllogism that there is no appeal to intuition. This goes to suggest that reason is concerned with forms of unity which are not given.

We have seen that reason in its logical employment seeks to find out the universal condition of its judgement, a rule from which the given judgement as well as many others may follow. This search for the universal implies that reason is concerned to discover the *unconditioned* in which all conditioned knowledge of the understanding may attain its unity and completion.

But the unconditioned is not anything that can be found within experience. So the principle of reason, which impels us to discover an unconditioned unity for our conditioned knowledge, is properly to be called *transcendent* inasmuch as it bids us go beyond the limits of experience. This principle is synthetic because it connects the conditioned with what cannot obviously be derived from it, viz. the unconditioned. The main question of the *Transcendental Dialectic* is to decide whether the concepts and principles of pure reason, as distinct from those of the pure understanding, have any objective validity.

BOOK I

THE CONCEPTS OF PURE REASON

The concepts of the understanding are obtained by reflection, but the concepts of reason can be obtained only by inference. The *concepts of the understanding* "contain nothing more than the unity of reflection upon appearances" which must belong to a possible experience. As they constitute the intellectual form of all experience, they can always be shown to be valid in experience. That is not the case with the *concepts of reason* which go beyond all experience. The unconditioned, for instance, with which the concepts of reason are concerned, can be reached by reason only in its inferences from experience and is not itself an object of possible experience.

The concepts of pure understanding are called *categories* and in distinction from them the concepts of pure reason are called Transcendental Ideas.

Section I
The Ideas in General

Kant refers to Plato's doctrine of *Ideas* and following Plato's use of the term *Idea* for super-sensible archetype, which are only imperfectly represented by things of the world, he proposes to restrict the use of the term to concepts of reason. He deprecates the use of the term for any representation whatever. Ordinarily even the representation of a colour, e. g. red, would be called an idea, but according to Kant such use is highly improper. For him the most general term is *representation*, which becomes *perception* when joined with consciousness. Perception, again, when it is subjective, is to be called

sensation and when it is objective, *knowledge*. Knowledge consists of *intuition* and *concept*. Concepts belonging to the understanding are *notions* or *categories*, and those belonging to reason are *Ideas*. Thus red is not even a notion, far less an idea.

Section II
The Transcendental Ideas

Just as the categories of pure understanding were derived from the logical forms of judgement, so the concepts of pure reason are sought to be derived from the logical forms of inference. From the three kinds of syllogism, *categorical, hypothetical* and *disjunctive,* Kant professes to deduce the three forms of the unconditioned which reason offers in order to guide and complete the work of the understanding. By going regressively from episyllogism to pro-syllogism we seek the unconditioned which ultimately will explain the conditioned knowledge given in a particular judgement.

Reason always seeks for the explanation of things, and no explanation can be final which merely works with the conditioned because the conditioned will always demand something else by which it is conditioned, so that we cannot be satisfied until we reach the unconditioned.

The three species of syllogism—categorical, hypothetical and disjunctive—lead us to the unconditiond in three different forms ; "first, to the subject which is never itself a predicate ; secondly, to the presupposition which itself presupposes nothing further ; thirdly, to such an aggregate of the members of the division of a concept as requires nothing further to complete the division". As Professor

Kemp Smith points out, Kant in fact obtains these transcendental ideas by combining the concept of the unconditioned with the categories of relation, i. e. with substantiality, causality and community.

These ideas are fundamentally different from the categories of the understanding, in that the categories are always illustrated in experience, but the Ideas of Reason have no corresponding use within experience. We can always point to a substance or a cause within experience, but the unconditioned can never be found within experience for the simple reason that whatever falls within experience is conditioned. Thus the objective use of the Ideas is *transcendent*, i. e. it oversteps the limits of experience. But they are not on that account to be considered as arbitrary fictions of our mind; they are, on the contrary, necessary and natural products of reason. Since there are no objects within experience which correspond to them, we may speak of them as mere Ideas, but we should not regard them as empty and superfluous, because although they do not themselves stand for any objects, they nevertheless guide the understanding in its knowledge of objects. Moreover, they serve as transitional links between the spheres of *theoretical* and *practical* Reasons, between the sphere of scientific knowledge and that of moral activity, as will be shown later.

Section III
System of the Transcendental Ideas

There are three possible relations in which all our representations must stand, viz. *first*, in relation to the thinking subject, *secondly*, in relation to objects as appearances, and *thirdly*, in relation to objects of thought

in general. All pure concepts are concerned with the synthetic unity of representations. The transcendental Ideas, which are nothing but the pure concepts of reason, are concerned with the unconditioned synthetic unity of all conditions. In correspondence with the three relations stated above, the transcendental Ideas are: (i) the absolute unity of the thinking subject (Soul), (ii) the absolute unity of the series of conditions of appearances (Cosmos), and (iii) the absolute unity of all objects of thought in general (the being of all beings, God).

With the Idea of the soul we render all subjective phenomena intelligible to ourselves; with the Idea of the cosmos we explain all objective experiences; and the Idea of God is necessary to explain the co-operation of mind and external nature in one experience. They together thus form a system.

It is neither possible nor necessary to give an objective deduction of these Ideas, as they have no objective application. A subjective deduction, however, is provided when they are traced to three logical forms of inference.

The Ideas are in a sense categories made absolute. The soul is *substance,* the world the absolue totality of *causes,* and God the absolute totality of all beings in *reciprocal relation* (the being of all beings).

As Kant specially discussed *immortality* in connexion with the soul, and *freedom* in his theory of the world, *God, freedom* and *immortality* (in the place of God, soul and the world) have come to be regarded as the proper subjects of metaphysical enquiry.

BOOK II

THE DIALECTICAL INFERENCES OF PURE REASON

Although a transcendental Idea is a necessary product of reason, we have properly speaking no concept of its object that can be intuited and exhibited in a possible experience. The object corresponding to a transcendental Idea does not fall within any experience, and so it is better to say that we have no *knowledge,* but merely a problematic *concept* of it.

But how do we come to have Ideas of things which we do not know? We are led to them by some necessary inference of reason. "There will therefore be syllogisms which contain no empirical premisses and by means of which we conclude from something which we know to something else of which we have no concept, and to which, owing to an inevitable illusion, we yet ascribe objective reality." The conclusions may even be called rational, "since they are not fictitious and have not arisen fortuitously, but have sprung from the very nature of reason." We cannot avoid them, although we may be able to teach ourselves that they are not valid.

By three kinds of pseudo-rational inference we get the transcendental Ideas of the soul, the cosmos and God, which used to form the subject-matters of the three parts of metaphysics known respectively as *Rational Psychology, Rational Cosmology* and *Rational Theology.* Kant calls the first kind of inference about the soul the *Paralogism of Pure Reason,* the second kind of inference about the world *the Antinomy of Pure Reason,* and the third kind of inference about God the *Ideal of Pure Reason.* It

is now his business to expose the fallacies lurking in these inferences.

CHAPTER I

THE PARALOGISMS OF PURE REASON

A *logical paralogism* is a fallacious syllogism. A *transcendental* paralogism is one in which an invalid conclusion is drawn from a transcendental ground. The transcendental ground used in rational psychology is the concept or the judgement *I think*. Although it has not been included in the list of transcendental concepts, there is no doubt about its transcendental character. It is in fact the vehicle of all concepts, including the transcendental ones. The concepts are concepts only as accompanied by *I think*. It is this *I think* which makes even transcendental concepts possible. Substance, cause, etc. really mean "I think substance", "I think cause", etc. Since *I think* is involved in every category, it is not separately mentioned in the list of transcendental concepts.

I think is the sole basis on which are founded all the doctrines of rational psychology, viz. (i) that the soul is *substance*, (ii) that it is *simple*, (iii) that it is a *unity*, and (iv) that it is in relation to *possible* objects in space. There is no other basis for the teachings of rational psychology than this simple and in itself empty representation. It is not properly a concept but a bare consciousness which accompanies all concepts.

Although *I think* is realized only subjectively in my own consciousness of object, I transfer it to all thinking beings, and make it the basis of universal judgements about them, because I can have no representation of

thinking beings through outer sense, and can think of them only in terms of my own consciousness.

It has to be noted that the I *think* which serves as the basis of rational psychology contains no empirical element whatever. It does not represent any knowledge about the soul that can be obtained through inner sense or by internal observation. If it were empirical in character, neither knowledge of what does not belong to possible experience nor any apodeictic knowledge about thinking beings could be derived from it.

I think in fact does not represent any thought but the pure apperception which accompanies all concepts and is the basis of all knowledge, but it is not itself any knowledge.

THE PARALOGISMS OF PURE REASON

(*First Edition*)

FIRST PARALOGISM : *Of Substantiality*

The *first paralogism* says that the soul "(I)" is a substance, because it is the absolute subject of all our judgements and cannot be used as a predicate of any other thing. By"substance"we understand only that which is the absolute subject of our judgements and never a predicate.

It is true that we cannot but regard the self as substance because the "I" is present in all thoughts as their subject. The thoughts are its determinations, but the self cannot be used to determine any other thing. But the category of substance here has clearly no objective meaning, because there is absolutely no intuition in the representation of the "I" which can serve as the support of the category. We know from the *Analytic* that categories have objective meaning, only as applied

to the manifold of intuition. *I think* does not represent any intuition, but merely consciousness without which no thought is possible. The "I" is merely the *logical subject* of all thoughts, but does not stand for any underlying thing which is given by any intuition and which can be distinguished from other objects.

The self is first thought of as substance in order to justify our further thought about it as a persistent entity which does not in any manner arise or perish. But this is not proper. What is legitimate is that when we have an intuition of something permanent in experience, we should apply the category of substance to it. We should not reverse the process and deduce the property of permanence from the notion of substantiality.

We thus find that rational psychology is wrong in making a *metaphysical substance* out of a *logical subject*, and in applying the category of substance in the absence of all necessary intuition.

We may, however, think of the self as substance provided we refrain from drawing any inference from the notion of substantiality with regard to the self, such as, e. g. that the self is immortal. We have to remember that the concept here signifies a substance in idea and not in reality.

SECOND PARALOGISM: *Of Simplicity*

In the *second paralogism* it is sought to be proved that the self is a simple entity on the ground that its action cannot be regarded as the concurrence of several things acting. If the self were a composite entity, its action, which is thinking, would be the co-operative action of its different parts.

It is no doubt true that thinking requires absolute unity. If the representations, which are united in thought, belonged to different beings, they would never make a whole thought. The self must be an absolute unity and only as such can it make any thought possible. But this only means that the unity of self-consciousness is a necessary condition of all thought. The thinking self can be represented only as a unity. But rational psychology is wrong in passing from this *logical unity of the subject* in representation to the *actual simplicity of the soul* in reality. The unity of self-consciousness is a necessary subjective condition of all experience, but it does not describe the actual character of an actual thing which we may call our soul.

Rational psychology is anxious to maintain the simplicity of the self in order to prove its difference from matter and thus to save it from the fate of destruction or dissolution which attends everything material. But even though we grant that the self is simple, this is not sufficient to establish its difference from matter. There is no point in distinguishing the self as a thing in itself from matter which is merely outer appearance, because the distinction is too obvious. But that which underlies matter or material appearance can never be known to be incapable of having representation, thought, etc. That which underlies outer appearance and, through the affection of the outer sense, comes to be represented as spatial and material may yet be, as noumenon, the subject of our thoughts. Thus we see that rational psychology even when it illegitimately asserts that the self is simple, cannot establish that the self is altogether different from matter, and it is precisely with a view to establishing this difference that the simplicity of the self was sought to be proved.

THIRD PARALOGISM: *Of Personality*

The *third paralogism* seeks to prove that the soul is an abiding personality on the ground that it is conscious of its numerical identity at different times.

Here again the unity of self-consciousness is made the basis of the conclusion that the self remains identical with itself through passage of time. The argument fails, because the unity of self-consciousness is a condition of all thought, from which nothing can be inferred as to whether in fact there remains a substantial self identical with itself throughout all its experiences. The logical subject of knowledge has always to represent itself as identical with itself. It says *I think* in respect of all thoughts. But this identity of representation cannot mean the factual identity of the underlying self. Kant makes his point clear by an illustration. An elastic ball impinging on a similar ball in a straight line communicates its whole motion to it and so in a sense passes on its whole state to it. Now if, after this analogy, we conceive a series of substances of which the first communicates its representations together with the consciousness of them to the second, thus passing on its state to it, and the second to the third, and so on, then the last substance would be conscious of the states of all the earlier substances as its own, but this would not really prove that one and the same substance was there throughout in all those states.

Kant's point seems to be that although the thinker always refers to himself as "I" and his consciousness of himself is not different at different times, this identity of consciousness, despite the identity of the word "I" by which that consciousness expresses itself, cannot prove the identity of the underlying being who has this con-

sciousness. The experiencing subject may really change continuously without thereby causing a change in the form of his experience or in his self-consciousness. So, conversely, from the identity in the form of experience or from the identity of logical subject, which is the same thing as the identity of self-consciousness, we cannot infer the identity of the subject which actually passes through experience.

FOURTH PARALOGISM : *Of Ideality*

This paralogism is concerned more with the nature of the objects of external perception than with the nature of the soul. It is argued that what we directly perceive is the self and its states, and so the external objects, falling altogether outside the self, cannot be directly perceived, and can only be inferred from our perceptions. We are directly aware of our own perceptions and we infer external bodies as the cause of those perceptions. But such inference cannot give us certain knowledge. When the external objects are not directly known, we cannot determine whether the cause of our perceptions lies in us or outside us, seeing that an effect may be due to more than one cause. There is no such uncertainty as regards the knowledge of the self and its states which are directly revealed to our inner perceptions, whereas the existence of all objects of the outer senses is doubtful, since they are only inferred and the inference may well be wrong. This uncertainty about the existence of external objects is called the *ideality* of outer appearances, and the doctrine which maintains this ideality is called *Idealism*.

In exposing the fallacy in this argument, Kant offers a *refutation of Idealism* in this sense. He points out that external objects are as directly known as our inner states and there is no question of inference about them.

Neither through inner sense nor through outer sense do we know things in themselves. By both we get only representations and about them we have no doubt whatever. But we should only remember that both the kinds of representations, inner and outer, give us only appearances. The self which is known through inner sense, and its states, are as much an appearance as external objects known through the outer senses. External objects are thus only appearances and so nothing but a species of representations which exist in us. Thus what Kant refutes is not Idealism as such, but only *empirical idealism* which is favoured by rational psychology and which permits us to doubt the existence of external objects.

Rational psychology, in favouring empirical idealism, conceived of external objects as things in themselves which cause our perceptions, and only as so conceived do they appear to be of doubtful existence. Kant points out that external objects are mere appearances and as appearances they are not doubtful at all. Empirical idealism is based on a confusion between appearance and reality which rational psychology fails to notice. Against *empirical idealism* Kant supports *empirical realism* in that he grants the undoubted existence of external objects as appearances. This he does, it appears, in the interest of a higher idealism which he calls *transcendental idealism* and according to which even outer appearances are mere representations which exist in us. But if they exist in us, how do we call them "outer" ? They are "outer" only in the sense that they consist of representations which relate their objects in space in which all things are external to one another. But space itself is in us, and so the outer appearances are not transcendentally outside but only empirically so.

CONSIDERATION OF PURE PSYCHOLOGY AS A WHOLE

Whatever may be the nature of the self in itself, in its earthly career it finds itself in an embodied state. So the relation between body and soul is of peculiar importance for rational psychology. In fact there are three questions involved here: (i), as to the possibility of communion between soul and body; (ii), as to the beginning of this communion, i.e., about the soul in and before birth; and (iii), as to the end of this communion, i. e. about the soul in and after death. When the soul and the body are conceived as two substances, altogether different in nature, we are undoubtedly faced with the serious problem of understanding how they are combined in a single subject, and how the states of the one are correlated with the states of the other. *I* am a mind that thinks as well as a body that moves. When there is a change in my bodily state, there arises a change in my mental state, and *vice versa*.

The communion between soul and body can be understood in three different ways. (i) It may be that the body acts on the mind and the mind acts on the body; and each by so acting produces changes in the other. This is the theory *Interactionism* (or the theory of *physical influence*, as Kant calls it), held by Descartes. But when matter and soul are conceived as totally different from one another, it is found very difficult to comprehend how the one can act upon the other. So it is thought that the communion between them is brought about by a third agency. Whenever there is a change either in mind or in body, God intervenes and produces a corresponding change in the other. This is *Occasionalism* or the theory of supernatural intervention, developed

by the followers of Descartes. But why should we suppose that God acts every now and then? He may have originally fashioned matter and spirit in such a way that whenever there is a change in the one, there occurs a change in the other also. This is the theory of *pre-established harmony* propounded by Leibniz.

Whatever may be the merits of these theories as solutions of the problem in hand, Kant points out that the problem itself is totally misconceived, and rests, like other dialectical questions of rational psychology, on a transcendental illusion which confuses appearances with things in themselves. Both through inner sense and outer sense we get nothing but appearances. The self which exists in time, and is known through inner sense, is as much an appearance as the objects of outer sense which exist in space. Space and time are nothing but the forms of our sensibility and nothing that exists in them can be anything but subjective appearance. So long as we take inner and outer appearances as appearances, i.e. as representations, there appears nothing absurd or strange in the association of these two kinds of appearances. But as soon as we hypostatize these appearances and think of them as things in themselves, exclusive of one another, we fall into all kinds of difficulties in conceiving the relation between them.

But even when the external things are not conceived as things in themselves, but as appearances only, there remains a problem. The real problem of the communion between mind and body, between the thinking and the extended, is this: how is outer intuition or the intuition of space possible in a thinking subject? If we call the thinking subject understanding and the intuition sensibility, the question comes to this: How are sensibility and

understanding connected with one another? But no human being can possibly answer this question, as no one can find out the common root of sensibility and understanding.

Although Kant finds only fallacies in rational psychology, he is not interested in denying its conclusions or in maintaining propositions which would be opposed to the conclusions of rational psychology. That would be inconsistent with his Critical stand-point. His objection against rational psychology is not dogmatic but Critical. He would have been dogmatic if he either merely denied the assertions of rational psychology or opposed those assertions by other assertions of his own. Without doing anything of the kind, he merely points out that the arguments by which rational psychology seeks to justify its conclusions are fallacious. He does not question the conclusions themselves, but only the validity of the grounds on which they are based. This is the peculiarity of his Critical objection.

When rational psychology says that the soul is immortal, Kant does not come forward to say that the soul is not immortal. He only says that the theoretical proof offered for this thesis is insufficient. Kant himself is a believer in the immortality of the soul, not as a *fact that can be known* theoretically but as a *postulate of moral experience*. Similarly when rational psychology asserts that matter has only doubtful existence, and thus rejects materialism, Kant does not oppose it by saying that materialism is true. He says no doubt that the existence of matter is not doubted, but by matter he understands only an appearance and not a thing in itself, as materialism takes it to be. It is essential to materialism to regard matter as ultimate reality, but Kant never subscribes to such a view. When in the *Aesthetic* he reduced

space to a subjective form of sensibility, he definitely denied reality to matter which can exist only in space.

The main concern of rational psychology is with the knowledge of the self and it supposes that it knows the self as a simple, self-identical substance. In other words, rational psychology asserts that the self can be known as an object, for the category of substantiality, and in fact all categories, are objective categories. Kant points out that what we really have is the unity of self-consciouness which is a subjective condition of all objective knowledge and that it is nothing but an illusion to regard this subjective condition of knowledge as the knowledge of an object. Self-consciousness is a necessary condition of objective knowledge, but it is not itself any objective knowledge, especially when what is absoultely necessary to objective knowledge, viz. intuition, is altogether lacking.

THE PARALOGISMS OF PURE REASON
(*Second Edition*)

In the Second Edition of the *Critique* we have a briefer but more pointed treatment of the *Paralogisms* and of the other questions connected therewith than in the First Edition. It is pointed out that the proposition from which rational psychology starts, in so far as it is valid, is an analytic proposition; but in drawing its desired conclusions from it, rational psychology turns it into a synthetic proposition of much wider scope, for which there is no warrant. Rational psychology is based on the proposition *I think* which really stands for mere thought or the unity of consciousness. This by itself can never amount to knowledge unless there is some given intuition or matter of thought to which this can be

applied. It is a fundamental point of Kant's philosophy that thought and intuition must be combined in order to give rise to knowledge. But in self-consciousness we have mere thought and there is no intuition of the self to which it can be applied. We have no intuition of the self because all our intuitions are sensible and the self is not an object of sense. Thus we can have no knowledge of the self in the real sense of the term "knowledge".

First Paralogism (Substantiality): The "I" which thinks is of course the subject in all thought. This is an analytical proposition; but it cannot mean that I, as *object*, am for myself a *self-subsistent* being or *substance*. We require for the application of the category of substance some intuition which is altogether lacking here.

Second Paralogism (Simplicity) : That the "I" (of *I think*) is a simple subject and is not a plurality follows from the nature of thought itself (and hence it is an analytical proposition) ; but this does not mean that the self is a simple substance. The intuition necessary for the application of this category cannot be supplied by mere thought, with which alone we are concerned here.

Third Paralogism (Personality): That the "I" in all thoughts is the same can be obtained from the analysis of *I think*, but the unity of self-consciousness is no intuition and can justify no application of the concept of substance.

Fourth Paralogism (Immortality) : It is again an analytical judgement to say that *I* am distinct from

all other things, including my body, because by other things I understand what I can distinguish from myself. But the fact that I can distinguish myself from my body cannot mean that I can exist apart from my body or that I am immortal.

Thus we see that merely from an analysis of self-consciousness as a condition of thought in general we can derive no knowledge whatever about the self as object.

If rational psychology were right, if, i. e., synthetic *a priori* judgement were possible in regard to the self, which is not given in any intuition, then the whole *Critique* would be falsified, because according to it synthetic *a priori* judgements are possible only in regard to objects of possible experience, for which intuition is indispensable. The whole argument of rational psychology can be reduced to a syllogism which, when examined carefully, will be found to involve the fallacy of *ambiguous middle* or the *sophisma figuree dictionis*, as Kant prefers to call it.

The syllogism is as follows:-

That which cannot be thought otherwise than as subject does not exist otherwise than as subject and is therefore substance.

A thinking being considered merely as such cannot be thought otherwise than as subject.

Therefore it exists only as subject, that is as substance.

In the major premise we speak of a being that can be thought in general, that is, in every relation, and so can be given in intuition also, but in the minor premise we speak of it only as it regards itself as subject in relation to thought alone and not also in relation to intuition. In fact " *thought* " in the

two premises is taken in two different senses. In the major premise it relates to an object in general and therefore to an object that may be given in intuition. In the minor premise it means no more than relation to self-consciousness. In the second sense it does not stand for the thought of any object, but merely for "the relation to self as subject". In the major premise "thought" means real thought; in the minor premise it means only the form of thought and not actual thought.

Refutation of Mendelssohn's Proof of the Permanence of the Soul.

Mendelssohn took the simple nature of the soul for granted, and argued that the soul connot pass out of existence either gradually or suddenly. Its gradual disappearance would mean the disappearance of one part of the soul after another and this would contradict the fact of its simple nature which consists in having no parts. The soul cannot also cease to exist suddenly, because if it ceased suddenly to exist, "there would be no time between a moment in which it is and another in which it is not, which is impossible." The continuity of time requires that one moment should continuously, and not abruptly, pass into another moment. The sudden cessation of an existence would occassion an abrupt break.

Kant replies to this argument by saying that although we may grant the soul to be simple, having no multiplicity of parts, this would only mean that it has no extensive quantity, but would not prevent it from having intensive quantity. Although the soul may have no parts, it may have a degree of reality that can be gradually diminished. So the soul need not pass

out of existence suddenly, for it may very well do so by a continuous diminution of its intensive reality. Kant points out in this connexion that even consciousness has always a degree and all that constitutes the existence of the soul can be, qualitatively speaking, more or less.*

Kant further shows that the position taken up by rational psychology leads necessarily to idealism or at least problematic idealism. When rational psychology claims to know the self as a spiritual self-subsistent entity, it means that the existence of outer things is not in any way required to determine the existence of the self in time, and so the assumption of their existence turns out to be quite gratuitous for which no proof can be given. Kant's position on this point is that the existence of the outer world is as certain as the existence of inner experience, for we can know our inner experience only in relation to outer things. Both inner experience and outer things are however equally appearances.

If we start with the category of *existence* and take it as given in the judgement *I think*, then even proceeding analytically we can very well see how the constitution of the self cannot be explained in materialistic terms. Since appreciation, which constitutes the essence of the thinking subject, is an act of absolute unity, the self as thinking must be determined as a simple subject. Such a subject can have no place in space, i. e., it cannot be materialistically conceived, because nothing that exists in space can be simple. Whatever exists in space is a manifold. (Points are merely limits and not anything that can, at parts constitute space.)

* See *ante*, "Anticiptions of Perceptions", pp. 92-95

To deny materialism is not however to affirm the spiritualistic hypothesis that the self is a spiritual substance. There appears nothing persistent in our inner intuition to which the category of substance can be properly applied. Thus the questions regarding the constitution of the self and its possible survival of bodily death must remain theoretically unanswerable.

Rational psychology then does not exist as a *doctrine* which can extend our knowledge of the self, but still it is valuable as a *discipline,* in that it holds speculative reason in check and makes both soulless materialism and groundless spiritualism impossible for it.*

Kant emphasizes the point that rational psychology confuses the purely intellectual representation of the "I" with an intuition of it and wrongly applies to this supposed intuition the category of substance. The forms of intuition (space and time) and the forms of thought (categories) are made possible by the self (as the unity of apperception), but it cannot itself be conceived in these forms. When we think of the self as immortal or as existing beyond death, we are thinking of it as existing in *time,* and in thinking of it as a *substance* we are applying to it a category of thought. But in this we are making an illegitimate use of the forms of intuition and thought, which are proper only to the object intuited and thought, not to the intuiting and thinking subject.

Although theoretical reason cannot prove that the soul is immortal, it cannot also prove that it is not immortal. So if on the grounds of *practical reason* or moral experience we are led to believe in the immortality

* *Doctrine* is positive and *Discipline* is negative in its effect. The former seeks to extend our knowledge and the latter to warn us against mistakes and illusions. It holds in check our natural tendency to transgress, or deviate from, certain rules.

of the soul, theoretical reason can raise no valid objection against our belief. Indeed, on grounds of Reason, which is not merely theoretical but practical also, we are led to believe in an order of ends which extends beyond the limits of experience and of life and therewith in our own existence as going beyond these limits.

CONCLUSION OF THE SOLUTION OF THE PSYCHOLOGICAL PARALOGISM

The fundamental mistake of rational psycholgy lies in the fact that it confuses the abstract concept of the "I" as pure intelligence with the idea of a substantial soul separate from the body. It is on account of this confusion that we are led to believe that we have knowledge of the self as substance, when in fact what we have in thought is simply the unity of consciousness.

How the communion is possible between the spatial physical body and the soul which has no being in space, raises a problem of peculiar difficulty; but the difficulty vanishes when we consider that the two kinds of objects (body and soul) are heterogeneous only as appearances, and that the thing in itself underlying material appearances may not be different in character from the underlying ground of spiritual phenomena.

GENERAL NOTE ON TRANSITION FROM RATIONAL PSYCHOLOGY TO COSMOLOGY

We have said above that the represensation of the self as well as that of the outer world is an appearance. It would however be a mistake to suppose that the self even in thought, i. e. in the proposition

I think, is an appearance. The empirical self known through various mental states is no doubt an appearance. But when we think of self merely as a thinking subject we are not presented with an appearance. Thought by itself is merely the logical function which spontaneously combines the manifold of a possible intuition and does not exhibit the subject of consciousness as appearance. In thought I do not represent myself to myself either as a thing in itself or as an appearance. I merely think of the self as I would think of any objet in general in abstraction from its mode of intuition, and consequently there is no appearance. If I still represent myself as *subject* of thought or ground of thought, I do not accept for myself the category of substance or that of cause which can properly be applied only to sensible appearances. In so far as I think, the " I " that thinks is no mere appearance; "in the consciousness of myself in mere thought I am the *being itself*, although nothing in myself is thereby given for thought." The proposition *I think*, in so far as it is taken as equivalent to " I exist thinking", is no mere logical function, but determines the existence of the subject. But we cannot know the subject as noumenon, for which intellectual intuition would be necessary which we do not possess.

The attempts of rational psychology to extend our knowledge of the self, independently of empirical intuition, beyond the field of experience, have proved a failure. But in moral experience we may find "ground for regarding ourselves as legislating completely *a priori* in regard to our own *existence* and as determining this existence". In moral consciousness there is a spontaneity which seeks to determine our existence independently of

empirical intuition. We freely choose to be what we *ought* to be without any reference to the conditions of empirical existence. But we have still to recognize that although on the strength of moral consciousness we take the self as related to the intelligible or ideal world, this never amounts to a theoretical knowledge of the self.

CHAPTER II
THE ANTINOMY OF PURE REASON

The dialectical inferences of rational psychology about the nature of the soul have been found to be fallacious. Kant is now going to consider the cosmological ideas, ideas in regard to the objective synthesis of appearances with which *rational cosmology* is concerned. These ideas are found to be no less fallacious. The fallacy of psychology is called the paralogism of pure reason; that of rational cosmology the *antinomy* of pure reason. And there is an interesting difference between the two. In a paralogism of pure reason we have a one-sided argument supporting the idealistic conclusion about the nature of the soul. But in an antinomy of pure reason we have two arguments of equal validity and cogency, supporting conclusions which are diametrically opposed to each other. We cannot say that of two such opposing arguments one is right and the other is wrong, because both of them are equally reasonable, and they proceed from the nature of human reason itself, and are not due to any blunder or personal inadvertence. Since human reason itself leads to such contradictions, we may either become quite sceptical about its capacity to give us knowledge about supersensible matters (such as the unconditioned unity of apperances, dealt with in rational

cosmology), or we may dogmatically assert one position only, disregarding the counter-position which is equally reasonable. In either case it would mean the end of sound philosophy.

Section I
System of Cosmological Ideas

In connexion with these ideas two points have to be noticed. In the first place we have to understand that reason does not really generate any concept. All concepts are of the understanding and they are converted into transcendental Ideas when they are made absolute. We know that the categories of the understanding have their proper significance only in reference to possible experience. But when this limitation to possible experience is taken away, and the categories are made absolute or free from the limitation, we get transcendental Ideas. And this is done in the following way:

For a given conditioned, reason demands absolute totality on the side of the conditions which are presupposed by it. Anything conditioned is made possible by its conditions and so when something conditioned is given, reason demands that the entire sum of conditions necessary for it must also be given. The *totality of conditions*, since there is no other condition to determine it, may be called the *unconditioned.* The transcendental Ideas are thus nothing but categories extended to the unconditioned.

The second point is that categories are not capable of yielding us a concept of the unconditioned. We get such a concept from those categories which are concerned with the synthesis of a series of conditions subordinated

to, not co-ordinated with, one another and are generative of a given conditioned. It is only when there is a series of conditions, one member conditioning another and leading finally to a given conditioned, that we demand a totality of conditions for the explanation of the given conditioned. The series conditions may run forward to other consequences beyond the given conditioned, but that part of the series which consists of the consequences of the given conditioned is not pre-supposed by it. What it pre-supposes is the totality of conditions that have gone before it and have conditioned it. And so the totality demanded by reason is to be understood in respect of them only. Thus the idea of totality of conditions applied to time concerns time only in so far as it is past.

The table of ideas is arranged in accordance with the table of categories. Under *Quantity* we find that the idea of totality can be applied to *time* and *space*. Any given present can be understood only as preceded or conditioned by the time that has gone before it. When the present is given, all its past is thereby pre-supposed as already given. The past time constitutes a series of conditions leading to the present and can therefore yield a transcendental concept. Space does not constitute a series like time, but is an aggregate. But in understanding any limited space or part of space, we have to pre-suppose other spaces (parts) which limit it. Thus there is a progression of limits of higher extent and a series is generated to which the idea of totality may be applied.

Under *Quality*, only *reality* in space, i. e. matter, comes into consideration. Its parts are regarded as its internal conditions and the parts of these parts as its remote conditions. We can well imagine the process of division carried to the utmost, till we reach parts that

cannot be further divided, and are therefore quite simple and not composite. Here we have thus a series of conditions and an advance to the unconditioned.

Of the categories of *Relation*, only the category of *causality* yields us a transcendental Idea. Neither the category of substance nor that of community can be so treated as to involve a series of conditions subordinated to one another. The accidents or properties are not subordinated to the substance but are merely the ways or modes in which the substance exists. The substances in community or in reciprocal relation are merely an aggregate and do not form a regular series. There remains only the category of causality; and for a given effect there is always a series of causes leading to the effect, and we can well apply the notion of totality to the series.

Under *Modality*, we find that the *accidental* in existence may be regarded as conditioned, pointing to a condition under which it is necessary and this again may point to a higher condition, and thus there may be a series of conditions in whose totality the *necessary* unconditioned is to be found.

Kant thus believes that guided by the division of categories he has been led to the four cosmological ideas, demanding absolute completeness concerning (1) composition, (2) division, (3) origination of appearances, and (4) dependence of existence of the changeable (accidental) in the field of appearance. The ideas relate themselves to appearance and not to things in themselves.

What reason really seeks in the totality of the series of conditions is the unconditioned. There are two ways in which the unconditioned may be conceived: (1) It may be conceived as consisting of the entire series in which all the members are conditioned and only the

totality of them is unconditioned. (2) The unconditioned may also be conceived only as a part of the series which stands under no other conditions but to which all the rest of the series are subordinated. On the first view the series is without limits and can be called infinite. On the second view there is a first member of the series which, according to the four-fold division of cosmological ideas, represents either the beginning of the world (time), or the limit of the world (space), the simple (reality) or absolute self-activity (causality), or absolute natural necessity (in respect of accidental existence).

These ideas are called *cosmological* because they relate to the world or the field of appearance, and not to noumena. They are so far not transcendent, but still they may be regarded as transcendent because they represent a totality or synthesis which is never given within experience.

Section II
Antithetic of Pure Reason

If thetic means a body of positive judgements, antithetic may be taken to mean a body of negative judgements in opposition to a positive thetic. Kant however uses the term antithetic to include both kinds of assertions.

Our reason cannot remain content with anything short of the unconditioned and is impelled to make assertions about the sum total of things beyond the scope of all possible experience. These cannot be definitely proved to be true or false. Judgements of opposite import can be maintained with equal plausibility in respect of each of the cosmological ideas discussed above. The judgements

are not arbitrary, but arise from the nature of human reason itself. The conflict of these transcendental judgements constitutes the *Antinomy of Pure Reason.* As both sides appear equally reasonable, neither having a better claim to our acceptance than the other, we seem to be faced with a perpetual controversy which in fact we find illustrated in that part of pre-Kantian metaphysics which went by the name of rational cosmology. Kant proposes to enquire whether the object of the controversy is not a deceptive appearance.

His method of procedure which consists in "watching or rather provoking a conflict of assertions" with the view of discovering the point of misunderstanding. It is called by him the *sceptical method.* The sceptical method which aims at right knowledge and therefore presupposes the possibility of such knowledge, is altogether different from *scepticism* which dispairs of all knowledge. Kant points out that the sceptical method is essential to transcendental philosophy, and can be dispensed with in other fields of enquiry, such as mathematics, experimental philosophy (empirical sciences) and ethics, because in them other means of removing error are available within experience, whereas in transcendental philosophy which ventures beyond all experience, no appeal to experience will serve any purpose.

First Conflict of the Transcendental Ideas

Thesis: (*a*) The world has beginning in time, and (*b*) is also limited as regards space.

Proof: (*a*) Let us assume that the world has no beginning in time. Then up to any given moment, an infinite time must have elapsed, that is to say, an infinite series of the states of the world must have completed

itself and come to an end. But from the nature of the case, an infinite series can never come to an end. Therefore the world cannot be beginningless in time.

(*b*) As regards this point also, let us suppose that the world is not limited in space. The world will then have to be conceived as an infinite given whole of co-existing elements. But such a whole, which is not given in intuition, will have to be constructed by successive synthesis of its parts. But an infinite whole would require infinite time to complete the synthesis of its parts, and we should never have it as a given whole. The world cannot therefore be infinite in extent, but must be limited in space.

Antithesis: (*a*) The world has no beginning in time, and (*b*) no limit in space. It is infinite as regards both time and space. *Proofs*:- (*a*) If the world had a beginning in time, it would be preceded by an empty time in which it did not exist. But no beginning is possible in empty time, because there is absolutely no reason why a beginning should be made at a particular moment rather than at some other moment, all moments being equally empty. Since no beginning in time is possible, we have to suppose that the world has no beginning in time.

(*b*) If the world were limited in space, there would be space beyond the world. The world should then be related to this empty space which would prescribe limits to the world. But empty space is no object (space being only a form of appearances and not by itself an appearance), and so no relation of the world to it is possible. The world, therefore, cannot be limited in space.

Second Conflict of the Transcendental Ideas

Thesis: Every composite substance in the world is made up of simple parts, and nothing but the simple or what is composed of the simple exists anywhere.

Proof: Supposing that composite substances are not made up of simple parts and there is no substance that is simple, then if we think away composition, all substances would be also thought away, and nothing would remain. But since substances do exist and cannot be thought away, the supposition that composite substances are not made up of simple parts must be false.

Composition is here understood as an accidental relation into which things enter, but which is not essential to their existence, so that they may very well exist outside this relation. We can understand the existence of composite substances or the composition of substances in this sense only when we grant in thought the prior existence of simple substances.

Antithesis: No composite thing in the world is made up of simple parts, and there exists nothing simple anywhere.

Proof: All composition of substances is possible only in space, and a space occupied by a composite substance must have as many parts as the parts of the composite substance. Now since the parts of space are not simple but are themselves spaces, the parts of a composite substance cannot be also simple, because, as occupying space, they will always contain a manifold of elements external to one another.

Nothing ever presents itself to our external or internal perception which does not contain a manifold, and so it is concluded that nothing simple exists anywhere in the world.

Third Conflict of the Transcendental Ideas

Thesis: Causality according to the laws of nature is not the only causality which can explain all the appearances of the world. To explain these appearances we have to suppose that there is also a free causality.

Proof: If causality according to the laws of nature were the only causality, then whatever happened would presuppose a previous state as its condition, and this previous state would itself be conditioned by some other state going before it. In the series of cause and effect there would be no cause which was not the effect of, and thus conditioned by, some other causes. We should thus get no complete cause but only subordinate causes. But the law of nature demands that for everything that happens there should be a cause sufficiently determined. We must therefore assume a complete cause, which produces its effect without itself being conditioned by some other cause. In other words, we must assume a free cause.

Antithesis : There is no freedom. Everything happens in the world solely according to the laws of nature.

Proof : If there were a free causality, it would produce a series of changes without being determined thereto by anything else. This would mean that there is a state of the cause (by which a change is initiated) which has no causal connexion with its antecedent state. This goes against the law of causality and would destroy the the unity of experience. Therefore, freedom is a chimera of thought and is not to be met with in any experience.

Fourth Conflict of the Transcendental Ideas

Thesis : An absolutely necessary being belongs to the world either as its part or as its cause.

Proof : The sensible world exists in time and therefore contains a series of changes each of which is conditioned by what precedes it. Without such a series of changes, time itself cannot be represented. Now the conditioned, for its complete explanation, requires a complete series of causes rising up to the unconditioned or what is absolutely necessary. What is itself conditioned is not a complete explanation of what is conditioned by it. So an unconditioned or absolutely necessary being is presupposed by the series of changes found in the world. But a necessary being can condition the series of changes only by being antecedent to it in time. That is to say, it must fall within the same temporal world.

Antithesis : An absolutely necessary being exists neither in the world nor outside it as its cause.

Proof : Let us suppose that a necessary being exists in the world ; then it must be either a part of the series of changes or the whole series. That is, we have to suppose either that the first member of the series is unconditioned and necessary, which conditions all other members, or that the series as a whole is necessary, although every member in it is contingent. The first supposition goes against the dynamical law of determination of all appearances in time, and the second supposition contradicts itself, because a series of changes cannot be necessary when no single member of it is necessary.

Let us now suppose that an absolutely necessary cause of the world exists outside it. Now this necessary being, as it must initiate the series of changes in time, must itself act in time and acting in time it must fall within the world of appearance, which goes against our supposition. Thus a necessary being exists neither in the world nor outside it.

Section III
The Interest of Reason in these Conflicts

The *Antinomies of Pure Reason* are concerned with matters that are of paramount interest to men. As we have seen, they deal with such questions as whether the world has a beginning, wether the soul is simple and therefore immortal, whether the will is free, and whether there is a primordial being, God, from whom the world derives its existence. These questions affect the vital interests of men, moral and religious; and one would make any sacrifice to gain sure knowledge on these subjects.

Kant finds that there are after all only two parties, one of which supports the thesis under each head, and the other the antithesis. The first party, which supports the thesis, represents the *dogmatism* of pure reason, while the other party, upholding the antithesis, is wedded to the principle of pure *empiricism*. The interests of religion and morality are served by the first party inasmuch as it is in favour of God, freedom and immortality. The interests of science and knowledge are served by the other party, inasmuch as it is loath to leave the field of experience and recognizes no principle which transcends experience.

However, the first party goes wrong when it vainly claims to prove, and thus to know, what is obtained through faith and is never to be found within experience. The second party similarly goes wrong when it flatly denies what is not amenable to empirical observation, and thus, in the interest of extreme empiricism, tends to destroy the validity of moral principles. Mere empiricism, although it subserves the purpose of true and verifiable knowledge, cannot satisfy us, not only because it goes

against our moral and religious interests but also because it can offer nothing final for our understanding. It leads us in endless regress from one conditioned state to another and never yields us the unconditioned. So our intellect finds no resting place and fails to understand any phenomenon completely or to achieve a completed view of the world which would be satisfactory to reason.

Section IV
The Absolute Necessity of a Solution of the Transcendental Problems of Pure Reason

There are certain branches of knowledge in which questions may very well arise which we are unable to solve. In natural sciences, for instance, in which we are concerned with phenomena that are not wholly dependent on us and certainly involve elements outside us, we may be unable to answer many questions for lack of sufficient data.

But in transcendental philosophy we are not concerned with objects given from outside, but only with concepts offered by pure reason, and in regard to them there cannot be any problem insoluble to that same reason. In transcendental philosophy the very concept which enables us to raise the question also provides the object to which the question relates, and we cannot therefore plead ignorance with regard to it. However, it is only in regard to cosmological questions that we can demand positive answers. When the questions relate to transcendent objects like the self or God, as in rational psychology and theology, we can say that they are not questions at all, as they refer to no objects that can be given. Here "No answer" is the answer. But in rational cosmology we are concerned with the objects of experience (appearances) and their syn-

thesis: The cosmological problems arise from the fact that we conceive the synthesis of appearances in its absolute completeness. The problem will be solved when we make clear to ourselves the exact significance of the idea which stands for such absolutely complete synthesis of the objects given in experience. The synthesis of appearances given in experience is only partial and relative, and in view of this fact, we have to find out the meaning of the idea which postulates absolute completeness in the synthesis. We have only to guard ourselves against that amphiboly or error which transforms our idea into a supposed representation of a given object and thus makes it an object that can be empirically known.

Section V
Sceptical Representation of the Cosmological Questions

Dogmatic answers to the cosmological questions raised by the antinomies would bring no real enlightent ment to us because, on examination, it would be found that the answers, whether affirmative or negative, are equally "empty of sense". Whatever validity we may claim for the ideas, they should be understood in reference to the objects of experience, but when we try to interpret the ideas in this reference, we fail to give them any exact meaning, because there are no possible objects yielded by experience, which will exactly correspond to the ideas, whether we take them as meant by theses or by the antitheses. If we think of the world as having no beginning or being without any limit, we obviously ge an idea which far transcends the limits of all empirical concepts. There is no concept of the understanding by

which a beginningless or limitless world can be represented. If, on the other hand, we think of the world as having a beginning in time or as being limited in space, we are constrained to posit something beyond the world which would condition or limit the world. We may think and regard the world as infinitely divisible or as composed of simple parts. We may think of it as admitting no free causes or as being of the opposite character. In every case we find that the cosmological idea does not fit the world of experience from which alone it can derive its meaning and significance. The cosmological idea is either *too large* or *too small* for any concept of the understanding.

Section VI
Transcendental Idealism as the Key to the Solution of the Cosmological Dialectic

Kant thinks that the key to the solution of the cosmological problem is to be found in his *Transcendental Idealism*, according to which whatever is objectively given to us, in external or internal perception, is an appearance and has no independent existence. An appearance is after all a representation which cannot exist apart from, or independently of, the representing mind. It is to be distinguished from the thing in itself which exists independently of our representation and to which we may suppose our representation to be due.

Transcendental Idealism is not to be confused with empirical idealism which denies the existence of outer things only and retains the existence of the objects of inner perception (mental states). For Transcendental Idealism, the objects of both inner and outer perceptions are equally appearances and the outer objects have as

good a title to (impirical) reality as the inner states.

Ultimately our perceptions are real and whatever can be connected with them by empirical advance is also real. The past is real only in the sense that it is connected through unbroken steps with our present experience. If anything not within our present experience is supposed to be real now, it is because we believe we can encounter it in a possible empirical advance from our present experience. In any case we have always to deal with appearances and they are distinct from things in themselves, of which no experience is possible. Only the conditioned is to be met with within experience and the unconditioned, for which the Idea of Reason stands, can be no object of experience and so no objective reality should be ascribed to it.

Section VII
Critical Solution of the Cosmological Conflict of Reason with itself

Kant points out the fallacy in the argument which underlies the cosmological antinomies. The argument is as follows : If the conditioned is given, the whole series of all its conditions is also given; the objects of the senses are given, therefore the whole series of all their conditions is also given. The major premise holds good of things in themselves. It is only when the conditioned is a thing in itself or independently real, that we can legitimately say that, when the conditioned is given, all its conditions are given. In the minor premise we are speaking of the objects of the senses which are only appearances and are not therefore things in themselves or independently real. They exist in so far as we perceive them. When these are

given, we cannot legitimately say that all their conditions are likewise given. The antecedent conditions of any given appearance are not given at all. They exist as appearances only in so far as we regressively construct them in thought. When an appearance is given, a task no doubt is set to our mind to reach out in thought to some other appearance as its condition. But the conditioning appearance is not given and has no existence save in our mental construction of it in regressive thought

The above argument is thus fallacious, because the *conditioned given* has different senses in the major and minor premises. In the former it refers to what is independently real and in the latter to mere appearance. Kant calls this fallacy *Sophisma figurae dictionis* (the fallacy of deceptive expression). We can very well think of the absolute totality of conditions in terms of things in themselves, when we take them to be given, as in the major premise in the above argument without any temporal limitation. The things in themselves are not subject to time. But we cannot think of the absolute totality of conditions which are appearances, because the members of this series, being appearances, have to be reached successively in time one after another and are not given and do not exist except as so reached through successive regress.

The thesis and the antithesis in each case are supposed to contradict each other, so that it might appear that one of them must be true. But when each of the two conflicting assertions is based on an illegitimate presupposition, both of them may alike be false. This is really the case here. When it is said that the world is finite (thesis) or that it is infinite (antithesis), both the propositions are false, because they imply that the world as a thing in itself has a determinate magnitude, finite or

infinite; and it is illegitimate to apply any category and so the category of magnitude to a thing in itself. If we conceive the world as a thing in itself, then it is illegitimate to apply the category of magnitude to it. If we think of itas appearance, then it is wrong to suppose that the series of the appearances, which constitute the world, can ever be given in its entirety to be determined either as finite or infinite. Kant describes such conflict between two propositions both of which can be false as *dialectical opposition.*

In the four-fold antinomy of pure reason we find only dialectical opposition and no real contradiction. What makes the thesis and the antithesis alike false is the underlying illegitimate presupposition that the idea of absolute totality, which holds good of things in themselves, is applicable to the world of appearance also.

In Kant's opinion, the discussion of the antinomies supports the view that the world of space and time is an appearance only. If the world existed as an independent whole, i. e. a thing in itself, it would be either finite or infinite, but the arguments for the thesis show that it is not infinite, and the arguments for the antithesis show that it is not finite. The world is thus neither finite nor infinite, which means that it is not a thing in itself or independently real. The world then consists only of appearances which are nothing outside our representations. Thus we get here a confirmation of the doctrine of *Transcendental Idealism* propounded in the Transcendental Aesthetic.

Section VIII
The Regulative Principle of Pure Reason in its Application to the Cosmological Ideas

The idea of totality in regard to conditions, implied

by what is given as conditioned, does not signify anything *given* in the object, but only something *set as a task.* The principle of pure reason in this regard does not hold as an *Axiom* that the totality is to be thought of as actually given in the object, but only as a *Problem* in the sense that, for anything conditioned, one has always to search for the series of conditions *as if* they could all be found completely. It thus does not state a fact but prescribes a rule as to how the understanding should proceed. As such, no doubt, it is quite valid, as one can see from the fact that our understanding never rests satisfied with conditions which are themselves conditioned, but always pushes its enquiry beyond them under the idea that the series of conditions should be completed. This rule does not tell us whether the unconditioned or the series of conditions as completed exists anywhere, but it tells us merely how the empirical enquiry into conditions of things is to be carried on. The rule is *regulative* only and is devoid of objective significance. Space, time, and the categories, as conditions of possible experience, constitute the object of experience, but this rule merely guides our understanding in its empirical enquiry and so is only *regulative* and not *constitutive.* We should commit a great mistake if we ascribed objective reality to the idea of totality, which is valid only as an ideal to be followed by the understanding in empirical enquiry.

Kant makes a distinction between *Regressus in infinitum* and *regressus in indefinitum.* When a whole is given in empirical intuition, the regress in the series of its conditions, i. e. its parts, may be carried on *in infinitum.* (It is to be understood that a whole is conditioned by its parts and when a whole is given, its parts are also given, but the division of these parts to infinity

is not given.) When however we have to trace out the higher conditions of a member of a series, the regress is only of an indeterminate character (*in indefinitum*). But in neither case can we conceive that the series of conditions as infinite is given in the object. It would have been so, if we were dealing with things in themselves and not with appearances.

Section IX
The Empirical Employment of the Regulative Principle of Reason, in respect of all Cosmological Ideas

We can now see the positive significance of that conflict of reason with itself which is illustrated in the antinomies. We should be wrong, no doubt, if we applied the idea of totality as objective to appearances. But nothing but good will result from our using this idea as a demand on our understanding to carry forward its investigation of empirical phenomena to the farthest possible extent. A principle, which would otherwise be *dialectical,* will be thus converted into a *doctrinal principle.* That is, instead of being deceptive, it will lead to fruitful results.

I. Solution of the First Antinomy

The *first antinomy* concerns itself with the question whether the world has a beginning in time or an extreme limit in space. The question is significant when we conceive the world as a whole. But the world as a whole does not exist as an object of experience. It is a mere *Idea* of reason. The unconditioned, which would limit the world and round off the series of appearances, can

never be experienced. What we ever perceive and experience is in time and space, and therefore, has always something prior to it and going beyond it. The world which means the world of appearance given to perception has therefore no beginning in time and no extreme limit in space.

But this does not mean that the world is infinite in magnitude. We have to keep clear before our view what we have got from the *Idea* of reason here. We have merely a *rule* that beyond any condition given in experience, we have to look for a further condition determining the given condition. We never have the whole object given to us, so that we might determine its quantity, whether finite or infinite. The regress in the series of conditions does not proceed *in infinitum* but *in indefinitum*. The series is not infinitely extended but only *indefinitely extensible*. We thus see that both the thesis and the antithesis of the first antinomy are wrong. The world is neither finite nor infinite in extent. It can be only indefinitely extended.

II. Solution of the Second Antinomy

When a whole is given to us in intuition, we know that its parts are also given at the same time, (because the whole contains the parts), and that its division or the regress from the conditioned (whole) to the conditions (parts) proceeds *in infinitum* and not *in indefinitum*. But to say that a whole is infinitely divisible is not to say that it consists of an infinite number of parts. To say that a thing consists of an infinite number of parts is to say that it is infinitely *divided* (and not merely that it is infinitely *divisible*). But when a whole is given, its division into parts, whether finite or infinite, is not given

at the same time. The whole contains the parts, no doubt, but not the division into parts. Such division realizes itself only in the actual analysis of the whole into parts. Thus although space or what is presented in space is infinitely divisible, we cannot say that it consists of an infinite number of parts.

The division of a spatial whole can be continued as far as we like, and we shall never arrive at any final parts. But this does not mean that everything in the spatial world is complex. To be complex is to consist of parts. But the parts, as parts, emerge only in the actual decomposition of the whole and never before it. As we are dealing with the world of appearance, and not with things in themselves, we have to realize that parts exist only in our devision of a whole, and never in themselves. Thus it is again wrong to say that the world or anything in it, consists of a finite or infinite number of parts.

The Distinction between the Mathematical--Transcendental and Dynamical--Transcendental Ideas

In the first two antinomies, which are called *mathematical*, we are concerned with series that contain only homogeneous members. In fact we are there concerned with the mathematical category of quantity, and only what is homogeneous can be brought under it. In the remaining two antinomies, which are described as *dynamical*, we are concerned with notions that may be different in character or heterogeneous. Neither the ideas of cause and effect nor those of necessity and contingency are required to signify things of the same kind. The mathematical ideas combine what is homogeneous, but the

dynamical ideas may connect even what is heterogeneous. The cause may very well be altogether different in kind from the effect, and similarly the necessary from the contigent.

From this there arises a welcome possibility. Whereas in the mathematical antinomies both the thesis and antithesis have to be denied as being false, in the dynamical antinomies both may be true, the thesis applying to the things in themselves, and the antithesis applying to the world of appearance.

III. Solution of the Third Antinomy

The category of causality is essential to our knowledge of things given in experience. As applied to experience it means that whatever happens has a cause which precedes it in time. But the cause itself, being an existence in time, is something that comes into being and is not eternal, and therefore requires a cause going before it. In this way we get, in the empirical field, an endless causal chain which cannot be completed. But reason cannot rest satisfied with an essentially incomplete, endless series. Reason therefore forms the idea of a *free* cause which acts spontaneously without being caused by anything else. The free cause cannot exist in time, since whatever is in time must have a cause going before it, and a free cause by definition is not caused by anything else. We have thus two sorts of causality: (1) causality according to nature, which is involved in our knowledge of any natural event, and (2) free causality. Natural causality is illustrated by all appearances, which must always stand in some temporal sequence, and without such sequence we cannot understand any appearance at all.

But what about free causality? We do not of course meet with free causes in the realm of appearances, where every cause is, in its turn, an effect of some other cause. Thus our experience of the world or nature gives us no evidence of freedom. But our moral experience presupposes freedom or free causality. There is nothing good or bad, moral or immoral, in a thing which happens with absolute necessity in the course of nature. We can credit any being with moral worth when and only when we suppose that he can by himself spontaneously initiate a series of effects without being determined to it by any other external cause. If we deny the transcendental *Idea of Freedom*, which is offered by reason and is not derived from any experience, we have to deny moral experience also. But how can we accommodate freedom in a world which is guided by natural laws?

Now if the world of experience were the reality, there would be no room for freedom. But we know that the world of experience consists of mere appearances, which must have grounds not given to experience. These grounds are the things in themselves. Every event, which is an appearance, has an intelligible *ground* and an empirical *cause*. Time is a form of appearance only and so it does not apply to things in themselves. The causality of an intelligible ground in respect of any effect is not determined by any antecedent cause, because 'before' or 'after' or time itself has no meaning with regard to it. This causality is quite free. We thus see that for an empirical effect there may be *two causes*, a free intelligible cause (in the world of things in themselves) which is neither before nor after nor simultaneous with it, and an empirical cause (in the world of appearances), which

precedes it in time and is again caused by something else. We are thus enabled to understand that both the thesis and the antithesis may be true, the former in respect of things in themselves and the latter in respect of appearances. God may be the free cause of the series of appearances which constitute the world, and we as moral agents may be the free c uses of our actions, while any event within nature is bound up with its antecedent condition by natural causality.

Possibility of Harmonizing Free Causality with Natural Necessity

It is a little difficult to understand how an event can be subject to two-fold causality, both free and necessary. If an event can be explained by natural causality by reference to its antecedent events which necessarily lead to it as their effect, what need or justification is there for introducing here any causality that cannot be verified within experience? Kant tries to meet this difficulty by pointing out that we do not get a complete comprehension of an event by reference to other events only. They are all mere appearances which are not possible without some transcendental ground. Everything that happens, or is in nature has a two-fold character. First it is a member of a series of appearances, and secondly, it is grounded in a transcendental object. As an appearance, it is no doubt determined by other appearances, but for being what it is, it is also dependent on the transcendental object which lies at its foundation. It should be clear that although we are speaking of causality in both connexions, the causality of the transcendental object in respect of an appearance is very different from the causa-

lity of an appearance in respect of another. We can trace an effect to its cause in the natural field, but we cannot in a similar way trace an effect to its super-sensuous cause. Still we cannot ignore the demand for such a cause, because the appearances themselves not being self-explained, we require a transcendental ground which may be supposed to determine them to be what they are in their character as appearances.

Explanation of the Cosmological Idea of Freedom in its Connexion with Universal Natural Necessity

But evidently the hypothesis of a transcendental ground cannot be verified in experience. Within experience we find that natural causality rules universally and there is nothing in the world which is exempt from this rule. Still, we can suppose that this causal relation itself, found everywhere in the world of appearance, may be due to some transcendental or noumenal condition. That the appearances are what they are, with their spatial and temporal form and causal connexion, may be due to some noumenal ground. That this supposition is not at all extravagant, but even necessary, Kant tries to show by referring to our moral experience.

Man with his birth and death is a natural existence. He is part of nature, and all his actions are natural events, explicable by natural causes, like other events. But man is not wholly a creature of nature. Through apperception he is aware of himself not only as a sensible existence, but also as possessing certain faculties, such as understanding and reason, which are not empirical but intelligible in character. Especially reason as *practical* gives evidence of something which forms no part of

nature. In nature we may discover what was, is, or will be; but nowhere in nature can we find any indication of what *ought to be*. *Ought* expresses a kind of necessity which is nowhere found in nature. Our moral action thus reveals a causality which goes beyond nature. An action, so far as it is merely a natural process produced by natural causes, is neither moral nor immoral. It is moral only when it is determined by the ideal of reason which is certainly not a natural agency.

All our moral judgements presuppose belief in a free cause. We cannot praise or blame a man for actions that are merely products of natural causes. When, e. g. we condemn a man for any moral offence, we do not take into account the natural causes that have led to it. We do not consider the bad education and the inherited dispositions to moral offence which might have operated as natural causes of the offence. We consider the moral agent as absolutely free and by himself able to start a new series of effects. Without a belief in freedom, moral judgement has no meaning.

The above arguments do not *prove*, and they are not meant to *prove,* that there are actually free causes. They only show that there is nothing absurd in the idea of free causality and that it is quite compatible with our view of nature as thoroughly governed by natural causes. We should only recognize that the idea of free causality is a Transcendental *Idea*, and the *third antinomy* of reason is due to the illusion which would apply this Transcendental *Idea* to the empirical field, i. e. the world of appearances.

IV. Solution of the Fourth Antinomy

The *fourth antinomy* differs from the third only in

the fact that in it we are concerned with the unconditioned existence of a substance, while in the third we are concerned with unconditioned causality only. But the solution of this antinomy is the same as that of the third antinomy. We are made to realize that both the thesis and the antithesis may be true, the former in respect of the intelligible ground which underlies the world of sense, and the latter in respect of the world of sense itself.

Everything in the world of sense is contingent. Every appearance depends on some other appearance as its cause, and we can never meet with the unconditioned in the world of appearance. But this thoroughgoing contingency of all things in nature does not preclude the possibility of an intelligible ground, which is absolutely unconditioned and on which the world of sense depends. It is a fact that nothing in the world is unconditioned and the unconditioned can never come within experience. But this fact does not mean that the unconditioned is nowhere real. The world of sense is a mere appearance and it cannot be self-grounded. However far we may trace the series of appearances, from effect to cause, we shall never come across any member that can be regarded as the unconditioned cause of all others. Every member in the series of appearances has a preceding member. So, for a complete explanation such as our reason demands, we have to take a leap beyond the series of appearances, and conceive a non-empirical ground which, without being a member of the series at all, conditions the whole series. We do not assert that such an intelligible ground exists or that we can ever know anything about it. We merely say that the hypothesis that such a being is the ground of the world of sense, is not contradicted by the fact of the thoroughgoing contingency reigning in the world.

Concluding Note on the whole Antinomy of Pure Reason

So long as our ideas concern only the unconditioned totality of sensible appearances they are still *cosmological*; but when they relate to the unconditioned outside the world of sense, they cease to be cosmological and become *transcendent*. This is the case with the idea which has given rise to the fourth antinomy. We are led by it beyond all appearances and think of a being who is outside of nature and experience. The understanding presents the world as a series of contingent appearances, and we are constrained to think of something which terminates the series and is absolutely different from all appearances. But how are we to think of this self-subsistent reality of which there can be no experience? We make use of the pure concepts of things in general in abstraction from the forms of sense and, by analogy, form the *Idea* of an absolutely necessary being. The concept of an absolutely necessary being (God) is the subject of enquiry in the next chapter of the *Transcendental Dialectic*.

CHAPTER III
THE IDEAL OF PURE REASON
Section I
The Idea in General

The *categories of the understanding* by themselves do not represent any objective reality. In themselves they are mere forms of thinking. They represent objective reality and are really significant only when they are applied to appearance or to material supplied by our sensibility. They are then exhibited *in concreto*.

The *Ideas of Reason* also refer to appearances, but since they aim at an absolule completeness that can nowhere be found *in concreto* they do not represent any objective reality. The ideas are thus further removed from objective reality than the categories. But the *Ideal of Pure Reason* is still further removed from objective reality than even the Ideas, for it refers to no appearance at all and yet stands for "an individual thing determinable or even determined by the idea alone".

Our *ideas* and *ideals* have no creative power, in the sense that they cannot by themselves bring into being what is signified by them. Still, as regulative principles they can guide our activities. Such for example are our moral concepts. Virtue and wisdom are *ideas*, but the Wise Man of the Stoics is an *ideal*, because by the term "Wise man" we understand an individual being who is in complete conformity with the idea of wisdom. The idea gives the rule and the ideal serves as the archetype.

The ideal exists only in thought and has no objective reality. It cannot properly be represented in any appearance, not even in a romance. But it should not on that account be regarded as a figment of the brain, It supplies us with an indispensable standard of reason by which we judge ourselves, and in the light of which we try to reform ourselves, although we can never reach it.

The *ideals of reason* are to be sharply distinguished from the *ideals of imagination*, such as, for instance a painter may be supposed to carry in his head. Such ideals are formed out of the materials supplied by diverse experiences, in accordance with no definite rules and never attain to any very definite form. The ideal of reason, on the contrary, is regarded as completely deter-

minable according to *a priori* rules and contains nothing that is drawn from experience.

Section II
The Transcendental Ideal

If we are to know any one thing quite definitely, we have to know, in a way, all that is possible in general. Whatever exists is completely determined, and we can determine a thing completely only by applying to it all the possible positive and negative predicates. But where are we to take these predicates from? They can be obtained only from the sum-total of all possible predicates. Thus it seems that in order to know any one thing in particular, we have to compare it with the sum-total of all possible predicates and select from this sum-total, for positive and negative assertion, whatever predicates are suitable to the particular thing in question.

But what is this sum-total of all possible predicates? Does it contain both positive and negative predicates? Is it itself quite determined? Is it an individual being or a mere aggregate?

We have to realize first of all that negation is never a primary fact. No negation is by itself intelligible which is not based on the opposite affirmation. Only when we know what is light, can we know darkness which is the negation of light. A man born blind cannot conceive darkness because he has no notion of light. All negations are thus derivative. Mere negations do not determine anything. Even when a thing is determined by both positive and negative predicates, it is the positive predicates or the realities that constitutes the basis of such determination. We can say what a thing *is not*, only on

the basis of what it *is*. The sum-total of all possible predicates, in reference to which alone all determination becomes possible, is thus a totality of positive predicates or realities.

This is the sum-total of all realities. All predicates for the determination of any finite thing are drawn from it. And it is not itself indeterminate. Out of every possible pair of contradictory predicates, the one that expresses reality belongs to it, and it is thus determined to absolute particularity or concreteness by all these infinitely numerous positive predicates. It is the source of all determination of all finite realities. It is their ground and not an aggregate of them. All finite realities are copies or ectypes of which it is the prototype or *ideal*. We may call it the *being of beings* or the *first being*.

We can easily see that this is really the Transcendental *Ideal* because it is determined by the idea alone. When we hypostatize or personalize this ideal, we think of it as God. But although we are inevitably led to this hypostatization, we cannot say that we are justified in hypostatizing what is merely in ideal of reason. It can at best be described as a transcendental illusion and it occurs in this way: We know that an empirical thing is real only in the context of experience, i. e. in relation with other empirical things or appearances. Thus the totality of all appearances is the ground of the reality of any appearance. Now what is true of an empirical thing is supposed, through a transcendental illusion, to be true of things in themselves. The ground of their reality is supposed to be the totality of all reality which is then conceived as God. There is a three-fold mistake here. First, we carry over to things in themselves what is true only of appearances. Secondly, we forget that experience is never given in its totality (collective unity), but only

in parts (distributively). Thirdly, the totality of reality or the collective unity of all things in themselves is confused with an individual single thing and conceived ultimately as an intelligent thing in itself or *God.*

Section III
The Arguments of Speculative Reason in Proof of the Existence of a Supreme Being

We are certainly wrong in thinking of the ideal of reason as actually existing, but there is a special reason for committing this error. Whatever we meet with in experience is conditioned and has a contingent existence. Our understanding by its very nature cannot rest content with what is merely conditoned and contingent. It demands an unconditioned and necessary being to serve as the ground of all conditioned and contingent appearances. And the *being of beings*, as we have described the transcendental ideal to be, which is the sufficient ground of all others, appears most fitted to fulfil this demand of the understanding. One therefore thinks that the highest reality is not merely an ideal, but enjoys necessary existence. We want an unconditioned and necessary being to provide sufficient ground for all contingent existences, and our concept of the highest reality seems to answer all that is needed for such a ground. What is a mere logical concept is thus transformed into a divine existence.

Kant points out that there are only three possible ways in which the existence of God may be sought to be proved. We can argue (1) from experience, or (2) from mere concepts. When we argue from experience, we may argue (a) from the definite experience of some particular

things, or (b) from the indefinite experience of anything. Thus (1) from the particular character of things found within experience, namely from their adaptation to certain ends, we can infer the existence of God as their cause. This is called the *physico-theological* or *teleological* proof of God. (2) Secondly, from anything that is given in experience, and which is always conditioned, we may conclude the existence of God as unconditioned and necessary. This is called the *cosmological* proof. (3) Thirdly, from the mere concept of God we may deduce *a priori* the existence of God. This is called the *ontological* proof. Kant proceeds to discuss these proofs one by one in the reverse order.

Section IV
The Impossibility of an Ontological Proof of the Existence of God

It is supposed that we have the idea of an absolutely necessary being, and that the existence of such a being follows from our mere idea of it. Kant shows first of all that such a necessary being cannot really be conceived, and even if it could be conceived, its existence would not follow from the concept of it.

Whenever we think of anything as necessary, we have to think of conditions which render it necessary. Whatever is necessary is so only under certain conditions. But when we remove all conditions and try to think of something as absolutely or unconditionally necessary, we fail to secure any intelligible content. When all conditions are removed, as is required by the idea of the unconditioned, we cannot then significantly think of anything as necessary.

The examples of what is absolutely necessary are always judgements, such as those of Geometry. It is absolutely necessary that a triangle should have three angles. "But the unconditioned necessity of judgements is not the same as an absolute necessity of things." The so-called absolute necessity of a proposition like "A triangle has three angles" is only a conditioned necessity. The above proposition does not say that three angles are there unconditionally, but that they exist only under the condition that a triangle exists. If we are to think of a triangle, we have to think of it as having three angles. That a triangle has three angles is an identical judgement. Of such a judgement we cannot reject the predicate while retaining the subject, because that would give rise to a contradiction. But no contradiction would result if we reject both the subject and the predicate, because nothing would be left to be contradicted. Although it is a contradiction to deny three angles of a triangle, it is no contradiction to deny the triangle together with its three angles. Similarly, "God is omnipotent" is an identical judgement and it would be a contradiction to deny omnipotence to God. This only means that if we once grant the existence of God, we cannot deny omnipotence of him. But without any contradiction whatever we can deny the existence of God together with all his omnipotence. If existence formed part of the content of any concept, as the property of having three angles forms part of the meaning of a triangle, the denial of existence in reference to such a concept would involve a contradiction. The idea of God does not include existence as an element, and so it is no contradiction to say that God does not exist.

It is however supposed that the idea of God conceived as *ens realissimum* (the highest reality) contains

existence as an element in it, and so it would be a contradiction to deny the existence of God. Against this view Kant contends that existence forms no part of the concept of any object whatever. No concept either gains or loses anything in content by the addition or subtraction of existence. If there is any defect in any concept, then the appropriate object of that concept even when it exists, will equally show that defect, and will not be rid of it by the fact of its existence. If in any existing object we find anything more than what is contained in the concept of it, then we know without a doubt that the concept is of some other object and not of the object we are considering. This shows that existence does not add anything to the content of any idea. We find that a hundred possible thalers are not a whit less than a hundred real thalers.

When existence adds nothing to, and so is not a part of, the content of an idea, it is clear that existence cannot be used as the predicate of an analytical proposition. There is no idea by a mere examination of which we can say whether the object of it exists or not. All our existential judgements are synthetic and we can learn only from experience what things exist. We may possess the most perfect idea of the supreme being, but the question will still remain whether this being exists.

It is quite plain that we cannot assert the existence of a sensible object from our mere idea of it. If we are to assert existence of it, it must be either itself actually perceived or be connected by empirical laws with what is actually perceived. Existence has no meaning for us, except in relation to possible experience, The concept of a supreme being is an *Idea* of pure reason and is never presentable in experience. It is a mere idea, and it can

never help us to know what exists or is even possible in fact. For such knowledge we must turn to experience.

Kant is not saying that God does not exist. His position is that we do not know that God exists and that it is impossible to derive this knowledge from the mere idea of God. We can never pass from the idea of a thing to its existence, because existence is not a part of the content of any idea.

Section V
The Impossibility of a Cosmological Proof of the Existence of God

In the ontological proof there is no reference to any experience; the argument is completely *a priori*. The *cosmological* proof refers to experience, though not to any particular experience, and is not completely *a priori*. It proceeds in this way: If anything exists, then there must also exist an absolutely necessary being. Now I at least exist, therefore the absolutely necessary being also exists. The argument does not refer to any specific experience, but any experience or the experience of anything will serve its purpose. Since the object of all possible experiences is called the world, the argument is described as *cosmological*. This is also described, as by Leibniz as a proof from the contingency of the world (*a contingentia mundi*), since what it says in substance is that because everything in the world is contingent, anything in it presupposes a necessary being as its basis or cause.

Since whatever is experienced is contingent, the necessary being presupposed by experience must be beyond all experience. Experience therefore cannot help us in determining the characteristics of the necessary

being. We cannot learn from experience which among all possible things it is that contains in itself the condition of absolute necessity. To learn this we must turn to our *a priori* concepts, and when we do so, we find that there is one and only one concept which satisfies the condition of absolute necessity or determines a thing completely, without referring us to anything beyond itself. This is the concept of the *ens realissimum*. Since our understanding cannot remain satisfied with contingent existences, we know, according to the demand of reason, that there must be some being which enjoys necessary existence. This does not suffice for us to identify this being. But the concept of the *ens realissimum* gives us the idea of a being that contains no borrowed reality and depends on no other being, it being the highest reality itself. We know thus that the absolutely necessary being is to be thought through the concept of the *ens realissimum*, or in other words, that a supreme being necessarily exists.

The nerve of the argument is constituted by the identification of the necessary being with the *ens realissimum*. Unless the concept of the *ens realissimum* answered the conditions of necessary existence, we could not determine in fact the absolutely necessary being presupposed by our contingent experience. But if the concept of the highest reality, or the most real being, is so far adequate that from an examination of the concept alone we know that it suffices for necessary existence, then we might simply deduce necessary existence from the concept of the highest reality. This is exactly what the ontological argument maintains. And if that argument is found to be invalid, the cosmological argument, is no less invalid. It is even worse than the ontological

argument, because it professes to prove the existence of the highest reality on the basis of experience, and so in a manner different from that of the ontological argument, but in actuality it merely repeats the ontological argument itself and so illustrates a case of a mere *ignoratio elenchi*.

Besides, this proof is based on several unwarrantable assumptions. First, in inferring a necessary being from the contingent it makes use of the principle of causality which is assumed to be valid in respect of the whole sensible world or outside the sensible world, whereas in fact it is valid only within the sensible world. The necessary being stands outside the world and experience, and it is inferred as the cause of the world. But how do we know that the causal principle holds good outside the world ?

Secondly, when we infer a first cause, we assume it to be impossible that there should be an infinite series of empirical causes. But the series of empirical causes may very well be infinite and so need not necessitate any transcendental first cause.

Thirdly, it is assumed that the unconditioned is the absolutely necessary, but in fact when we have removed all conditions, we have removed at the same time the idea of necessity, because it it the conditions which make anything necessary, and when there are no conditions, there is no necessity.

Discovery and Explanation of the Dialectical Illusion in all Transcendental Proofs of the Existence of a Necessary Being

If the cosmological argument is so fallacious, how is it

that our mind is so prone to make use of this argument to prove the existence of God? This requires explanation and the explanation is found in the fact that what is prescribed merely for the guidance of our understanding in its empirical investigation is, through a transcendenta illusion, taken to characterize a real fact. Or, as it is technically put, a *regulative* principle is mistaken for a *constitutive* one.

The main point in the cosmological argument is that if anything whatever exists, then something must necessarily exist. On the other hand, we cannot think of a single determinate thing as in itself necessary. Everything is contingent. There is a contradiction between these two propositions: (a) something is necessary and (b) everything is contingent. This shows that necessity and contingency cannot be taken as objective characteristics of things in themselves. They may be regarded as subjective principles of reason and may be taken to express complementary rules for the guidance of the understanding. They do not contradict each other when they are regarded as merely *heuristic* and *regulative*.

The first rule, viz. that something exists by absolute necessity, means that we should never rest content with anything relative and contingent, but should carry on our investigation ever further and further, as if something absolutely necessary were to be found at the end. The second rule, which says that everything is contingent, demands that we should not regard any determination in things as ultimate, but should always try to trace it to something else. Even extension and impenetrability, which make up matter, should not be regarded as final, and there should always remain a possibility of their further derivation from something else. Thus the

understanding in its scientific research is guided by this two-fold command of reason.

The former rule, which urges us to trace empirical phenomena to more and more ultimate grounds, *as if* there were at the end something absolutely final which would complete the search, is helpful merely as stating an ideal which we should do well to pursue in our scientific investigation. But through an inevitable mistake this regulative precept is taken to be a statement of fact, and the absolutely necessary being or the *ens realissimum*, which is nothing but a subjective ideal to inspire our scientific research, is regarded as an objective existence. This is how a regulative principle is converted into a constitutive one. That the conversion is quite illegitimate is quite evident from the fact that we cannot even conceive unconditioned necessity, because necessity without condition is not at all intelligible

Section VI
The Impossibility of the Physico-Theological Proof

The *physico-theological proof* or, as it is otherwise called, the *teleological* proof, does not start from mere concepts or from experience in general, but from some particular experience of the world. We find variety, order, purposiveness and beauty in the world, and as these cannot be explained by any natural causes, we feel justified in inferring from them the existence of God as their sufficient cause. Kant describes this argument as the oldest, clearest and most suited to the common understanding of man. This argument undoubtedly possesses a great persuasive force. Any doubt as to the existence

of God raised in our mind by subtle and abstruse speculation is readily dispelled, Kant says, "by one glance at the wonders of nature and the majesty of the univere". But in spite of its appeal to common human understanding, the argument cannot be regarded as theoretically valid or logically cogent. At least it gives no apodeictic certainty.

The argument points out that there are everywhere in the world clear signs of order in accordance with a purpose. This purposive order cannot be due to the blind working of the mechanical laws and cannot be explained by anything in the things themselves. The order therefore has to be conceived as imposed on the things by some intelligent agency outside them. As there is unity in the reciprocal relations between the different parts of the universe, the intelligent cause of the world is not many but one.

The argument assumes that nature working freely by itself is incapable of producing the harmony and order observable in the world; but this may well be doubted. The argument really proceeds after the analogy of works produced by human skill and intelligence, such as houses, ships and watches, and so at best can prove an *artificer* of the world and not a *creator* of it. God is shown to be necessary only for the orderly form of the world and not for the being of the substance on which that form is imposed. He, like a human artist, only fashions the material lying ready to his hand, (which may well hamper him in his work), but does not freely create the material itself.

Moreover, the cause we infer can be only proportionate to the effect from which it is inferred. The world is indeed great and the order and purposiveness in it is also

great, and this can be due, we suppose, to a being who is very wise and powerful. But a being very wise and powerful is not determinate enough to be identified with God. Great wisdom and great power are things very different from omniscience and omnipotence.

No argument drawn from experience can be adequate for a being who falls entirely outside experience and is represented to us only by an idea of reason. The teleological argument regards order and purposiveness in things as contigent, and in inferring a necessary cause for them it falls back upon the cosmological argument. And that argument (cosmological), we have seen, is but the ontological argument in disguise. If any proof is at all possible of a transcendent being like God, the only proof is that of the *a priori* ontological argument.

Section VII
Critique of all Theology based upon Speculative Principles of Reason

The knowledge of the original being or God may be based either on revelation or on reason. *Rational theology* aims at giving us knowledge of God based on reason. Rational theology may be distinguished into *transcendental* theology and *natural* theology. Transcendental rational theology does not take into account any empirical concepts, but by a consideration of purely *a priori* concepts, arrives at the notion of God as the original being or the being of beings. Natural theology, from a consideration of the order and harmony exhibited in the world, comes to the idea of a God who, through understanding and freedom, creates the world. Transcendental theology leads to deism and natural theology to

theism. For the deist there is only a first cause of the world, but the theist requires an author of the world. Although for the deist the first cause is not further determined as intelligent or free, he may be allowed to believe in a God, but it is only the theist who believes in a living God.

Knowledge may be theortical or practical. In theoretical knowledge the object of knowledge is something that exists. In practical knowledge we are concerned not with what is, but with what ought to be. We know there are practical or moral laws which are absolutely unconditional or necessary. These laws presuppose the existence of God as the ground of their obligatory power. The moral laws thus require us to postulate the existence of God. But this can never amount to a theoretical knowledge of the existence of God. It gives us only a practical faith for the guidance of our moral activities.

Theoretical knowledge may be of two kinds, speculative and scientific. Speculative knowledge concerns an object of which there can be no experience, whereas scientific knowledge or the knowledge of nature, as Kant calls it, is concerned only with objects which can be given in a possible experience.

It is plain that by a speculative employment of reason we cannot prove the existence of God. We may be able to form the most perfect idea of God, but since God is not an object of a possible experience for us, we have no means at our disposal to assure ourselves that the object of this perfect idea actually exists. We cannot arrive at the existence of God from the contingency of things in the world, because if we were to do so, we should be extending the principle of causality beyond its legitimate sphere, which is experience. Cause has no

meaning outside experience, and so God, who is never experienced, cannot properly be conceived of as the cause of the world. Moreover, by causality we trace one happening or a state of things to an earlier state of things. It is the state of things that is contingent. That things themselves are contingent or that substance or matter is contingent we do not know. So our notion of an actual creator of things is unjustified. Even if we somehow connect God with the series of contingent phenomena which constitute the world, God would, in that case, be a member of the series and likewise contingent, and so not God at all. Rational theology is thus quite impossible. We have to content ourselves only with a *faith* in the existence of God as a postulate of moral experience. And this is not knowledge.

We may here refer to the original question of Kant: how are synthetic *a priori* judgements possible? The *Aesthetic* and the *Analytic* have shown that such judgements are possible and valid within experience. Their validity is confined within the field of possible experience. When we assert the existence of God, we assert a synthetic *a priori* proposition and such a proposition cannot be at all valid, because what it asserts is not a possible object of experience.

But although the existence of God cannot be proved by any theoretical means, it cannot also be disproved. It is thus that room is made for *faith*, even when knowledge is denied.

APPENDIX TO THE TRANSCENDENTAL DIALECTIC

The regulative employment of the ideas of Pure Reason

We have seen how the Ideas of pure reason give rise to certain illusions which we cannot avoid. The Ideas are as natural to reason as the categories are to the understanding. And it is the view of Kant that whatever is grounded in the nature of our powers (undertsanding and reason) must be appropriate to their right employment. The Ideas lead to illusion because they are put to a use which is not proper to them. To take these Ideas for concepts of real things, transcending all experience, is an entire mistake. But they may have a proper use within experience. We have to find this out. And for this we should first realize that the Ideas do not directly relate to objects at all. It is the understanding that deals with objects, and reason has concern only with the understanding and its synthetic activities. If it is the business of the understanding to synthesize or combine phenomena by means of its concepts (e. g. causal connexion), and make them into objects, it is the function of reason to combine the syntheses of the understanding into a unity or whole by means of its Ideas which aim at absolute totality. The understanding by itself makes only distributive or partial unities, and it is only through the Ideas of reason that a collective unity or the unity of a whole is set up to it (understanding) as the goal of its activities. The Ideas are not, like the categories, concepts of objects. They do not constitute objects, as do the categories, and are not therefore constitutive but only regulative. That is, they direct (regulate) the understanding towards

a goal or an ideal point upon which all its series of concepts in their completion converge. This point lying quite outside the bounds of all possible experience is not anything real, but a mere idea, *focus imaginarius*; still, it serves to give the concepts the greatest possible unity and extension.

The idea of a whole, which thus reason gives, helps us to unify and systematize all knowledge obtained through the understanding. This Idea of a whole makes into a system what would otherwise remain a mere contingent aggregate. All our scientific enquiries are carried on with the Idea that there is such a whole or system. This Idea is not derived from nature, but nature on the contrary is interrogated according to it. We are not to suppose that this Idea represents any objective unity. It represents only an ideal of knowledge which we strive to attain through the efforts of the understanding. Thus it serves only as a rule for the understanding.

This Idea of a systematic unity of the manifold of knowledge may thus appear to be a subjective, logical, or *methodological* principle which merely demands the greatest possible unity in our knowledge. But in fact it is a *transcendental* principle of reason in virtue of which a systematic unity is necessarily assumed *a priori* as belonging to the objects. It is no doubt only a logical maxim which says that we should seek for systematic unity in our knowledge of nature. But this logical maxim is based on transcendental principle, and this principle finds expression in the familiar assumption that in spite of the infinite variety of particular things, they can be subsumed under various species which in their turn can be brought under fewer and fewer genera of greater and greater extension.

Now, if the things in the world were so utterly different from one another that there could be no similarity and affinity between them, we should be altogether unable to frame any concepts and our understanding would be paralysed. We have therefore to assume unity and affinity in the objects. This is described by Kant as the *principle of homogeneity*. This principle, we should note, is subjective and *methodological* on the one hand, and objective and transcendental on the other. It is subjective and methodological because it is meant to guide our scientific inquiry. It is objective and transcendental because it is presupposed in the object and is not derived from experience, but makes an *a priori* demand on experience to conform to it.

This principle of homogeneity is matched by another principle in virtue of which we are always led to look for species under species. This is called the *principle of specification*. According to it every genus must specify itself in different species and these again in more specific sub-species, and so on. If the principle of homogeneity leads us from variety to unity, the principle of specification leads us from unity to variety.

There is not merely unity but also variety in nature. This principle is equally transcendental and equally necessary for the development of our understanding. Where there is mere identity as well as where there is mere difference, there is no scope for the understanding.

Besides these two principles, we have another principle, the *principle of affinity* or *continuity*. According to this principle there are no abrupt jumps in nature from one species to another, but only gradual transition. This means that between any two species or sub-species there are always other intermediate species

possible. This principle requires us to took always for intermediate species between any two species to serve as the link between them. This principle like the other two is also transcendental, because it is not derived from our experience (viz. the experience of the world as a system), but it is according to this principle that our experience is systematized. This principle is in a sense the cause, and not the effect, of our systematic knowledge.

But the continuity of forms which this principle prescribes is not to be discovered actually anywhere in nature. In the first place, the actual species in nature are all separated from one another and constitute what is called a *quantum discretum.* If we follow the principle literally, there should be an infinity of intermediate species between any two species, which is impossible. This principle tells us in a general manner that we should seek for grades of affinity, but gives no definite indication as to how far and in what manner we should prosecute the search.

However, it is clear that understanding and reason co-operate to build up the system of our scientific knowledge. The knowledge of the understanding must be already there. Reason comes in to organize and extend that knowledge in accordance with regulative ideas of *manifoldness* (specification), *affinity* (homogeneity), and *unity* (continuity). The principles corresponding to these ideas are like the principles of the understanding synthetic and *a priori.* But although they are valid in a way in respect of the object, the objective validity of these principles of reason cannot be demonstrated by a transcendental deduction. These should therefore be regarded as heuristic principles, i. e. as aiding us in discovery, and as so conceived they can be used with much profit. Since

their objective validity cannot be proved, they had better be described as maxims than as principles.

All thinkers are not influenced in the same way by these ideas (manifoldness, affinity and unity). One may have more, and another less, interest in one or other of these regulative ideas. And much useless controversy would be avoided if these were properly regarded as giving us merely maxims for the guidance of our scientific enquiry, and not as yielding objective insight into the nature of things.

The Final Purpose of the Natural Dialectic of Human Reason

The Ideas of reason do not by themselves lead to error or illusion. They do so only when they are wrongly employed. As belonging to reason itself they must have a proper use which does not involve error or illusion. If they are to have any sort of objective validity, we should be able to give a deductian of them. But the sort of transcendental deduction we could provide in the case of the categories of the understanding is not possible in the case of the Ideas of reason. The Ideas do not characterize and determine objects as do the categories; they give us only the points of view from which we should seek to determine the character and constitution of the objects of experience. If we are to extend and systematize our empirical knowledge, we find these Ideas quite indispensable, because they help us to give a systematic unity to our knowledge, and even to make discoveries which would otherwise be impossible. Herein consists their transcendental deduction which shows their legitimacy as regulative principles.

How are we to use these Ideas? The Ideas of God, soul and the world as a whole do not of course represent any objective realities which we can possibly know. But we are nevertheless aided in our enquiries in different fields of psychology, theology and cosmology if we proceed *as if* there were objects like the soul, God, or the world as a whole. Only for the purpose of our empirical enquiry we assume in idea (but do not posit in reality) these transcendental objects and we find that the assumptions are really helpful.

We have seen that the Idea of the world involves us in antinomies. The Ideas of God and the soul do not involve any contradiction and are therefore logically possible. But this logical possibility cannot justify the assertion that they actually exist. And when we assume them, we do not assume them in themselves absolutely. What they may be in themselves we have not the slightest idea. But we assume them only in relation to appearances, and conceive this relation after the analogy of the relation between one appearance and another. We thus think of God after the manner of a real substance which is the cause of all things. But we have not the least notion as to the inner possibility of his perfection or the necessity of his existence. We are justified in thinking of God only in relation to experience, (and cannot assume God or the soul as existing absolutely), solely with a view to its complete and systematic unity. We can know the world, given in experience, better in its unity and systematic connexion, if we regard it as the creation of a God. Similarly we are aided in our psychological knowledge of the inner states and appearances, if we regard them as the expressions of a simple immaterial soul.

It should be clear that the concepts of reality, sub-

stantiality and causality, which are applicable only to appearances, do not describe any entities like God or the soul, entirely distinct from the world of sense. The outcome of the whole *Transcendental Dialectic* is that pure reason in its Ideas is concerned merely with itself and not with any things in themselves. The Ideas do not signify any objective reality. Their sole significance consists in the fact that they bring together to systematic unity what we know piecemeal through understanding. An Idea of reason then merely systematizes or unifies our empirical knowledge. But when reason thinks of this unity, it ascribes at the same time an object to the Idea. The object, however, is entirely undetermined for us as regards its constitution. It helps us merely to envisage the whole body of knowledge from a unitary point of view and serves as the schema of the regulative principle.

Thus the Idea of the soul does not signify a real entity which is the actual ground of all the mental states, but represents only the schema of a regulative idea by means of which all our inner experiences are unified and systematized. The sole function of the Idea is the unification of our psychical experiences, as distinguished from all outer experiences. The soul does not represent a reality, but an ideal schema in terms of which our psychical experiences are systematized. The systematization is best attained when we regard the mental states or psychical experiences *as if* they were grounded in a single persistent spiritual substance, called the soul. The soul in itself is not thereby known, nor are the hypotheses of its generation, extinction and rebirth at all justified.

The Idea of the world in general means the absolute totality of conditions in nature. The series of conditions

from which appearances are derived is endless and so the totality of the series is never realized within experience. It can serve only as a rule which should guide our explanation of empirical phenomena. The rule is that in the explanation of any particular phenomenon we should refer to further and further conditions *as if* the series of conditions in itself were infinite. We should not rest satisfied with any particular condition, but should push our enquiry ever further.

The third transcendental Idea is that of God. This idea does not presuppose an actually existing being, but merely demands that we should regard the world in its systematic inter-connexion *as if* it originated from a single all-sufficient being, *as if* it were the purposive creation of a supreme intelligence. That everything in nature subserves some purpose is not of course established by observations that have been so far made. But the hypothesis that everything in the world has a purpose immensely helps our study of nature and its connexions. We can better understand and connect phenomena when we view them teleologically and can even make discoveries while looking for ends. This view cannot also do any harm, for at the worst we should only find a physical connexion when a teleological connexion was looked for.

It is in this way that the Ideas of reason can be properly used as regulative principles in our scientific enquiries with great advantage. But if we overlook this restriction of the ideas to mere regulative use and regard them as being constitutive in character, we are led into grave errors. The first error of this kind which arises from our regarding an idea of reason as being constitutive rather than regulative is called *ignava ratio* or slothful reason. By it we are led to dispense with the

trouble of a proper scientific explanation of a phenomenon, and we try to explain it by merely referring it to a divine decree. This means only the sluggishness of our reason.

The second error is called *perversa ratio* or the error of putting the cart before the horse. The proper course of scientific enquiry is that we should seek for systematic connexions everywhere in nature under the guidance of the idea that the world is a purposive creation. The purposive creation of God means nothing but the systematic connexion of things in nature which has to be found out by proper scientific research. But under the influence of this error, we reverse the order and think of God as already existing and imposing purposive and systematic unity forcibly on things. What has to be proved is here simply presupposed as being already there.

It was asserted in discussing the antinomy of reason that the questions raised by reason should admit of an answer. What is the answer to the question: Is there any ground of the world distinct from it? The answer is: Yes, because the world is a sum of appearances, and therefore there must be a transcendental ground of these appearances. If it is asked whether the ground of the world is to be conceived as substance, real, necessary, etc., the answer is that these concepts have meaning only within appearance and cannot be applied to things in themselves. Can we not think of the world-ground as an intelligent author (after the analogy of our own intelligence which is an empirical concept)? We may and indeed must do so; but we should be careful not to suppose that we thereby know the unknown ground of the world as in itself intelligent.

"All our knowledge begins with intuitions and from them proceeds to concepts and ends with ideas." Sensi-

bility, understanding and reason have all their respective *a priori* elements, viz., the pure intuitions of space and time, the categories and the Ideas; and although they hold good independently of experience and may even appear at first sight to scorn the limit of all experience, still our knowledge can never extend beyond the field of possible experience.

TRANSCENDENTAL DOCTRINE OF METHOD

In the *Transcendental Doctrine of Elements* (consisting of the *Aesthetic*, the *Analytic* and the *Dialectic*), Kant has considered, as it were, the materials out of which the edifice of knowledge is built and has also determined for what sort of edifice the available materials are sufficient. He has found that the building does not reach up to the heavens, but remains on the low level of experience. He has found that we cannot know super-sensible realities, but only objects which fall within possible experience. He is now going to consider, in the *Transcendental Doctrine of Method*, as it were, the plan of the building. He will be concerned to determine the formal conditions of a system of pure reason, and will treat of a *discipline*, a *canon*, an *architectonic* and finally, of a *history* of pure reason.

CHAPTER I
THE DISCIPLINE OF PURE REASON

Discipline here means the compulsion which restrains and finally removes the constant tendency to disobey certain rules. Our reason suffers from the tendency to go beyond all intuition and so requires this discipline. No discipline is needed for reason in its empirical employment, because in this it is always subjected to the test of experience. Nor is any discipline of reason needed in mathematics, because here the concepts of reason have to be exhibited *in concreto* in pure intuition and we are thus guarded against their possible wrong use. But in the transcendental employment of reason, i. e. in

metaphysics, no such correcting factor being present, the discipline is very necessary.

Section I
The Discipline of Pure Reason in its Dogmatic Employment

Mathematics gives us a splendid example of how we can extend our khowledge without the help of experience. Encouraged by this example, philosophy may likewise hope to attain to sure knowledge by adopting the method of mathematics. The mathematical method, by which apodeictic certainty is attained, is the same thing as the dogmatic method of philosophy by which the same sort of certainty is sought to be reached. Kant's position is that the method of mathematics is not applicable in philosophy and so the *Doctrine of Method* as *Discipline* should forbid any such dogmatic use of reason in philosophy.

The method of mathematics cannot be adopted in philosophy because there is an essential difference between mathematical and philosophical knowledge. "*Philosophical* knowledge is the knowledge gained by reason from concepts, *mathematical* knowledge is the knowledge gained by reason from the construction of concepts." To construct a concept is to exhibit *a priori* the intuition which corresponds to the concept. For the construction of a concept an intuition is necessary which is non-empirical and universal in significance. We thus construct a triangle by representing by imagination in pure intuition the object which corresponds to it, or also by drawing it on paper in accordance with the pure intuition of it. We get in the latter case an empirical and particular intuition, but it has an *a priori* and universal

significance; *a priori*, because there is nothing here borrowed from experience, and universal because, as it corresponds to a concept (a universal representation), what is true of it must be true of all other instances also which come under the concept.

The philosopher, merely by analysing the mathematical concepts, is quite unable to bring forth anything new. But the mathematician, since he constructs the objects of these concepts in intuition, is able to arrive at new knowledge about them. The philosopher can of course frame analytical propositions by analysing the concepts; but the question here is of synthetic propositions which require the help of construction in pure intuition.

The mathematical concepts already involve pure intuition and so the construction of their objects is quite possible, and we can very well make synthetic judgements about them, But the concepts of philosophy do not contain any intuition at all. They are only the syntheses of possible iutuitions. They represent the ways in which possible intuitions are to be connected with each other. The concepts, like those of substance and quality, and cause and effect, for example, are empty of all intuitional content and represent only the form according to which what is given in intuition is to be connected and conceived. We know that both intuition and concept are necessary for knowledge. As mathematical concepts themselves contain *a priori* intuition, it is possible to derive knowledge from them. But since philosophical concepts are devoid of all intuitional content, it is impossible to derive any synthetic knowledge from them.

Still the temptation to follow the mathematical method in philosophy is great, because both mathematics and philosophy deal with *a priori* concepts, and it is imagined

that what has led to excellent results in one field may be equally fruitful in the other also. Kant seeks to supply an effective antidote to this temptation by showing that definitions, axioms and demonstrations, on which mathematical knowledge depends for its exactitude, are not possible and cannot at all be used in the same sense in philosophy.

1. *Definitions*: According to the mathematical notion, to *define* a thing is to represent the complete concept of it. In this sense neither empirical nor *a priori* concepts can be defined in philosophy. As regards the empirical concepts, we can never be sure that we have exhaustively known all the essential characteristics that a thing possesses. The *a priori* concepts such as substance, cause, etc. are in a sense given to the mind, since they are not framed by it, and we cannot define them in the strict sense, because we can never know for certain that we have been able to make a correct and complete analysis of them. It is quite otherwise with mathematical concepts which in a sense contain their objects, and no question arises as to whether the object corresponds to the concept defined, because the object is as it were made through the definition. "Mathematical definitions *make* their concepts, in philosophical definitions concepts are only *explained*." This is why mathematics can begin with definitions, whereas philosophy can only end with them. We can make ourselves clear about philosophical concepts only after a philosophical enquiry, and so if philosophical definition means clear exposition, we can get definitions only at the end of philosophy.

Mathematical definitions can never err, since the objects are made what they are through the definitions and there can be no question of their not agreeing with them. The definitions at worst may not be precise.

But philosophical definitions are always liable to error, because they are either too wide or too narrow, the essential characteristics enumerated being either too few or too many.

2. *Axioms :* Axioms are synthetic *a priori* principles, in so far as they are immediately certain. They are quite possible in mathematics, because mathematics constructs its concepts in intuition and so can both make synthetic *a priori* judgements about the object intuited and be certain of their truth through intuition. The *a priori* intuition involved in the construction of mathematical concepts accounts for both the possibility of synthetic *a priori* judgements and their immediate certainty. But no such intuition is involved in philosophical concepts and so the principles derived from them cannot be immediately certain. The synthetic *a priori* principles in philosophy are concerned with such concepts (devoid of intuitional content), and so a proposition like "Whatever happens has a cause" cannot be immediately certain, but requires a deduction, that is, a proof of its objective validity. We thus see that axioms, such as are used by mathematics, are not possible in philosophy.

3. *De onstrations :* A demonstration strictly peaking is an apodeictic proof in so far as it is intuitive. From experience we merely learn what a thing *is,* and not that it *could not be* other than what it is. Consequently no empirical grounds will ever suffice to yield an apodeictic proof. And from *a priori* concepts too we can never obtain intuitive certainty or demonstrative evidence. Demonstrations are possible in mathematics alone which, by virtue of its construction of concepts in pure intuition, can give us intuitive certainty.

A *dogma* is a synthetic proposition directly derived

from concepts, but in the whole domain of pure reason in its merely speculative employment, no synthetic judgement is to be found which is directly derived from concepts. Philosophy, so far as it is the speculative employment of pure reason, can have therefore no dogmas as its special subject matter, and all dogmatic methods, whether borrowed from mathematics or specially invented, are quite out of place here.

Section II
The Dicipline of Pure Reason in respect of its Polemical Employment

We have seen that there can be no dogmatic employment of pure reason, that is, there is no place for dogmatism in philosophy. We are now to see whether there can be any *polemical* and *sceptical* employment of pure reason, that is, how far polemic and scepticism are justified in philosophy. What are we to understand by these terms?

When a dogmatic assertion is made in metaphisics, it is generally met by a counter-assertion of the opposite import, and so the dispute starts. To be a party to this dispute and maintain one position positively against the other would be to proceed dogmatically. But without positively maintaining one position, one may simply attack the position of one's opponent and try to show that it is unjustified. This is *polemic*. It says that one party to the dispute, namely the dogmatic opponent, is wrong. *Scepticism* goes a step further and maintains that both the disputants are wrong, that the assertion and the counter-assertion are equally unjustified. "By the *polemical* employment of pure reason," says Kant, "I mean the defence of its propositions as against the dogmatic

counter-propositions through which they are denied." But he adds that the contention is not that its own assertions are not false, but only that the opposite assertions cannot be made with apodeictic certainty. He later on says: "By the defence of propositions I do not mean the addition of fresh grounds for their assertion, but merely the nullifying of the sophistical arguments by which our opponent professes to invalidate this assertion." So in a polemic we do not so much affirm our own position as deny the position of our opponent. Is there any scope for polemic in philosophy? And is it justified?

The self-contradiction of pure reason was treated in the section on the *Antinomies* and it was found there that this self-contradiction of pure reason was due to a misunderstanding. It was because what were appearances were treated as things in themselves that reason was involved in self-contradiction. When interpreted properly, the thesis and the antithesis could be reconciled with each other and so there is no real self-contradiction. But when the question is about God and soul, if one affirms their existence and the other denies it, there appears to be a real contradiction here, because God and the soul can be regarded always as things in themselves, and we cannot say that the affirmation relates to reality and the denial to appearance. But even here, strictly speaking, there is no real self-contradiction of reason, because neither the affirmation nor the denial can be proved, and so both are equally unjustified. So although we cannot claim any *knowledge* about God and the soul, our *faith* remains unshaken, because nobody can prove that God or the soul does not exist. The faith is necesssary for our moral well-being and stands unaffected by all theoretical attacks. But at the same time it is vain to attempt to

defend this faith with a show of theoretical reasons.

Properly speaking, there cannot be any real *polemic* of pure reason, because when we are faced with the question of the existence of God or the immortality of the soul, we are concerned with Ideas of reason, and from them alone it can never be made out whether their objects exist or not. So long as we proceed only dogmatically, the dispute is bound to arise and remain endless. In its dogmatic procedure, reason is in a state of nature or anarchy, as Hobbes would say, and it is when the *Critique* has done its work by establishing the rights and limits of pure reason, that we can hope for any final judgement and peace.

Scepticism too is not a reasonable position in philosophy. It says that we cannot know and should not therefore side with any party, but should maintain the position of neutrality and doubt. But how can it establish that we are incapable of attaining any knowledge? We cannot establish this by pointing to particular facts of our ignorance. This can be established only by an enquiry into the sources and limits of our knowledge itself. But our position then is no longer merely sceptical but *Critical*.

Hume is rightly regarded as the most representative sceptic. He remained a sceptic to the end, and did not advance to the Critical position, because he considered only particular judgements of reason which were unjustified, and did not make the faculty of knowledge itself an object of systematic enquiry. In fact, he considered specially only the principle of causality and rightly held that we had no *a priori* insight into its validity; and thereupon he believed that the principle of causality, if it were to be valid, could be learnt from experience.

We have however learnt from the *Transcendental Logic* that we can know *a priori* the validity of the causal principle, not of course through an analysis of the concept of a happening and its cause, but only in reference to a third something, namely possibl eexperience. The causal principle is valid as it makes knowledge of experience possible.

Hume did not make a systematic study of such synthetic concepts as substance and attribute, cause and effect, etc., and the synthetic *a priori* principles arising from them. As he based his conclusions, not on any systematic consideration of principles, but on an examination merely of particular and accidental facts, his own position of scepticism has itself remained open to doubt. He moreover did not see the difference between the well-grounded claims of the understanding, such as express themselves in the synthetic *a priori* principles (e. g. the principles of substantiality and causality), which are valid of experience, and the dialectical pretensions of reason (e.g. assertions about God and immortality), which can never be validated.

Although scepticism itself is not a satisfactory position, we can see that it prepares the way for the true Critical position in philosophy.

Sectoin III

The Discipline of Pure Reason in regard to Hypothesis

We have learnt that without the help of experience, we cannot arrive at any knowledge merely through the speculation of pure reason. But although knowledge is confined to experience only, is there not left open, outside

experience, a wide field for *hypothesis*? Can we not frame hypotheses about things which we can never experience? Kant explains here certain conditions which a valid hypothesis must fulfil and which would therefore prevent reason from making all unwarrantable hypotheses.

The first condition is that we must be antecedently certain as to the possibility of the object we are going to assume hypothetically for the explanation of any phenomenon. It is only when we know for certain that an object is possible that we can entertain the opinon that it may be real and account for certain events or facts which we experience. In framing a hypothesis, we should not assume objects with altogether new qualities for which experience gives no evidence. It is thus not permissible to assume an understanding which intuits without the help of the senses or matter which is not impenetrable. If we do not obey this rule, we should be basing reason, not on any clear understanding, but on the empty figments of the brain.

We know that the Ideas of reason representing objects like God and the soul are mere ideas and there can be no proof that God or the soul is a possible object. When we do not know that they are possible, we cannot assume them in any hypothesis to explain any facts of experience. Still, these ideas are not quite useless. They may be used, as we have seen, with great advantage as regulative ideas or heuristic notions, to aid our research and discovery. They are quite useless as explanatory grounds. The actual explanation is to be sought always in terms of empirical objects. Therefore Kant says that even "the wildest hypotheses, if only they are physical, are here more tolerable than a hyperphysical hypotheses."

The second condition that a hypothesis must fulfil is that it should be adequate to explain all the relevant facts. If one is compelled to resort to other auxiliary hypothesis to explain the facts, we become justly suspicious of the original hypothesis. We can indeed explain the purposiveness, order and vastness of the world by the hypothesis of an infinitely perfect divine cause. But the presence of various imperfections and evil in the world would call for other hypotheses and is thus an argument against the original hypothesis of a divine creator. Similarly, the hypothesis of the simple and imperishable nature of the soul cannot, without the help of other hypotheses, be reconciled with the appearance of growth and decay in our soul's life and is thereby rendered invalid.

One may not assume God or the soul merely for the explanation of any facts of experience, but one may try to prove them *a priori*. But in that case the proof should be capable of yielding apodeictic certainty. In the transcendental sphere, where there is no question of experience, we know *a priori* either what is necessarily and absolutely true or nothing at all. Just as in geometry, which also follows an *a priori* procedure, a thing is either proved or not proved, but is never rendered merely probable, so there is no sense in a thing being rendered only probable by *a priori* arguments.

Hypotheses are no doubt quite useless for establishing any metaphysical propositions. But they are very valuable as defensive weapons which we may well use against all destructive criticism of our metaphysical beliefs. As moral beings, we are committed to certain metaphysical beliefs about God and immortality. We cannot of course make any use of these beliefs without sufficient reason in theoretical speculation. But we are

within our rights to make use of them in the *practical* sphere. As the beliefs are already there in possession of the field, it is not for us to offer any reason why they should be entertained; but it is incumbent on our opponent to show why they should be rejected. He may raise various objections to our beliefs and we are justified in making use of hypotheses to turn the edge of his criticism. If, for instance, he says that our belief that the soul is immaterial and self-subsistent is inconsistant with the fact that our mental powers are subject to bodily conditions, we may, to meet his objection, resort to the hypothesis that the body is nothing but an appearance which only in our present state serves as a condition of sensibility and thought. Thus regarded, the body would be a restrictive condition and so a hindrance to the pure and spiritual life, and not a cause of it. This hypothesis will greatly weaken the force of our opponents' objection. Such hypotheses are not of course Ideas of reason, but only concepts devised for self-defence and designed to show that all the possibilities have not been taken into consideration. They are mere problematic judgements which can be neither proved nor disproved. They are however indispensable as weapons against doubts that are apt to occur, and are thus even necessary to our inner peace.

Section IV

The Discipline of Pure Reason in Regard to its Proofs

If we are to go beyond the concept of an object and make any synthetic *a priori* judgement about it, we can

do so only with the help of some special guidence. This guidence is provided in mathematics by pure intuition, and in transcendental knowledge, so far as we are concerned with the concepts of the understanding, by the possibility of experience. In the latter case the proof of the validity of the concepts consists in showing that, without these synthetic concepts of the understanding, no experience, and consequently no objects of experience, would be possible. Such proof is not possible in the case of the Ideas of reason. And mere ideas never suffice to give us the knowledge that there are real objects corresponding to them. From the simple representation *I*, we can never get the knowledge that there exists a simple soul-substance. This we have already seen in the discussion on *Paralogisms*. To avoid all such errors, Kant propounds some rules which should guide our *transcendental proofs*.

The first rule is that we should not attempt any transcendental proof without making ourselves clear as to the principle on which the proof is based. We should know that with the help of the principles of understanding, such as the principle of causality, we can never prove the objects of the Ideas of reason as real, because these principles are valid only in respect of possible experience and cannot apply to objects beyond experience. We cannot in this regard appeal even to the principles of reason, because they have no objective significance and are only *regulative* in the sense that they merely help us to systematize and extend our empirical knowledge.

The second point to be remembered in connexion with transcendental proofs is that for a transcendental proposition only one proof is possible. When in proving anything we get our guidance from an intuition, pure or empirical, we are presented with a manifold which admits

of being connected in more ways than one, so that by diverse paths, we can arrive at the same conclusion. But in the case of a transcendental proposition, we have a single concept to go by, and if any proof is to be possible at all, the proof will be one and only one. So when a dogmatist gives various proofs for a metaphysical proposition, we know he must be wrong.

The third rule is that a transcendental proof should be *ostensive* and not *apogogical.* In an *ostensive* proof we proceed directly from the ground to the consequence. Here we get an insight into the ground of a conclusion. In an *apagogical* proof we arrive at a conclusion by showing the falsity of its opposite. Here we get certainty, but no insight into its ground, which is provided by the ostensive proof.

The apagogical proof is allowed in sciences where there is no chance of confusing subjective conditions with objective grounds. Such confusion is not possible in mathematics and can be avoided in natural science by repeated observation. But in the transcendental sphere, where the subjective as a rule forces itself upon reason as being objective, the confusion is unavoidable, and so the apagogical proof is quite out of place here. When we assert here any proposition by refuting its opposite, (this being the procedure in apagogical proof), we cannot be sure whether the refutation or the impossibility of the opposite view does not merely mean its conflict with our subjective conditions of thought. If it be so, it would prove nothing as regards the thing itself. Both the assertion and the refutation might well be due to an impossible concept of the object, produced by a transcendental illusion.

CHAPTER II
THE CANON OF PURE REASON

A *canon* embodies the *a priori* principles of the right employment of a certain faculty of knowledge. The *Transcendental Analytic* is thus a canon of the pure understanding, because it treats of the categories and the synthetic *a priori* principles derived from the understanding, and shows that their valid use consists in making experience possible. When there is no correct use of a faculty of knowledge, there is no canon for it. We have seen in the *Dialectic* that the theoretical use of pure reason is unjustified, and so we cannot have a canon of it in its theoretical employment. If there is to be a canon of pure reason, it must be concerned with its *practical* employment. We do not know by pure reason what *is*, but we may yet know by pure reason what *ought* to be. And if we do, this would be a practical use of pure reason. It is this practical use of pure reason that is now going to be considered.

Section I
The Ultimate End of the Pure Employment of our Reason

The ultimate aim of speculative reason in its transcendental employment is the solution of the questions concerning God, freedom and immortality. The solution of these questions has no bearing on our theoretical knowledge, which is concerned with the explanation of empirical facts, and that explanation in its detail will not in any way be furthered if we know that God exists or that the soul is free or immortal. These propositions (*God exists*, etc.) do not represent, nor do they help,

any theoretical knowledge, but they are of utmost importance for our practical life. The *practical* means for Kant what is possible through freedom, and comprises the whole field of our activity. "Here we want to know what we ought to do, if the will is free, if there is a God and a future world." So it appears that the ultimate end of our reason is concerned with our moral interests.

The concept of *freedom* is used in the *practical* sense. That is, a will is considered free when it can be determined independently of sensuous impulses and through motives which are represented only by reason. Practical freedom in this sense is no problem for us. Our own experience shows that such freedom exists.

Reason prescribes laws for our conduct without being determined by sensuous impulses, and is thus *practically* free. But we do not know whether reason is transcendentally free and is not determined by any higher and remoter causes. That however is a speculative question and does not concern reason in its practical use. Thus in the canon of pure reason (in its practical use), we are concerned with the remaining two questions: "Is there a God?" and "Is there a future world?"

Section II

The Ideal of the Highest Good as a Determining Ground of the Ultimate End of Pure Reason

What can we know? What ought we to do? What may we hope? These three questions express in a summary way all the interests of our reason, speculative as well as practical. We have already considered what we can know and what we cannot. We shall now try to find answers to the remaining two questions.

We are naturally inclined to strive after happiness, and from the pragmatic laws or rules of prudence, which are based on experience, we know how it can be attained on the fulfilment of certain natural conditions. Besides the practical law of prudence there is the moral law which says, not how happiness is to be attained, but how we should behave in order to be *worthy* of happiness. The moral law is not based on experience, but is delivered by pure reason. This law does not make a hypothetical statement, but gives its command in an absolute manner.

The moral law presupposes the possibility of a moral world. When reason demands in its moral laws that certain actions should take place, we know that they must be possible. From this we get the conception of a moral world which is in accordance with the moral laws, that is, a world which is what it can be through the freedom of rational beings, and what it ought to be in accordance with the necessary laws of morality. In this world the rational beings enjoy their freedom, and the freedom of each under moral laws is in harmony with the freedom of every one else. This world is of course different from the *sensible* world, and may be in contrast called the *intelligible* world. We can regard it only as a future world.

The answer to the second question is that we should do that through which we should be worthy of happiness.

Our reason or the moral law commands us categorically to do certain things and we must obey the command without any ulterior motive. If we obey the law with the hope of enjoying happiness, our act will not be moral. But when we have so acted as to be worthy of being happy, it is demanded that in the ideal state or in the moral world, we should be accordingly happy. That

is, we should be happy in proportion to the moral excellence of our conduct. This demand can be fulfilled if the world be under the government of a supreme reason that is at the same time its cause. The idea of such an intelligence, in which the most perfect moral will united with supreme blessedness, is the cause of all righteous happiness in the world, is what Kant understands by the *ideal of supreme good.* It is in this ideal of supreme original good that the moral world, the supreme derivative good, with its intimate connexion between virtue and happiness, is grounded. Our moral demand that virtue should be rewarded with happiness is thus the basis of the conviction that God exists—a conviction which mere speculative theology is insufficient to produce.

The answer to the third question then, is that we can hope to reap the reward of our virtuous conduct in a future world under the wise rule of an omniscient, omnipotent, eternal Being whom we call God.

It is only when our moral consciousness is developed that we get a true idea of godhead. Even though we achieve great advance in theoretical knowledge, if our moral ideas are not adequately developed, our concepts of divinity are bound to remain crude and incoherent.

Although we are led to the idea of God from a consideration of the moral laws, it is not to be assumed that the moral laws might as well be deduced from the idea of God, because we have no concept of God at all to start with, from which the moral laws might be derived : we first frame the concept only in accordance with those laws. Similarly we should not suppose that the moral law is binding on us because it is God's command. We should rather regard it as being the command of God, because we feel ourselves inwardly bound by it.

Moral theology never suffices to give us any theoretical knowledge of a transcendent reality like God. It is of immanent or practical use only. That is, moral theology helps us only to fulfil our moral vocation in the world, by showing us how we are to adapt ourselves to the ideal or moral world and its requirements.

Section III
Opining, Knowing and Believing

If a judgement which we hold to be true is valid for every rational being, it is entitled *conviction*. Its ground must be objectively sufficient. When all people agree in a particular judgement, we may well think that the basis of their agreement is in the object, that the judgement is true, i. e. agrees with the object. If our holding a judgement to be true depends on mere subjective conditions without any sufficient ground, the judgement is called *persuasion*. So long as a judgement is viewed as an appearance of the mind, one cannot distinguish between persuasion and conviction. When we fail to make others agree with us, we have reason to suppose that our judgement is a persuasion, and we are certain that it is such when we can discover the subjective causes which led us to make the judgement.

A judgement may be entertained in three degrees of certitude. We may hold a judgement to be true without being subjectively certain about it, and without also knowing any objective ground for it. It is then called *opinion*. When we have subjective certainty, but do not know any objective ground, it is called *belief*. When there is subjective certitude as well as objective ground for a judgement, it is then called *knowledge*.

Both opinion and knowledge are out of place in the transcendental use of reason. We make here *a priori* judgements which should be valid for all and so knowledge. There is no room for opinion here. But we have seen in the *Dialectic* that we cannot attain knowledge in the theoretical sense here. So our judgements here, as theoretically insufficient, may, from a practical point of view, be termed beliefs.

A belief is only *pragmatic* when, on the basis of it, we are ready to act, although we know it may turn out to be false. When, e.g., a physician treats a patient for a certain disease of whlch he has found some symptoms in him, but no conclusive proof, we have a case of such belief. A belief is *doctrinal* when it helps us in our theoretical work. The belief that there is systematic unity in nature or that it is the work of an all-wise, all-powerful creator, is a belief of this sort, as it helps us in our scientific enquiry. But a mere doctrinal belief lacks stabilty. We often lose hold of it. It is not so with a *moral* belief. It is absolutely necessary that I should conform to the moral law. This presupposes the ultimate moral end, the *summum bonnum*, which can be guaranteed only if there is a God and a future life. These beliefs are inextricably bound up with our moral sentiment, and we can no more give up these beliefs than the moral sentiment itself.

CHAPTER III

THE ARCHITECTONIC OF PURE REASON

By *Architectonic* Kant understands the art of constructing systems. As it is systematic unity that

makes a body of knowledge into a science, architectonic may be taken to mean the doctrine of the scientific in our knowledge.

By *system* is meant the unity of the manifold modes of knowledge under one idea. We have a science so far as our knowledge can be related and arranged under one idea. The idea requires a schema for its realization, and the schema *a priori* contains the outline as well as the division of the manifold whole into co-ordinated members in accordance with the idea. A science is thus always based on an idea, and without it so science is possible. But the idea at first is apt to remain quite vague. Even the founder of a science may not clearly realize the idea on which his science is based. But there is no doubt that it is always there in his mind inspiring and controlling his scientific work. When our knowledge in the science has sufficiently advanced, we are able to discern the idea in a clear light and to envisage the whole in an architectonic scheme, more or less adequate to the idea.

Kant now gives an outline of the architectonic of all knowledge derived from pure reason. All knowledge, viewed in abstraction from all content, is first derived into *historical* and *rational*. Historical knowledge is *cognitio ex datis*, i. e. knowledge from the given. If what we learn is merely delivered from without and not developed from within, out of concepts and principles, our knowledge is only historical. Even when what we learn from onother is a philosophical system, we get only historical knowledge.

Rational knowledge, on the contrary, is *cognitio ex principii*, i.e. knowledge from concepts and principles. This knowledge is not gathered from an external source,

but is produced out of one's own reason; and on the basis of such knowledge we cannot only criticize but even reject what is merely learnt from another. Rational knowledge again is *philosophical* or *mathematical*, according as it is derived from concepts or from the construction of concepts.

"Philosophy is the system of all philosophical knowledge." Philosophy does not yet exist *in concreto*. No system has yet been achieved of all philosophical knowledge. It is only an idea of a possible science. All our attempts in philosophizing are directed towards realizing this idea as far as possible.

This is the scholastic notion of philosophy. Besides it we have the universal notion (*conceptus cosmicus*) of philosophy or the notion of philosophy in which not only academic people but men in general are interested. According to the latter view, "Philosophy is the science of the relation of all knowledge to the essential ends of human reason." The philosopher would teach us how all our knowledge is related to our essential ends and ultimately to our moral destiny, which is the highest of all ends. The philosopher is the ideal teacher who would use the mathematician, the natural philosopher and the logician as his instruments. These would be solving the tasks the philosopher would set them. He would be the lawgiver of human reason.

Philosophy, then, which is the legislation of human reason, has two objects, *nature* and *freedom*, and contains both the law of nature and the moral law. The philosophy of nature is concerned with what *is* and the philosophy of morals with what *ought to be*.

Philosophy is again either *pure* (dealing with

a priori knowledge of reason) or *empirical* (dealing with knowledge derived from empirical principles). Pure knowledge is either a *propaedeutic* which investigates the faculty of reason in respect of its pure *a priori* knowledge and is called *Criticism*, or it is the *system* of pure reason which is called *metaphysics*.

Metaphysics is either *speculative* or *practical*, i. e., either *metaphysics of nature* or *metaphysics of morals*.

By metaphysics in a narrow sense we understand the metaphysics of nature or of all that is. It consists of *transcendental philosophy* (ontology) and *physiology* of pure reason. The former treats of the understanding and reason in a system of concepts and principles in relation to objects in general without taking into account objects that may be given. The latter treats of nature, that is, of the sum of given objects, whether given to the senses or to some other kind of intuition.

The physiology of pure reason may be either *immanent* or *transcendent*. As immanent, it deals either with the objects of the outer senses, and so with their sum, *corporeal nature*, or with the object of inner sense, the *soul*, and thus it branches off into *rational physics* and *rational psychology*.

As transcendent, the physiology of pure reason deals either with nature as a whole, giving us transcendental knowledge of the world, or with the relation of nature as a whole to a being above nature, giving us transcendental knowledge of God. It thus divides itself into *rational cosmology* and *rational theology*. The whole system of metaphysics then contains five main parts: (1) Ontology, (2) Rational Physics, (4) Rational Psychology, (4) Rational Cosmology, and (5) Rational Theology.

CHAPTER IV
THE HISTORY OF PURE REASON

Kant seeks to characterize the most important directions and changes in metaphysics under three heads.

1. *In respect of the object,* we have two schools holding divergent views. The *Sensualists*, represented by Epicurus, hold that reality is to be found in the objects of the senses and nowhere else; and the *Intellectualists,* represented by Plato, hold that the understanding alone knows what is true and there is nothing but illusion in sense-experience. According to the former, the true objects are merely sensible; and according to the latter, the true objects are purely intelligible.

2. *As regards the origin of knowledge,* the *Empiricists,* represented by Aristotle, hold that knowledge is to be derived from experience, whereas the opposite party of the Noologists, represented by Plato, hold that knowledge has its origin independently of experience, in reason.

3. *In respect of method,* we have to draw the distinction between the *naturalistic* and the *scientific*. The naturalist of pure reason believes that through our common sense only can we know things truly, without the help of any scientific method. This view is rather absurd. But if any one, for lack of better insight, is content to follow common sense, he does not merit censure. The scientific method has been either *dogmatic* as practised by Wolff, or *sceptical,* as we find it in Hume. If was left to Kant to introduce into Philosophy a new method, which is called *Critical.*

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,,	87	,, 1	*For*	hot *read* not
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,,	,,	,, 22	*For*	derived *read* are derived
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,,	157	,, 6	*For*	series *read* series of
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