Abstract: C.I. Lewis' Notebook
on Kant, 1910-11

This edition is of a notebook prepared by C.I. Lewis during 1910-11. The text covers the "predicament" of philosophy at the time of Kant, The Critique of Pure Reason, and The Metaphysic of Morals. The highly detailed discussion of the Critique was "based on" Lewis' own outlines made in the Kant course conducted by Ralph Barton Perry.
This edition presents in unabridged and essentially unchanged form the contents of a notebook prepared by C.I. Lewis. The notebook contains a discussion of the "predicament" of philosophy at the time of Kant, a detailed review of The Critique of Pure Reason, and a summary of The Metaphysic of Morals.

The part of the text that covers the Critique was, by Lewis' own statement, based on the Kant course conducted by Ralph Barton Perry, a course which Lewis had attended in 1908. Particularly noteworthy are Lewis' own remarks on portions of the text of the Critique. One of these interpolations deals with the alleged \text{a priori} order in perceived succession (p. 19). Another deals with the "Refutation of Idealism" (p. 20), and a third is addressed to the concept of freedom in the "Thesis" of the "Third Antinomy" (p. 33).

The only major shortcoming which I discern in Lewis' representation of the Critique pertains to Lewis' use of the term "transcendental." Lewis, in my judgment, failed to be critical of Kant for the latter's excessive (and, therefore, often incorrect or unhelpful) use of "transcendental." With awareness of, and respect for, the many problems of interpretation that relate to the use and meaning of the terms "transcendent" and "transcendental," I nonetheless believe that a brief discussion, together with a few references to the text, would serve a useful purpose.

There is, I believe, very nearly universal agreement that one primary reference of the term "transcendental" in the Critique is to the type of argument or analysis by which one determines the alleged action of the categories of the understanding in the synthesis of the matter, the data, of experience. (See, for example, A97, Critique of Pure Reason.) In Lewis' notebook, this use is reflected in a passage on pages 9-10: "we must explain how it happens that the objects given by intuition are such as to be capable of synthesis under these concepts [that is, categories]...."

The term "transcendent," infrequently used by Kant and Lewis, is employed in cases where there is reference to what is beyond the limits of experience (A296, CPR), whether that be an existent in itself or the alleged object of a metaphysical reference. In the notebook, there is a good example of the correct use of "transcendent" on page 24 where the subjects under discussion include principles "...which cannot be applied to a possible object [of experience]...." Such principles are called "transcendent."

In contrast to the correct use of the terms "transcendental" and "transcendent"—allowing, of course, that both are employed, at times by analogy, in a variety of contexts—there frequently occurs, both in the Critique and in Lewis' notebook, a use of
"transcendental" in cases where "transcendent" would have been the correct term to employ. Most of these misuses occur in the "Transcendental Dialectic" in the Critique and in Lewis' discussion of that section of the Critique in his notebook. Expressed in its most pointed form, Kant's concern in his critique of the faculty of reason ought to have been with the transcendental dialectic, the misuse of transcendental principles in the fruitless enterprise of using arguments to draw conclusions about a transcendent entity or process. Kant himself was later to express unhappiness that one of his reviewers had "not once grasped" the correct meaning of the word "transcendental." (See Prolegomena to Any Future Metaphysics, Footnote 48 to page 373 (Universal pagination).)

Readers of Lewis' notebook, especially those who are using the notebook to further their understanding of Kant, should be sensitive to the many places where the misuse of "transcendental" might compromise the value of what otherwise would be very helpful discussions. I shall give only one example; others can easily be identified if the opposition of the concepts in question is kept in mind. On page 21 of the notebook a statement that would have been particularly useful in expressing Kant's view on that type of error that underlies the practice of metaphysics is rendered misleading by the occurrence of "transcendental": "We may thus attempt a transcendental use of the understanding...and apply it to things in themselves." Obviously, the term "transcendent" ought to have been used in this context. [I ought to mention that this failure, on Lewis' part, adequately to distinguish the use of the terms in question was overcome early in his career. In Mind and the World Order Lewis, in a critical passage, tacitly directed to the Kantian position, mentions a "...transcendent mind working upon a material which likewise is something beyond experience" (p. 30; my emphasis). Later in that book, Lewis noted (without, however, using the term "transcendental" in referring to the "deduction of the categories") that the deduction consists "at bottom" in the fact that no experience is possible "...without the validity of categorial principles..." (p. 320)]

The existence of the Lewis notebook on Kant was brought to my attention by John D. Gbheen. Permission to reproduce materials in the C.I. Lewis Collection at Stanford University Libraries was granted to me at first by Andrew K. Lewis, Lewis' son and literary executor, and later renewed by Florian Shasky of Special Collections at Stanford. Sara Timby forwarded the photocopies of the notebook to me. I give my thanks to these persons for their assistance in helping to make this historically and philosophically important material public.

I would also like to express my thanks to A.I. Melden, for his expressions of interest in the notebook, to my wife, Arlene, for her tireless attention to detail in the preparation of the notebook for publication, and to Mrs. Carole Wenthen for expert (and cordial) secretarial assistance.
These outlines of Kant were written out in 1910-11, following award of the Ph.D. They are apropros of nothing, and never made use of. I suppose that at the time I had some vague notion of using them someday as my own outline for possible courses I might some day give (or basis for such). By the time they might have been so used, I had acquired a better sense of audience.

So far as Kant's first Critique is concerned, they were based on my own outlines made in the Kant course conducted by Ralph Barton Perry, in which I sat in the fall of 1908.

C.L.
An account of the predicament at the time of Kant involves the history of two schools or lines of thought: the Rationalism of the Continent and Empiricism in England.

The Continental Philosophy, beginning with Descartes, shows two marked features characteristic of the Renaissance period: the throwing off of authority and the hope, fostered by the wonderful discoveries and progress of the period, for a complete system of thought, established on the basis of incontrovertible principles. Following a natural bent to Mathematics and led on by the exact results of that science, Descartes sought for some self-evident truth to serve the purpose of a mathematical axiom. This he believed that he had found in the dictum, "Cogito, ergo sum." Perhaps also from the analogy to Mathematics or from the Law of Contradictions in Logic, he was led to enunciate the second dictum that whatever proposition when once clearly understood appears immediately convincing, is necessarily true. On the basis of these two principles, Descartes built up, in the Method and Meditations, a system including the Self, God and Nature. But in this proof God becomes an inference from certain persuasions of the 'natural light' and Nature or extended reality is again an inference from the nature of God. The Soul and Body, the mind and the external world, were thus separated. The mind is known immediately and intuitively, but the reality of the outside world becomes certain only after long drawn-out and (to modern minds) somewhat fallacious proof.

Descartes was, however, a naive dualist rather than a dualist from intention. The separation of subject and object was a result of his philosophy perhaps not clearly foreseen and possibly regretted by the author himself. But with the development of his system by Geulinx, Malebranche, and the minor philosophers of the Cartesian School, this dualism became the troublesome and crucial problem. Malebranche sought solution of it through the device of seeing all in God, and narrowly escaped a mystical pantheism of the most pronounced and abstruse type.

Spinoza defined reality as one Substance— infinite, eternal, God. Particular facts or things are but the modifications of the two knowable attributes of that one Substance— Thought and Extension. We are still minds and exist by virtue of participation in the essence of God. Matter is still, with Spinoza, something foreign to us and connected with mind only as another attribute of the Infinite Substance.

In the philosophy of Leibniz, the material world was still more submerged, and the Monadology gives us what may be termed a Pluralistic Idealism.
In the development of Continental Philosophy, therefore, the Ego with which Descartes had begun, had remained sure property, although the concept had lost much of its richness. And as for the external world, it had steadily been reduced in significance until the loss would have been comparatively slight had account of it been entirely omitted.

Furthermore, the method of Descartes had remained throughout. Demonstrations were still based on the fundamental laws of Logic and appeal to the 'natural light' or to the principle of Sufficient Reason.

English Empiricism, though foreshadowed in the Inductive Logic of Bacon, first becomes important as a philosophical doctrine with Locke.

Locke adopted the method of psychological analysis, declared the mind to be a 'blank tablet,' and based all upon the 'simple ideas' of sensation. Outer reality, he thought, could be like its appearance only in respect to its mathematical qualities of extension, solidity, and figure. The substance which underlay the appearance, he called 'something, I know not what.' The significant point, however, is that he never thought to doubt the existence of that something, even though it is separated from us by the peculiar structure of the sense organs.

Berkeley, in his New Theory of Vision, reduced the primary qualities of Locke to the same condition as the secondary appearance of color, taste, etc., and then leaped the chasm by announcing that the appearance is the reality. This idealism of Berkeley, however, is in sharp contrast with that of Leibniz. One is tempted to say that Berkeley thought of ideas in terms of things while Leibniz interpreted things in terms of concepts. Again, the Ideas, according to Berkeley, are imprinted on the human mind by God, and thus are made to take their rise in sensation.

Berkeley was much puzzled because, as he said, "we have no idea corresponding to spirit." In his second edition (of the Principles) he explained that we have "a certain notion" of it, but he never admitted it to the class of realities that immediate experience gives us.

Hume began where Berkeley left off, much as Berkeley had taken the philosophy of Locke as his point of departure. The only realities that Hume's Skepticism left intact were the isolated sensations. Hume could find nothing corresponding to the Soul. Whenever he sought, by introspection, to discover it—so he declared—he found only a sensation or a particular volition or feeling. The continuity of experience he attributed to the ease we find in passing from one idea to another; and the continuity of the outer world—the causal relation—he defined as the belief or opinion we have that what has been often observed will, under similar circumstances, be repeated.
The English Empiricism had preserved the that of experience but had forfeited the right to give it any what, had lost all save the bare and isolated sensation. The Continental Philosophy, likewise, taking its rise in necessary truth and immediate rational conviction of the Ego, had saved only that with which it started: it had formulated an ideal what and had lost the that of experience. The English had bricks but no mortar; the Continentals, mortar but no bricks.

Such was the predicament in which Kant found European Philosophy. It remained for him, by curbing each tendency and uniting the better elements of both, to initiate the second period of Modern Philosophy.

The Problem of the Critique

The problem which Kant set for himself in the Critique is the problem of establishing Metaphysics on a sound basis such as Aristotle provided for the science of Logic. The test of success, he says, will be general acceptance of that basis and success in building the superstructure without the necessity of continually going back to undo what has been done. As evidence that such a foundation for Metaphysics is possible, he cites the fact that Aristotle's Logic has never required an important reconstruction. (Kant here distinguishes Logic proper from what might be called the epistemology of the logical processes and also from that pseudo-Logic which intends to supplant Metaphysics.) The Logic of Aristotle has been so successful because it was restricted to the understanding itself and its forms.

Logic has not been restricted, however, to the forms of a priori knowledge—general truth with inward necessity and independent of experience. It intends to exhibit and to prove also the forms of a posteriori knowledge.

Besides this division with reference to origin, the logical propositions are divided into two other classes: the analytical judgments and the synthetical. The first are those which do not add to our knowledge and merely exhibit the subject in more detail, perhaps, in the predicate. Synthetic judgments are those which do add to knowledge and give us in the predicate that which no inspection of the subject, alone and unaided, would ever be sufficient to prove.

But these two divisions of judgments—into a priori and a posteriori, and into analytic and synthetic—are not produced by the same distinction. As evidence of this, Kant cites the fact that Mathematics and Physical Science (so far as it is pure) containing no concepts drawn from experience though made up wholly of a priori judgments, still contain synthetic judgments. a+b=(a+b) is an a priori judgment and analytic. It gives us the fact that one collection containing, to take an example,
'a' objects and one containing 'b' objects may be made into a single collection, but does not, he maintains, give us the fact that the number of objects contained in that collection will be such and such, e.g. 8. This is evident in cases where the numbers are large. We can immediately judge by inspection that the result of 1726 + 9674 will be (1726 + 9674) but we can never tell by analysis what the sum will be. The sum is an addition to our knowledge and as such synthetic in character. In synthetic judgments, there must be something else (\(x\)) upon which the understanding relies to know that the predicate belongs to the subject. In Mathematics, which deals only with a priori knowledge, the '\(x\)' is another synthetic judgment; in empirical judgments, the '\(x\)' is furnished by experience.

Knowledge may stand in a twofold relation to its object by determining the 'what' only, or the 'that' as well. Experience tells us what is, but not that it must be necessarily as it is. In the knowledge, therefore, which stands in the second relation to the object, the '\(x\)' of experience is necessary. (I am not certain that this is a correct interpretation.) Moreover, for the knowledge which determines the 'that', pure reason as well as experience is necessary, for reason has insight into that only which she herself produces on her own plan.

Therefore, no knowledge is antecedent in time to experience, but that is not to say that it arises from experience, because experience may include that which our faculty of knowledge supplies to supplement the 'raw material.' Certain kinds of knowledge, mixed with experience and serving to connect the elements of 'raw material'—of sensation—, have a priori origin. There are certain forms into which experience necessarily falls, and these concepts are logically prior to, and therefore independent of, experience. Thus we may predicate more of the objects of sense than we learn from experience, and these judgments will have inward necessity, will inform us that the 'that' of experience must necessarily be 'what' it is.

There are also certain kinds of knowledge which transcend experience. Here knowledge stands in the relation to its object of determining the 'what' only. Such knowledge is purely speculative. This knowledge goes beyond the frontier of experience and deals with postulates. To this realm Kant relegates the Unconditioned which reason supplies for every Conditioned—else we should have the absurdity of phenomena without something that appears—and also all knowledge of the moral realm, of God, freedom, etc. This knowledge peoples the empty world of the supersensuous which the Critique creates. Although knowledge of this realm can never be verified by experience, it cannot, because of its transcendental character, be contradicted by experience. Thus we cannot know freedom, but we can think it, believe it, and it will not be contradicted by the mechanism of phenomenal Nature. For the hypotheses of this realm, Kant seems to accept the principle of Sufficient Reason, and to apply that
principle much as Leibniz did. It is necessary only that the truth of this realm should not be self-contradictory. Its principles form an organic body of which each member exists for the sake of all the others. Speculative reason is thus self-critical.

Metaphysics is not concerned with this realm. It deals with a priori knowledge which unites with experience to determine the 'that' as well as the 'what'. It deals with the forms of sensuous intuition, such as Space and Time.

The Critical Philosophy should contain a doctrine of Method and of Elements. In its method (so far as I understand it) it is self-critical like speculative knowledge. Its elements are the primary concepts or the forms of sensuous intuition. It is not necessary to treat of derivative concepts, because the fundamental ones and the method being determined, these follow with as much certainty as the solution in Mathematics. The problem of the Critique is thus to provide not a system of science but only the method for such a system.

Transcendental Aesthetic

The undefined object of an empirical intuition is phenomenon. All thought must go back to intuitions; because it depends upon the phenomenon, we cannot think about that which has not been represented in our minds. The sensational element of the phenomenon is its "matter"; that which gives order to the phenomenal manifold is "form." It is evident that sensation cannot be arranged or ordered by some other sensation; therefore, the origin of that which orders must be of the mind, must be a priori.

If then, from the phenomenon, we abstract the matter of it, we shall have pure representation, and this pure form of sensibility—that is, knowledge of the form—may be called pure intuition. Deduct from the representation of a body what belongs to thinking—substance, force, etc.—and what belongs to sensation—hardness, color, etc.—there still remains something of that empirical intuition, namely extension and form.

The Transcendental Aesthetic deals with the principles of sensibility a priori. There are two such: Space and Time.

Because of the nature of our minds, we represent objects as outside us in Space. Again, although we never have an intuition of the soul as object, the mind perceives itself under a certain fixed form. Whatever belongs to these internal determinations must be represented in Time. Are Space and Time real beings, relations of things in themselves, or of things as perceived?
Space is not a concept drawn from experience. When I re­present things as in different places, the representation of Space must be already in my mind. Without this a priori form of the external intuition, experience of the Outer would be altogether impossible. Thus Space is a priori necessary and from this fact results the apodictic certainty of geometrical princi­ples. We are not limited to experience because we know beforehand the form under which all experience must necessarily be given. If we did not possess such binding principles, the axioms of Mathematics would have to be given up and sense perceptions substituted. That is, Mathematics would become an Induc­tive Science. Moveover the idea of space is not arrived at by considering many objects, each having extension, for this could never give us the sense of certainty about all objects to be perceived in the future. We cannot even imagine objects except as existing in Space. Therefore, Space is not a quality to things, nor an abstraction arrived at by generalizing from many particu­lars. Space is the form under which all perception of things by the external senses must fall.

Yet space is not a condition of things in themselves. If we consider the nature of objects apart from our perception of them, the apodictic certainty that they will fall under the space form does not obtain. Space is a subjective condition of our sensibility, according as we are affected by objects. It is an a priori necessity of all representation of objects.

Space is the only subjective representation referring to something external, the only form which is a priori objective. Taste, color—the secondary qualities—are dependent on sensation. There is not a priori necessity that objects, even as perceived, must have color or taste or smell. These are qualities of the object; Space is the form of sensuous intuition.

Time, like Space, is not an empirical concept. The fact that different times cannot coexist could never be discovered from any investigation of things as representations, as phenomena, but is given only in the intuition of Time itself. Like Space also, Time is not a discursive concept arrived at by generalization of other concepts, because there is only one Time and different times are conceivable only by limitation. Moreover if Time were a generalization of separate times, we could not know that no two of these times could coexist, which is a synthetic judgment. This judgment is, however, contained immediately in the intuition and representation of Time.

Time is thus not a quality of phenomena but the a priori form of the internal sense, of the intuition of self. Yet it is a condition not of the self only but of all phenomena because all phenomena are subjectively conditioned, are representation. Time has objective validity only because of its being this condition of phenomena, and does not condition things in themselves.
Likewise time is not a condition of the Knowing Self but is to be considered as the condition of the representation of myself as an object.

Thus the Ego and things in themselves exist apart from Space and Time. All phenomena, except the Self, exist in Space, being conditioned by this form of the intuitions of the external sense. All phenomena, including the Self, exist in Time, being conditioned, as representations, by the internal sense, the intuitions of the internal sense, of the empiric Self.

Transcendental Analytic Book I

The distinction which divides Logic from the Aesthetic is the distinction of the sensuous intuition from the understanding. Both these faculties—sensibility to impressions and the spontaneity of knowledge—are necessary to constitute our knowledge. The former gives us the content of knowledge, but without any necessary order, while the latter gives form to the manifold, but could not, alone and unaided, produce any content. Hence the necessity for dividing the Aesthetic from the Logic.

Elementary Logic treats of those general rules of thought which are necessary. Logic may be invoked, however, in its relation to some particular Science, and this Logic is distinguished as the Organum of that Science. It becomes possible only when the Science nears completion.

General Logic is either pure or applied. Pure general logic takes no account of empirical conditions, while applied logic reckons with the psychological facts of attention, emotional coloring of judgments, etc. The general logic deals with principles a priori only, and is a canon of the understanding and of reason. It takes no account of the conditions or the diversity in the matter of knowledge, and has nothing to do with empirical principles.

The Transcendental Logic, as distinguished from the general Logic, excludes all knowledge of a merely empirical character but considers in additional the origin of knowledge so far as that origin is in pure form. It is transcendental in that it shows how representations (as concepts) are possible only a priori. It may also examine the extent and objective validity of knowledge as conceptual.

General logic furnishes a criterion of truth for every kind of knowledge. It furnishes the general rules with which all knowledge must comply if it is to escape inconsistency and self-contradiction. It is thus a negative test of truth only. With regard to the matter of knowledge, logic can furnish no test. To ask for a criterion of the object of knowledge is, according
to Kant's method, absurd, since the object must be already recognized as such and its a priori elements taken for granted, so that the search for such an objective criterion would contradict itself by presupposing the criterion.

What is required here is a general test, an examination of form of thought and a resolution of the formal action of the understanding and reason into its elements. This part of general logic is called the Analytic.

No organum of general truth is possible, because we cannot venture with Logic alone to judge of objects. That sham Logic which pretends to do this, Kant indicated by the title of Dialectic and he makes use of it only to exhibit its own insufficiency and thus the limitations of knowledge. But when thus turned upon itself, the Dialectic becomes Transcendental.

The transcendental Analytic first separates out that part of knowledge which is pure and has its origin in the understanding. In teaching the elements of this pure form of thought, it furnishes the missing criterion of truth by laying down the formal conditions of all knowledge.

In this work, it is essential that the contents of such knowledge be pure representation apart from sensation, and that a complete list of elementary underived concepts be given. The result must be a system, the self-sufficiency and unity of which will attest the success of the analysis. This is accomplished not by dissecting given concepts, but by examination of the function of understanding itself. The pure concepts are traced to their lair in the pure understanding, and by spreading our net over the mouth of the cave, we make sure of the whole family.

The understanding, as the non-sensuous faculty of knowledge, depends upon concepts; and concepts depend upon what Kant calls "functions"—by which he means the faculties of the mind for producing unity in a diversity of representations. The concepts are used in forming judgments, in applying one representation, of the many grouped under the concept, immediately to the object. The object then becomes mediately represented by the concept.

These functions or forms of the understanding, Kant tabulates as follows:

According to quantity - universal, particular, singular;
  "    " quality - affirmative, negative, infinite;
  "    " relation - categorical, hypothetical, disjunctive;
  "    " mode - problematical, assertory, apodictic.
In this table, the first two "moments" of each function are in some sense opposed and the third "moment" is in some sense a synthesis of the two preceding. For instance, the singular proposition is particular in that the subject is concrete and not discursive, and universal in that the predicate is asserted true of all the subject; and the judgment of infinity as an affirmation of the absence of something (limits) is therefore both affirmative and negative.

This triadic relation of the moments of the categories or pure concepts of the understanding appears as:

- Of quantity - unity, plurality, totality.
- Quality - reality, negation, limitation.
- Relation - substance and accident, cause and effect, reciprocity (community of action and passion).
- Modality - possibility - impossibility, existence - non-existence, necessity - contingency.

These are all the original pure concepts a priori. They constitute the sum of the original ways in which objects a priori (pure representations) may be synthesized. More strictly, they constitute the original ways in which the pure syntheses of the manifold by imagination may be brought under the higher synthesis of pure apperception.

The triadic character of the moments, and the correspondence of the categories to the functions of judgment, seem to constitute all the system here introduced. The division of the functions is evidently based upon the Aristotelian logic, yet Kant accuses Aristotle of having picked up his categories "fortuitously."

These concepts, the categories, must be deduced a priori. Since they constitute the part of knowledge furnished by the understanding with a view to ordering the manifold of experience, we shall never find them by investigating the manifold. It is here that Hume made his mistake. Reducing all reality to sensations, he forfeited the possibility of discovering the relations of the sensations. Though the concepts may not be deduced from experience, and Locke was thus mistaken in seeking to so deduce them, yet the occasion of their arising [may be made the object of an investigation which is possible and profitable. That is because the circumstances of experience induce the understanding to bring them forward.]

A transcendental deduction of the categories and also of space and time (considered as pure forms of thought) is necessary. It must be shown how subjective conditions of thought come to have objective validity. We must explain how it happens that the objects given by intuition are such as to be capable of synthesis under
these concepts, since the categories are not conditions under which objects may be given in intuition. And this proof must be transcendental, because no investigation of intuitions themselves will show their necessary relations, but only a study of the form or relations themselves as existing in the understanding.

There are three original sources or faculties of the mind which give rise to the relations of objects:

1. Sense - by which is produced a synthesis of the manifold \textit{a priori} (in space and time)
2. Imagination - which produces synthesis of objects (already spatially and temporally determined)
3. Original apperception - the prime unity of all syntheses.

Inasmuch as each faculty may be exercised transcendentally (about pure objects), the syntheses produced will be \textit{a priori}.

We may discover the necessary or \textit{a priori} character of the synthesis of knowledge in some form in two ways. First, if we proceed toward the manifold, in the direction of the objective and the various, we find that we cannot go further than the object. There is a synthesis of apprehension, such a unity of intuition as makes it such as to be contained in one representation. Some synthesis (the object) is necessary, or we could have no matter of knowledge. Secondly, if we consider knowledge inwardly, we discover that it can be knowledge (for me at least) only in so far as it enters into the unity of original apperception—my knowledge of my own consciousness. Anything given outside consciousness could not be knowledge.

Moreover, our intuitions themselves could give us no knowledge unless they were subject to \textit{recognition}, which is a synthesis in which the imagination brings the intuition into union with certain pure representations of memory.

Since these syntheses are necessary and since without them, there could be no knowledge at all, they are of the mind, subjective, and \textit{a priori}.

(There seems to be here almost an assumption that the constant, the indivisible, is subjective and of the mind. The only ground for such assumption would be that it is the constant or indivisible character or aspect of experience which we denominate by the subjective.)

We cannot conceive, however, that things in themselves are subject to such \textit{a priori} conditions. It is only phenomena, in so far as they are conditioned by the necessary form of our knowledge, which admit of such determination. It is thus that the categories may be transcendentally deduced and yet possess objective validity.
Transcendental Deduction

The manifold given by intuition is purely sensuous, and the space or time form of the intuition is pure receptivity. But the connection of the manifold cannot be sensuous, and this connection is therefore supplied by a spontaneous act of the understanding. Beside this act or synthesis, the concept of connection includes the unity of the manifold. The unity is logically necessary for the connection; and since the act of synthesis is one and the same for every connection, there is an Original Synthetic Unity of Apperception which is the condition of all synthesis of the manifold.

The manifold of representations must all be my representations if they are to be given in intuition; that is, they must all belong to one self-consciousness. It must be possible that "I think" accompany every representation. But the empirical consciousness is disjunctive. This unity is possible therefore only by a transcendental synthesis of the manifold, which is analytically discovered when I pronounce the consciousness of the manifold as one. The Ego is not given as a simple representation. It is analytically discovered in the transcendental unity of the manifold in the original apperception.

The manifold of representations, so far as it is given, is subject to the formal conditions of space and time; so far as it is connected, it is subject to the conditions of the original synthetical unity of apperception.

The faculty of cognition, which defines the relation of the representation to the subject,—that in the manifold which is connected—thus depends upon the unity of consciousness. The very possibility of anything's being cognized, and thus the objective validity of knowledge, depends upon the original apperception. This original synthesis is the first pure cognition of the understanding. Nothing can become an object for me except as it is possible to connect the manifold in the unity of self-consciousness. This is a condition for our understanding, but would not condition another (God's?) if that other were so constituted that its representations were its intuitions, i.e., if it created the phenomena by a spontaneous act of the understanding.

By connecting the manifold into the concept of an object, the transcendental apperception creates an objective unity which is different from the subjective unity of the internal sense. Empirical synthesis of the manifold, in time, as successive or coexisting, is contingent and not necessary; the a priori ground of the synthesis is found in the original apperception. Only that unity is, then, objectively valid; and the empirical apperception—in which one man associates one thing in a certain manifold, another, in another, according as their empirical experience differs—has subjective validity only.
Judgment, when examined, proves to be nothing but the bringing together of cognitions in the objective unity of apperception. The relation of the cognitions becomes a judgment only as I join them in the object, not as I join them subjectively. But intuition is possible only under the form of the original apperception, so that the 'given' is determined as to the fashion in which it comes under the synthetical unity. This is the same as to say that it is determined with regard to one of the logical functions of judgment. The categories are these logical functions or ways of bringing under the original synthesis, so that the manifold in any intuition is determined with regard to the categories. The category indicates that the manifold is subject to a subjective synthesis a priori (in self-consciousness, according to its category) in just the same way that it is subject to the objective synthesis a priori in intuition.

Kant is now especially concerned to show that this unity of the empirical intuition is the same unity which is prescribed by the category, for by showing this, he demonstrates the objective validity of a priori reasoning and makes all experience subject to the categories which have been transcendentally deduced. However, the manifold of intuition must be given antecedently and independently.

To think an object is not the same as to know it. If no object corresponding to a concept is produced by intuition, the concept is still thought—pure form, determined by the category. Thought becomes knowledge only if this pure concept of the understanding is referred to sense-objects. Consequently the categories give us the possibility of empirical knowledge only. Pure intuition may give us a mathematical knowledge (of pure form), but we have empirical knowledge only if these concepts are referred to objects. Thus the categories must apply to empirical intuition if we are to have empirical knowledge. Further, the categories can give us knowledge only so far as they are referrable to objects of possible experience.

The categories are applicable to intuitions in general, but we can by their use determine an object of non-sensuous intuition only negatively, by showing that it could not have any attributes of the sensuous object. Thus no category could apply to such an object.

The synthesis of the manifold in intuition referred to the transcendental unity, becomes thus the ground of knowledge a priori. The synthesis does so fall under the unity of apperception only because the understanding is able spontaneously to determine the internal sense by the manifold of intuition. Thus the categories, determinations of the internal sense, receive objective validity, but for phenomena only. This 'figurative synthesis' of imagination determines the internal sense through the imagination, by which the objects of sense are represented even in their absence. This active faculty, the productive imagination, is thus able to determine a priori the sensibility as well as
and the internal sense. We could not know an object which we
could not imagine. Unity of the synthesis without and within
us is the a priori condition of apprehension simultaneous with
intuition, which alone gives knowledge. Consequently all synthe­
sis, even of perception, is subject to the categories. The cate­
gories are the conditions of the possibility of experience and
valid a priori for all objects of experience.

Since Nature is the sum total of all phenomena, the cate­
gories supply the laws for Nature in general. But the laws
so supplied are general only, e.g. cause and effect, since they
determine only what can be given, and experience also is necessary
to the laying down of special or empirical laws. These laws
exist, not in things in themselves, but as conditions of their
relation to a knower.

We cannot think any object except by means of the cate­
gories; we cannot know any object except through intuitions
corresponding to these concepts. But empirical knowledge is
experience and therefore knowledge a priori is possible only of
objects of possible experience. Either experience makes the
concepts, or the concepts make the experience possible. There
is knowledge (of concepts) which is not made by experience;
therefore, the latter alternative is the true one. The middle
course of preestablished harmony of thought and things is objec­tionable, because by it the categories lose the character of
necessity. This course thus leads to Skepticism, since purely
subjective necessity can be denied.

Transcendental Analytic Book II

The division of general logic into concepts, judgment,
and syllogisms corresponds exactly to the division of the higher
faculties into Understanding, Judgment, and Reason. Formal logic,
since it does not treat of content, can give rules to reason only.
Transcendental logic, being limited to pure knowledge a priori,
cannot belong to Analytic, the logic of truth, because trans­
cendental reasoning does not receive objective validity.
The transcendental use of reason is therefore limited to Trans­
cendental Dialectic, the logic of illusion. The Analytic of
Principles treats of the understanding and judgment, and teaches
how the concepts apply to phenomena—that is, teaches the manner
of bringing phenomena under the categories, i.e., of judging.
The understanding is the faculty of rules, and the judgment of
the application of those rules. The Transcendental Analytic
gives the general condition of rules of the understanding, and
also indicates a priori to what case the rules apply.

The first chapter treats of the sensuous conditions under
which the pure concepts may be applied. Kant calls this rationale
the 'schematism of the pure understanding.'
The concept must be homogeneous with representation of its object. Since concept and sense impressions are not homogeneous, the application of the concept is possible only because there is an intermediate representation pure and homogeneous with the category on the one hand, and with the sensuous on the other. This is the transcendental schema. Such a representation is the transcendental determination of time, which, as pure intuition, conditions sense impressions, and as the formal condition of the synthesis of the manifold in the unity of apperception, conditions the understanding. The formal condition of sensibility which limits the application of the concept is the schema; the function of the understanding in these schemata is the schematism of the pure understanding. The schema functions as the imagination, aiming, however, at a unity alone and not at a single or particular intuition. Thus the schema is distinguished from the image as being more general in character. Pure sensuous concepts do not depend upon objects—as the triangle on the board—but on schemata—as the triangle in general. The schema can thus exist only in thought. Empirical rules are general rules of imagination. The schema cannot be made into an image; it is a synthesis expressed by a category, under the time condition of the internal sense.

The pure image of quantities is space; of objects in general is time. The schema of quantity is number—cardinal number. Number is a unity, by addition, of that which is homogeneous. Reality equals sensation in general. The concept of reality then comprehends Being (in time). Negation represents the absence of such being. Time is the form of intuition, of phenomena as sensation, and is thus the transcendental matter of objects. Since, however, sensations have degrees and are capable of filling time with a more or less, there is a transition from Reality to Negation.

The schema of substance is permanance in time—that which always persists in some form. It is, therefore, substance, which, in phenomena, corresponds to time. Only by means of the concept of substance as something which persists can succession and coexistence be determined.

The schema of cause is succession in the manifold, so far as the succession is necessary or determined by rule.

The schema of cause is succession in the manifold, so far as the succession is necessary or determined by rule.

The schema of community or the reciprocal determination of the accidents of substance is coexistence.

The schema of possibility is the determination of a representation at any time whatsoever.

The schema of reality is existence at a given time.

The schema of necessity is existence at all times.
The schema of quantity represents the synthesis of time in the succession of times—series of time; the schema of quality, the synthesis of sensation with reference to time—contents of time; the schema of relation, the relation of perceptions in point of time—order of time; modality, time itself as correlated with the determinations of an object—comprehension of time.

Since these schemata aim at unity of the manifold through the imagination, they are the only possible conditions for the reference of concepts to sense impressions. Outside these conditions, the categories can have no meaning, unless a purely logical one of which we can make no use. The schemata, as sensuous concepts of objects in agreement with the categories, limit the categories to the objects of possible experience (of which alone knowledge is possible).

Analytic of Principles

Having laid down, in the first chapter of the second book, the conditions of sensuous intuition under which the categories can be applied to objects, Kant now turns to consider the judgments which may be made a priori under those conditions. The principles of the pure understanding are, so to speak, the categories at work, their application to experience. The concepts of mathematics, being derived from pure intuition and not from the categories, are here omitted from consideration.

The highest principle of all analytic judgments is the logical principle of contradiction. Kant states it: "No subject can have a predicate which contradicts it." This is a negative condition of all judgments. Non-contradictory judgments may still be false. Yet this principle may discover truth as well as ward off error, since the opposite of that which is necessarily true of experience will be in contradiction with the object—will predicate of the object that which contradicts it. But this is an analytic principle and we must expect no help from it in synthetic judgments, though synthetic judgments must never offend against it.

In making synthetic judgments, we join with a concept that which is not contained in it. The subject and predicate are thus neither identical nor contradictory. To discover the ground and extent of the validity of such judgments a priori is the aim of transcendental logic. A synthesis of such a subject and predicate in terms of a third is necessary since neither contains the other. This medium of synthesis is time, in which all our concepts are contained. The means of synthesis, as already shown in last week's reading, is the imagination; and the unity necessary for judgment is the unity of apperception.
Objects of knowledge must be given. A concept, whether of pure intuition, category, or pure schema, may give us thought, but no knowledge without the sensuous intuition. The possibility of experience alone gives objective reality to a priori knowledge. But the manifold could never get itself into such form as to become possible experience without a priori rules of synthesis. Possible experience as something determined depends upon the objective validity of these rules.

The pure synthetical judgments always refer, mediately through the pure intuition, to possible experience. The pure concepts are objectively valid and judgments about reality, only as they contain the necessary conditions of synthesis of the experience manifold in time.

The highest principle of all synthetic judgments is therefore that every object is subject to these necessary conditions.

The understanding is the source of all rules. Even laws of nature do not inhere in things themselves but only exhibit the conditions of necessary synthesis under special conditions. This empirical necessity is easily distinguished from the logical necessity which characterizes principles of the pure understanding. There are also pure a priori principles—those of Mathematics—which are derived not from the pure understanding but from the pure intuition. The possibility of the reference of mathematics to experience, however, rests on the pure understanding, as the ground of all synthetical knowledge a priori.

So far as the pure concepts are directed to pure intuition only, the synthesis is mathematical; so far as they are directed to existence, we have dynamical principles.

The basis of the table of principles is the categories, of whose reference to objects the principles treat. Quantity and Quality give the grounds of certainty to mathematical principles; Relation and Modality, to the dynamical principles, through which is traced the certainty of all particular physical dynamical rules.

The axioms of intuition are the principles of quantity. "All phenomena are, with reference to their intuition, extensive quantities,"—wholes made up of parts (the 'unit-collections' of modern terminology). Since all intuitions are given in space or time and depend upon a synthesis in space or time, they come under this determination as extensive quantities. The mathematics of extension and its axioms are founded on the synthesis of sensuous intuition a priori by imagination under the conditions of intuition a priori. Objects of sense must conform to constructions in space; hence the objective validity of mathematical principles. This objective validity a priori depends upon principles of synthesis, upon construction rather than analysis.
"All phenomenal sensation, and the Real which corresponds to it in the object, has an intensive quantity, that is, a degree." The "Anticipations of Perception" seem really to deal with qualities, but with qualities as quantitatively determined. Every sensation, as apprehended, is simple; but sensations, when brought under the synthesis of succession, have degree, are determined as intensives. Every sensation, every real, is capable thus of diminution down to negation, the absence of it. The peculiar character of intensives is that they are not aggregates but can be apprehended as units only. Their quantity is determined by approximation to negation.

A peculiar character of quantities is continuity. The division into parts is not absolute, and any unit may be treated as a collection, any collection as a unit. The units, however small, are always homogeneous with the quantity itself.

Since all sensation has a degree and the degree corresponds to the real in the object, no sensation can ever give evidence of an empty space or time.

Different degrees may fill equal times or the same or equal space. Of quantities in general we can know only this one quality—continuity—a priori. Sensations—degrees—are given a posteriori only.

The three modes of the mutual relations of phenomena in one and the same time are permanence, succession, and coexistence. The general principle of these three 'analogies of experience' depends upon the unity of apperception, by which existences and their relations, as such, must be brought into one consciousness, into one time. The rules for the synthesis may be given a priori, but existence and the differences of empirical intuitions cannot be known a priori. Mathematical principles are 'constitutive': although referring only to possible existences, degrees and quantities may be a priori determined by construction in the imagination. The principles of empirical thought in general have also this character of being regulative of something which is possibly existent. They relate to the form, not the matter, of phenomena. All these analogies are valid, not transcendentally, but as principles of empirical synthesis of experience. These principles restrict the category to its application to possible existences, and only when so restricted can the category be referred to objects. Thus, in the analogy of phenomena to the unity of concepts, we substitute for the category the schema which is the principle of its application to objects.

All phenomena, in time, are determined as coexistent or successive. Our apprehension of phenomena is always changing, so that we can determine the succession or coexistence only on the supposition of something that exists always. The permanent is thus the basis of all determinations of succession or coexistence,
representing the unchanging unity of all times in one time. Duration, quantity of time, and change, succession, are only possible because of this permanent substratum. Permanence is the only ground of the application of the concept of substance, as that which persists, to phenomena at all. The different determinations of substance, modes or accidents, are possible to it only as it is conceived as permanent. This category then contains the ground of all relations. It is only in substances as permanent that changes as successive determinations can be conceived. Substances then are the true substrata of all determinations (succession and coexistence) of time.

The second analogy treats of cause and effect. "Everything that happens (begins to be), presupposes something on which it follows according to rule." We have here, as always, to deal with phenomena only; and these as our representations, are given successively. We find, however, two kinds of succession in apprehension. The order of the parts of any whole—so far as that whole is permanent—in apprehension, is accidental. Such is the order of the parts of a line already drawn. But we find certain other successions such that they are objectively determined and we cannot change the order of apprehension. Such is the apprehension of events. Events have an order in time which is not accidental but necessary. A certain kind of conjunction or synthesis of the manifold is thus determined. We have to derive the subjective succession from the objective. That this succession can be no other than what it is, means that that which follows, follows by rule, or in a determined way and necessarily, from what precedes.

We discover this rule, as a particular determination, only by comparison of many events. It is not, however, a merely empirical determination, because here, as elsewhere, we discover in phenomena only the order which we have previously introduced. Events receive this order only because a certain order is necessary in the synthesis of relations in time in our apprehension. The objective character consists only in the rendering necessary of the representations in a certain way. It is a necessary law of our sensibility and a formal condition of all perception that a preceding necessarily determines a succeeding time. It is also a law of empirical representation of time that the phenomena of past time determines every existence in succeeding time. We can conceive a succeeding only by conception of a preceding, and we can conceive the order as necessary only if it is determined by rule. That which is purely subjective cannot determine the empirical as necessary, but the empirical of itself cannot produce the concept of necessity. Such successions are changes. They are not substances arising out of nothing, but successive states of substances.

One state can arise out of another only as a certain time intervenes. Apprehensions occupy but moments, and time intervenes. We have a cause and effect simultaneously existing, the one determining the other through successive states. All change is possible therefore only through a continuous action of causality in substance.
The determinations of the internal sense are a progression in time. This progression determines everything but it is not itself determined by anything else. Every transition in perception is really a determination of progression in time. The understanding is the a priori condition of all determinations of succession in time.

(The latter portion of this paper is so badly written because I have failed to see how Kant touches the problem of why A and not B necessarily follows C. I can understand from this demonstration that something must necessarily follow something else, but I have not seen why these somethings must be what they happen to be. Kant seems to be aiming to prove not that some order but that a certain order is objectively necessary and that the objective necessity of that certain order can be discovered a priori. I cannot see that he has proved the a priori necessity of any certain or particular order.)

The Postulates of Empirical Thought in General

The categories of modality are not further conditions of the object. They determine the relation only of that object, so far as its existence is concerned, to the understanding. The principles of modality, thus treating of possibility, reality, and necessity, limit the understanding to possible experience (since all experience must be at least possible).

This possibility consists in the agreement of the concept with the formal conditions of experience in general. Concepts which do not contain either a synthesis of intuitions as given or a synthesis a priori of the necessary forms of intuition, must be empty, since no experience can come under such concepts. Concepts may be logically consistent, i.e. non-contradictory, and yet refer to no possible experience because inconsistent with the space and time forms of experience. Such concepts obviously cannot have objective validity.

The objective validity of concepts then can be determined only by their agreement with the form of experience. Such validity may be determined a priori, that is, before all experience, only by reference to the formal conditions which contain the necessary condition for the synthesis of all experience. We cannot conceive reality in the concrete without the aid of experience. Possibility can be represented a priori only as the formal conditions of experience.

A space enclosed by two straight lines is formally impossible; a triangle is formally possible but in the concrete problematical, i.e., we cannot know a priori whether such an object is given in intuition.
Thus formal possibility is determinable a priori, but since the form has meaning only as the manner of synthesis of intuitions, formal possibility has meaning only by reference to experience.

Hence, reality requires perceptions; in the mere concept of a thing no sign of its reality can be discovered. In a certain sense we can know the existence of a thing a priori (by inference) if it agrees with given perceptions according to the analogies of experience. (We may infer a cause, a substance, etc. The problematical character of such a priori knowledge of things not given is well illustrated by Kant's own inference of magnetic matter.)

Kant here introduces his refutation of (material) Idealism. I have not well understood this refutation, but it seems to amount to this. Idealism holds that we are immediately conscious of ourselves, our representations. But the self (unity of apperception) exists only as the unity of representations determined in time. But determination in time implies time itself, which is the form of intuitions, and therefore implies experience as intuitions. Thus, in denying the objective validity of experience, Idealism denies the ground of unity in the self. The representation that I am (I think) implies knowledge that I am but no knowledge as to what I am; for this second knowledge, determination (in time) through objects is necessary.

(If objects mean only phenomena as determinations in time by intuition, the refutation appears sound. As things in themselves do not come under the time form, Idealism as a denial of 'things in themselves' apart from perception is not here answered. Immediate knowledge of the fact that I exist, apart from objects, is also admitted.)

The third postulate—that whatever, in its connection with the real, is determined by universal conditions of experience, is (exists as) necessary—refers to existential and not logical necessity. Existence as necessary can never be known from concepts alone but only in their connection with the given. The only existence known as thus necessary is the existence of effects when the causes are given. This existence is therefore not that of the substance which persists in its various determinations, but of the determinations themselves, states of substance. Since effects necessarily exist as possible experiences when the causes are given, every effect, everything that happens, is hypothetically necessary. Hence the principle that nothing happens according to blind chance, and also the principle that there exists in nature no necessity which is not apprehensible (subject to this law of cause and effect as an analogy of experience and thus subject to the form of the understanding). The principle of continuity rendered every break of the series of phenomenal changes impossible. A vacuum, as such, an empty gap in possible experience, cannot be proven, because it would exist either by blind chance or an unintelligible necessity.
Whether all that is possible is the real, and all that is real, the necessary, are questions which come to this: Do all phenomena belong to the sphere of one experience? All experience that is possible for us is subject to such a unity in apperception. Possible causes being given, effects are necessary, and all our experience is subject to the principle of causality. Hence an experience in which the possible is not the real and necessary can exist only for some form of intuition and understanding different from ours. Whether there be such a field of possibility, whether there exist possible perceptions which are not actual, the understanding cannot determine, since the understanding only synthesizes what is given. No argument can prove such possibility which is different from the real (the vacuum is an example) because no experience of such could come under the form of our understanding.

In conclusion of the chapter, Kant states that the principles of modality are called postulates, not in the sense of unproved assertions, but as being synthetic principles which do not add to the concept of an object but bring it into relation with the formal conditions of experience. They predicate nothing of the concepts except the act of the understanding in producing them. The difference between possible and real, for example, is a difference, not in the object, but in its relation as existing to the understanding.

Phenomena and Noumena

The rules of the understanding, which are true a priori and the source of truth, as containing the ground of all possible experience and its connection with the understanding, complete the sphere of our knowledge. But we may not be content with this limitation of knowledge to possible experience, and hence try to use the understanding apart from the rules of experience. We may thus attempt a transcendental use of the understanding, in which it is not limited to phenomena as possible experience, and apply it to things in themselves. In this realm, the understanding can give us no certain truth, because it has dispensed with intuitions, which condition all knowledge. We may think things in themselves but cannot know them.

The concepts are produced a priori, but their legitimate use is limited to intuition. Transcendental concepts can have no reference to objects, as one will readily see if one tries to construct an object without reference to experience. We cannot explain quantity in general except as a synthesis of homogeneous units (given by intuition under the time form). Reality can be explained only in opposition to negation, an empty space or moment. Cause could not be distinguished from effect except in time; substance as the permanent is determined in time.
Possibility, reality, necessity, are relations of concepts to intuition and have no other meaning. If this relation to intuition be omitted from concepts, no meaning remains except the logical function of judgment. And this function itself can be defined only in a circle, for the definition, being a judgment, would beg its own meaning. The pure categories have no meaning except as the form in which the understanding refers to experience. The understanding a priori can never do more than anticipate the perception, the possible experience, as the form of it. Transcendental use of the understanding cannot determine any object but only the thought of an object. Though the categories have a transcendental form, they do not admit of a transcendental use, since there is no judgment without a given object.

Appearances subject to the categories are phenomena. If things are admitted as objects of intuition which is nonsensuous, they may be called noumena.

The things in themselves, as not subject, like phenomena, to the form of intuition, would be such objects—strictly, representations without a corresponding intuition.

All our representations are referred to something, an object in general, which can thus be—always is—subject, but can have no particular predicate. This is the transcendental object which serves as the (objective) correlatum of the unity of apperception. But this object cannot be thought, apart from sensuous data. It is thus distinguished from the noumenon.

The very word 'phenomenon,' indicating a something which appears under the form of our sensibility, implies the existence of something apart from our sensibility. Since such an object could be given only in some kind of intuition different from ours, its existence, like the existence of another form of intuition, must remain problematical. We can never determine that this noumenon exists as anything more than the form of an empty concept. Such a concept may be self consistent and connected with other kinds of knowledge, but its objective reality cannot be known in any way. This concept is limitative since, by covering all thought which has no corresponding intuitions, it limits the use of the understanding. As such a limit, to prevent intuition from extending to things in themselves, it is a necessary concept.

Amphibology of Concepts

Reflection is concerned with the subjective condition of concepts, as to whether it is by the understanding or by the senses that the representations synthesized are connected and compared.

"The relation in which two concepts may stand to each other in one state of mind is that of identity and difference, of agreement and opposition, of the internal and external, and finally of the determinable and the determination (matter and form)." Logical
reflection takes no account of matter but only of form, so that it is only transcendental reflection which can make the distinction of matter and form and can thus determine whether we have to deal, in the concept, with a synthesis of intuitions or of the understanding.

I. Identity and Difference

When an object is presented to us several times, which is internally the same (in quantity and quality) its representations are in concept identical. But its different determinations in space and time render it numerically different. Leibniz, who took phenomena to be things in themselves, confused objects of sensibility with those of pure understanding, with noumena.

II. Agreement and Opposition

No opposition of pure concepts can be conceived, but in phenomena two opposing reals may exist and neutralize each other, as pleasure and pain, or equal and opposite forces.

III. The Internal and External

It follows from what has just been said that a pure concept can have no relation to anything different from itself. But phenomenal substance is a mere complex of relations. We know substances in space only through their relations to others (accidents). The only internal accidents are those of thought. Hence Leibniz, in translating phenomena into things in themselves, made their internal determinations to consist of representations.

IV. Matter and Form

In logical judgments, concepts (subject and predicate) are the matter; the mode of their connection (the copula), the form. In the pure understanding, therefore, matter precedes form, as substance precedes its relations. Leibniz, who translates things into the pure understanding, made space and time to depend upon the concepts (monads). But when knowledge is referred, as it must be, to objects, the matter presupposes the form of intuitions.

Transcendental topic, reflection which determines the place in the understanding to which a concept is assigned, contains no more than the four above-mentioned titles. Without this reflection we are liable to confuse concepts of pure understanding with those of sensibility.
There follows here a lengthy refutation of Leibniz which may be summarized in three counts. First, as already mentioned, he confused things in themselves with phenomena by intellectualizing them. Second, and in consequence, he neglected the numerical difference, in space and time, of what was conceptually identical. What can be affirmed of any universal (concept), can be affirmed of any particular subsumed under it. But Leibniz wrongly concluded that what can be affirmed of the particular can be affirmed of the universal. There exist between particulars just those differences which constitute their particularity (determination in space and time) and these differences do not exist in the universal (concept).

Thus Leibniz did not admit opposition in phenomena, since no opposition in concepts is possible. Evil, for instance, cannot be the opposite but only the absence of good (nil privatum) and not really existent.

By purely intelligible objects, we can refer only to objects of non-sensuous intuition; our categories cannot apply to such noumena, and we can have no knowledge, either by conception or intuition, of them. Their significance is thus purely negative, and their existence purely problematical. The noumena are empty concepts without objects.

In a further division of the chapter, Kant distributes the concept of Nothing as follows: I. Empty concept without an object; ens rationis (noumenon). II. Empty intuition without an object, ens imaginariurn (as pure space and time). IV. Empty object without a concept, nihil negativum, (a conceptually impossible object).

Transcendental Dialectic

Dialectic in general is the logic of illusion. As the outset, however, the illusion which is the subject of the Transcendental Dialectic is distinguished from empirical illusion, which consists in a wrong application in experience of rules which are themselves correct and intended to be applied to experience. Principles which apply to experience are called immanent. Those which cannot be applied to a possible object are called transcendent.

The senses cannot be said ever to err, since they make no judgments. Neither could the understanding by itself produce any illusion because it could act only according to its own laws. The transcendental illusion then can spring only from mixing the subjective and the objective grounds of judgment, by an unperceived influence of the sensibility on the understanding. Such illusion is distinguished again from the purely logical, which disappears when attention is fixed on the error, in that transcendental illusion persists and is the result of an inevitable tendency to extend the use of understanding beyond the realm of possible experience.
Reason is the faculty of principles, as understanding is the faculty of rules. Reason produces unity among the rules of the understanding, as the understanding by these rules produces unity in experience. In its logical use, reason essays to reduce the variety of knowledge of the understanding to the smallest number of principles or general conditions. In every syllogism, a rule appears as the major premise, and the minor premise represents some particular knowledge brought under that rule. Reason, in treating of the relation of rules to that which is subsumed under them, finds three kinds of syllogisms: the categorical, hypothetical, and disjunctive.

The syllogism does not deal with intuitions except mediately through the understanding. But as the understanding, in its proper use, only synthesizes intuitions according to rule, reason, in its proper use, can refer only to objects of possible experience. But reason operates only by bringing the syntheses of the understanding into a higher unity (of principles) so that we have always in the syllogism a judgment and a general condition represented in the major premise.

The highest principles, the judgment which conditions other synthesis, is itself unconditioned. Such a principle will be entirely different from the principles of the understanding, and Reason, as the faculty of such highest principles (which are unconditioned and cannot be used empirically) is called Pure Reason. The principles of Pure Reason are transcendent principles. The problem of the Dialectic is the problem of the use of such highest principles—to see if they are objectively valid or represent only the tendency of Reason itself to an ever higher unity.

Book I. The concepts of the understanding, being merely the forms of experience necessary for its apprehension, are always objectively valid. But the concepts of reason, referring to a kind of knowledge of which every empirical knowledge is but a subsumed part, are those concepts which can never become themselves objects of experience. The concepts of pure reason are called the transcendental ideas: Categories: understanding: transcendental ideas: pure reason.

The term, idea, should not be used to denominate representations in general, but should be reserved, as it was by Plato, to express the archetype, the concept of reason which transcends all experience and can, therefore, never itself appear in experience, which conditions all which is subsumed under it, but is not itself conditioned.

The unconditioned idea is represented in the syllogism by the major premise. The syllogism itself is a judgment which predicates this idea, this universal condition, of some particular (or something less general than the subject of the major premise). The pure concept of reason in general is thus the totality of all conditions, and represents the universal application of its conditions.
There are as many species of the unconditioned as there are kinds of relations of major premise to conclusion, i.e. three. Each kind of syllogism, in seeking by prosyllogisms to condition its own major premise, seeks for an absolute unconditioned or transcendental idea. The idea approached by the categorical syllogism is that of the subject which is no longer predicate; by the hypothetical, the presupposition which presupposes nothing else; by the disjunctive, an aggregate of the members of a division, which requires nothing else in order to render the division of the concept complete.

The transcendental concepts of reason can never be realized in experience, being themselves the unconditioned conditions of the unity of concepts of the understanding. But they should not be regarded as useless, since they represent the only unity under which all other concepts may be finally brought.

The unconditioned first premise is a necessary concept in that, in any given syllogism, the major premise must be absolute or conditioned; and, if conditioned, we must find that condition in a prosyllogism which gives us a major premise representing a higher unity, and so on. The series of prosyllogisms up to the absolute unconditioned are all necessary for the validity of the particular judgment, the condition of the truth of the conclusion in any particular syllogism. It is, however, indifferent to reason how far the series of episyllogisms proceeding a parte posteriori be carried.

The transcendental dialectic contains a priori the origin of certain ideas in pure reason. The relations which all our representations share in common are: 1st, relation to the subject; 2nd, relation to objects, either as phenomena or as objects of thought in general. We find three corresponding classes of transcendental ideas: 1st, the unconditioned unity of the thinking subject; 2nd, the absolute unity of the series of conditions of phenomena; 3rd, the absolute unity of the conditions of thought in general. This division corresponds also to that of the syllogisms: the first concept to the categorical; the second, to the hypothetical; and the third, to the disjunctive. The thinking subject is the object-matter of (rational) psychology; the system of phenomena in space and time, of cosmology; the being which is the condition of the unity of all thought in general, of theology. This division of concepts follows the thread of the categories, because the unity of Reason is a unity of rules of the understanding and not a synthesis of phenomena.

Book II. Ch. 1. We are led by the necessity of reason, the necessity of the unconditioned first principle, to conclude an absolute unity to which no object but only a problematical concept corresponds. And as already shown, we are led to three such unities of transcendental ideas. We have now to reckon with another concept to which no object can correspond, namely that if "I" in 'I think.' This concept is a necessary accompaniment or vehicle (cf. the 'unity of apperception') of all thought. Nevertheless, the "I" in 'I think' is never object of thought, since being the condition of all synthesis it can
never be known, since it cannot become object-matter for the synthesis. This concept of "I," the soul, forms the subject matter for rational psychology. None but transcendental predicates may be attached to the soul, since the smallest admission of the empirical would violate the nature of the concept itself.

Following the schema of our thinking, the categories, (since "I think" attaches to all), we get the topic of rational psychology as follows:

1. The soul is **Substance**.
2. As regards its quality, it is **Simple**.
3. As regards the different times in which it exists, it is numerically identical, i.e., **Unity**, not Plurality.
4. It is in relation to possible objects in space.

The conceptions of rational psychology all arise from these elements in combination, without the addition of any others. Substance, as an object merely of the internal sense, gives the concept of Immateraility; as simple substance, that of Incorruptibility; its Identity, that of Personality; its relation to objects in space, that of commercium with bodies. This last notion, representing thinking substance as the principle of life, gives rise, when joined with the other concepts, to the conception of Immortality.

But the "I" which thinks, being known only in its thinking, is a transcendental 'x' only and the concept of it 'goes round in a perpetual circle.' The conception of other thinking beings, since I cannot gain the least concept of any such in experience, arises merely as the transference of my own self consciousness to other things. The reason for such transference is our tendency to attribute to other things a priori the conditions under which alone we can think them.

The concept of "I" is purely problematical. I have no perception of myself as thinking: the proposition 'I think' is merely the form of thinking. The "I" is the determining, never a determinable, subject.

First Paralogism. The "I" as determining subject can never be determined by any predicate. That I am always subject is an identical proposition, but from it no concept of myself as a substance, a self subsisting being, can be deduced.

Second Paralogism. That "I," the thinking subject, am singular is self-evident from the concept itself, but this can never be taken to mean I am a simple substance, which would be the representation of myself as a determined object.
Third Paralogism. The identity of the subject is likewise analytically discoverable in the concept of the Ego, but this cannot make the subject of all representations itself representable as an identical personality, the identity of a thinking substance.

Fourth Paralogism. "I" am different from my representations. The 'otherness' of things is analytically certain. But the existence of myself apart from my representations cannot be deduced.

We have thus in the four paralogisms merely analyzed the concept of the self without discovering any predicates which may be attached to it. The logical form of all thought must not be mistaken for the metaphysical determination of the Self as object. The discovery of thinking beings as simple substance would invoke a priori synthetical propositions which are legitimate only in relation to possible objects of experience. We can legitimately make such propositions in the realm of phenomena but never in that of noumena.

The whole procedure of rational psychology is based upon the false assumption that, because the thinking subject cannot be thought except as subject, it does not exist except as subject, and therefore does exist as substance. But the internal sense, by which the subject is given, gives us no intuition of anything permanent, and the existence of a permanent thinking substance can thus never be known, as such can never be given in intuition. It can be thought only.

Mendelssohn, in his Phaedo, sought to prove the incorruptibility of the soul by its simplicity. Having no parts, it could not be reduced to nothing by the successive annihilation of parts, and it cannot as a whole pass from something to nothing (by the postulate of continuity). He overlooked the fact that the soul, although without extensive quantity or parts (granting it simple), might still be possessed of a degree which would admit of diminution down to the absence of it, or nothing. As an object of the internal sense, the soul cannot be known as permanent. Its permanence in life—as man, an object of the external sense—is self-evident, but immortality cannot be inferred.

If the synthetic propositions of rational psychology were legitimate, the existence of the soul as a permanent simple substance, determining its representations, would necessarily lead to Idealism, for the assumption of external things would not be necessary (for intuition). But if we proceed analytically from "I think" to 'I think as subject' 'as simple subject', 'as identical subject (in every state of my thought),' we shall have only the necessary forms of all thinking, and the existence of the I which thinks will nowhere have been determined. We cannot pass from the necessary unity of all thought to the existence of the self, which is subject of thought, as an object. We cannot deduce from the unity of thought the existence of a unit something which thinks.
Reason is thus confined within her legitimate domain, that of possible experience. However, the proofs of immortality do not necessarily lose their value. For the necessity of our natures, the inevitable tendency of thought beyond knowledge may still give us the assurance of immortality.

Thought, *per se*, is a purely spontaneous logical function. But the representation of myself as thinking involves more—the receptivity of intuition, that is 'my thought of myself as applied to the empirical intuition of myself.' The necessary laws of reason have then a certain practical use as the basis for the 'categorical imperative'—as the authority of my legislation for my own (empirical) activity.

But these considerations do not help rational psychology; they do not enable us to attach any predicate to that which is always subject. They merely enable us to explain our own actions by the laws of nature according to an analogy of logical function.

Book II. Ch. 2. This chapter treats of the unconditioned unity of the possibility of objects in general. The paralogisms of rational psychology produced a one-sided illusion only, a tendency to extend reason beyond possible experience so as to embrace dogmatically certain concepts which are by right problematical. But in the system of cosmological ideas, reason is led with equal force to conclusions which contradict one another, and this perfect antithesis leads some philosophers to embrace the one conclusion dogmatically, while others skeptically reject the possibility of our dealing with the problem at all. Kant proposes a critical investigation of the ground for embracing each of these contradictories.

In this consideration we must bear in mind: first, that reason does not produce any concept but only carries the conditions of the categories up to the unconditioned totality of conditions; second, that we consider only those categories whose conditions form a regressive series which leads to such an unconditioned. The cosmological ideas, being concerned only with the totality of conditions, proceeds always *a parte priori* and is not concerned with that which is conditioned *in consequentia* (e.g. the future).

The concept of totality naturally arises from the quanta of intuition, space and time. The serial character of time is obvious. With regard to space, we have the serial character only when it is remembered that space is phenomenal and that its synthesis must consequently be successive. Every space is limited (conditioned) only by other spaces, and so on up to the sum total of all space, if such there be.

Again, matter in space is internally conditioned as the sum of all its parts which are likewise conditioned and so on down to that which is no longer matter, i.e. the simple.
The relation of substance and accidents is not subject to such regressive treatment, since accidents are coordinate and do not constitute a series. For like reasons, the principle of community is omitted from consideration. The category of causality obviously does lead to a regressive series. The concepts of the possible, the real, and the necessary, do not lead to any series, save only in so far as the accidental in existence must always be conditioned regressively up to the unconditioned necessary.

The four syntheses of conditions, implying each a totality of conditions, will then be as follows:

1. Absolute completeness of composition in the given whole of all phenomena.

2. Of division in a given whole in phenomenal appearance.

3. Of origination in a phenomenon in general.

4. Of the dependence of existence in the changeable in phenomenal appearance.

It should be remembered here that we deal always with the unconditioned totality of phenomena, not of things in themselves. The unconditioned may be conceived as existing in the whole series, so that the regressus is infinite, or the unconditioned may be represented as the first term of the series, in which case the regressus is only potentially infinite.

The world, considered as an aggregate in space and time, is the subject of the first two antinomies (mathematical concepts); the world as nature, a complete and infinite system of inter-related parts (dynamical concepts), is the subject of the third and fourth.

The arguments of the antinomies are distinguished from mere sophisms by the fact that they deal with a question which inevitably arises from the concepts of reason. Moreover, the opposing arguments each are the inevitable illusion of pure reason and cannot be annihilated in thought. The critical or skeptical method by which Kant proposes to deal with them must not be confused with agnosticism or that skepticism which calls upon us to witness the contradiction as evidence of the impotence of reason itself.

First Antinomy: Thesis

"The world has a beginning in time and is limited also with regard to space."
The method of proof here, as throughout the antinomies, is the reductio ad absurdum. Assume that the world had no beginning. In that case an infinite series of previous states of things is assumed. But such a series could never be completed or come to this moment; hence it is impossible.

Assume that space as a whole (conceived phenomenally by successive synthesis of parts) has no limits. Since time is a condition of such synthesis, this idea would involve the idea of an infinity of time as completed, which is contradictory.

Antithesis

"The world has no beginning and no limits in space."

For assuming that it has a beginning, we have a time which was preceded by no time. Thus that which is, would be conditioned by (arise from) nothing, which is contradictory. Likewise if space is limited, it would be conditioned by that which limits it, and the whole of space would be limited by void space or nothing, which is impossible.

Observations on the First Antinomy: Thesis

In this argument, only proofs which are legitimate have been used and no logical fallacies admitted. The wrong definition of the infinite as the greatest possible number or quantity (a contradictory concept) has not been used. The proof has instead resulted from the concept of infinity as a successive synthesis which can never be completed. Hence the impossibility of conceiving a totality either before it or through it.

Antithesis

The proof of the antithesis has rested upon the impossibility of an empty space or time. Since space and time are not objects in themselves but only the form of phenomenal intuition, the totality of space or time could not be limited, as some hold, by a pure concept, empty space or time as purely intelligible entities which could not correspond to or result from synthesis of phenomena in possible experience.

Second Antinomy: Thesis

"Every compound substance in the world consists of simple parts, and nothing exists anywhere but the simple, or what is composed of it."

Assuming the contrary, there would exist no simple and no composite, therefore no substance at all. Either therefore we
cannot remove all composition in thought, or, after its removal, the simple would remain. An immediate consequence is the existence of simple being.

Antithesis

"No compound thing in the world consists of simple parts, and there exists nowhere in the world anything simple."

Since every compound must occupy space, and the parts of space are not simple but are spaces, every part of a compound must occupy space. That which occupies space can only be a synthesis of the spatial manifold, so that no simple can exist in space. This is not to say that no simple can exist in idea or transcendentally but only that the simple can never be given in experience.

Observations on the Second Antinomy: Thesis

The argument of the thesis refers only to substantial wholes. We ought not to call space a composite but a totem, since the whole of space is a condition of the parts not the parts of the whole. As space is not a compound of substance, nothing remains of it if its substantial content is removed. Space and time do not consist of simple parts. We can infer the simple from the compound in self-subsisting objects only. Space and time (the forms of phenomena) and accidents of state are not self-subsisting. The proof of the simple as necessarily given in the composite is what has here concerned the author. That which is immediately given as simple (in self-consciousness) may be called a monad to distinguish it from the atomic simple which appears in compounds.

Antithesis

The Monadists object to the demonstration of the antithesis, which has proceeded on mathematical grounds. They assume the existence of a physical simple which would correspond to a mathematical point and attempt to fill space with such simples. It should be remembered here that we are dealing with phenomena only and that pure concepts with no corresponding object cannot be admitted to consideration. The self (which, as an ideal object, is undoubtedly absolute unity and simple) cannot be considered for it is not phenomenal and is given only by intuition of the internal sense.

Third Antinomy: Thesis

"Causality according to the laws of nature is not the only causality from which all the phenomena of the world can be
deduced. In order to account for these phenomena, it is neces-

Ssary also to admit another causality, that of freedom."

Since every natural cause is itself an event and must
have a cause, there can be no first natural cause. The ser-
ies of natural causes a parte priori can thus never be complete.
The law of natural causes thus contradicts itself unless tran-
cendental freedom be allowed to supply a first cause.

Antithesis

"There is no freedom, but everything in the world takes place
entirely according to the laws of nature." If we admit
freedom as a first cause, we admit an event which is not deter-
mined by natural law and thus destroy the unity of nature.
Freedom may deliver us from an intellectual restraint, but in
so doing it takes from us the guidance of the rules by which
we put nature in order.

Observations: Thesis

Freedom as a first cause is a purely transcendental con-
cept. We should not seek to understand how such an absolute
beginning of a series of events is possible; it is enough to
know a priori that reason demands it.

(Kant's position here seems to be extremely embarrassing.
To prove freedom, he has to establish not only that one such
beginning is necessary, but as many as there are free acts.
In so doing, he truly destroys the unity of nature. Not only
must the several series be independent, but the series of
determining causes before the act of freedom must come to a
stop. This can only mean that nature before the act is not
an organic whole, else the whole of nature must come to a
stop before every act of freedom. The thesis hardly requires
so much. The existence of one first cause might be safely
assumed if the thesis be granted, but freedom for God and free-
dom for man are two concepts which stand in very different
relations to the conception of nature as an organic whole.)

Antithesis

If no first moment of time is admitted, no first cause
need be allowed. The assumption of a beginning of nature is
gratuitous. The fact that an infinite regression cannot be
understood is no more remarkable than the fact that the con-
tinual succession of being and not being in change cannot be
understood, and no more proves any extra-natural agency.
Moreover, the integrity of nature is hardly consistent with
the existence of such a lawless faculty of freedom.
Fourth Antinomy: Thesis

"There exists an absolutely necessary Being belonging to the world, either as a part or as the cause of it."

The conditioned presupposes the unconditioned; something absolutely necessary must therefore exist as the condition of the series of phenomenal changes. This series, being temporal, requires as its origin something which precedes it in time, and the first cause must be homogeneous with the caused.

Antithesis

"There nowhere exists an absolutely necessary Being, either within or without the world, as the cause it it." No necessary being can exist in the world, because unconditional necessity is contradictory of the conditions of phenomena according to dynamical principles. And no necessary can exist outside the world or the cause of it, since, in originating the world, such a being would begin to act, and would thus be temporally conditioned.

Observations: Thesis

The cosmological proof of God has alone been admitted, since it is the only one here consistent. (The cause must be homogeneous with the caused.) The procedure of some philosophers who have traced the causal chain empirically so long as they have been dealing with phenomena but have foresaken empirical rules for the pure category with regard to the first cause have no defense. For in the light of the pure category that only is contingent, the contradictory of which is possible, and the existence of the possible which is not actual is purely problematical.

Antithesis

In this antinomy, the same ground of proof has led to the two contradictory conclusions. The thesis tells us that the whole of time includes the series of all conditions and thus a first which cannot be itself conditioned but is necessary. The antithesis tells us that all which is included in time is thereby conditioned and the existence of the unconditioned in time is self-contradictory. The contradiction is one merely of point of view.

This is the whole system of antithetical ideas, since there are neither more nor less series or synthetical hypotheses which limit empirical syntheses a priori. They display the brilliant pretenses of reason in the realm to which she is allured by her success in the realm of phenomena. The propositions of the antitheses, representing pure empiricism, rest upon a uniform application of empirical rules not only to phenomena but to the transcendental cosmical ideas. The propositions of the theses, representing the dogmatism of pure reason, rest upon an empirical
Dogmatism has in its favor certain practical advantage as a foundation for morals and religion. It has also a speculative interest. There is a certain advantage to systematic philosophy in being allowed the concept of the totality of phenomenal nature. Dogmatism is also more popular, as it gives the ordinary mind something in which to rest secure as against a mere modus operandi.

Empiricism has no such practical advantage but its speculative interests are at least equal. It confines reason properly within the sphere where it can operate surely though it can never come to any permanent conclusion of its business. If the empiricist had not purpose except to curb the rashness of reason, he would be altogether a benefactor. But he frequently becomes dogmatic in denying that of which the truth cannot be known in experience. Either party thus maintains more than it knows. The unpopularity of empiricism may be attributed, apart from its practical disadvantages and the desire for completeness of system, to the human love to dilate upon themes with regard to which one man's opinion is as good as another's. A perfectly unbiased man would oscillate or preserve his balance between the two.

It is absolutely necessary that reason should give a solution to its own problems. There are some realms, as the moral, in which there is no excuse for ignorance. We must know what is our moral obligation, since we owe no obligation to that of which we are ignorant. So with the problems of reason. The object of the concept does not exist save in the concept itself, and we must therefore be able to give account of it. We cannot throw the blame for ignorance upon the obscurity of the object. If the whole of Nature were spread out before one, one could give no better answer to these transcendental questions because of his increased knowledge. The cosmological ideas presuppose their own object as given, and the synthesis required for it. The only requirement for satisfactory solution is that one guard against considering the question objectively, where no ground of proof or disproof can be got, and proceed by the critical method.

By the skeptical treatment we observe what advantages are had by an answer to these questions in the affirmative or negative, and when we discover that sheer nonsense results in either case, all illusion is removed. We discover in the case of each antinomy that any synthesis of phenomena is too small for the idea, since the concept immediately transcends the highest condition. Conversely, the unlimited is too large for any concept to comprehend by any synthesis of phenomena.

Thus we may suspect that the conflicting sophisms rest upon an empty and merely imaginary conception of the manner in which the object of the transcendental ideas may be given, and this suspicion may lead us to a satisfactory solution of the problems.
Antinomy of Pure Reason: 6th Section

The conception that all which is experienced, posited in space and time and consisting of phenomena, is termed Transcendental or Formal Idealism. Realism, in the transcendental sense, translates such representations into things in themselves. The objects of experience are never given as things in themselves, but only as phenomena, and have no other existence. They are real only in the sense of standing in empirical relations with the real consciousness. And the existence of objects as things in themselves is problematic, since they can never be given as such in any possible experience. The non-sensible cause of phenomena is wholly unknown to us. This merely intelligible cause we may term the Transcendental Object, the only use of which is that of a foil to the receptivity of consciousness.

Thus the real things of past time can become such for me only in a possible experience. The existence of all objects of sense, and hence of the totality of such, does not thus postulate the existence of possible objects—the terms of the regressus of conditions—apart from or before or beyond any possible experience. They are real only as given in the possible progression of experience. The distinction of empirical and transcendental object is thus one of use only as it regards some question which transcends experience, and to obviate fallacious conclusions of pure reason.

Antinomy of Pure Reason: 7th Section

"The whole antinomy of pure reason rests upon the dialectical argument. Provided that the conditioned is given, the whole series also of all conditions of the same is given. But objects of sense are given as conditioned, consequently, &c, &c." This postulate of the totality of conditions is what has placed reason in the contradiction to itself revealed in the antinomies. The major [premise] of this syllogism is undoubtedly certain. Moreover, if the conditioned and its condition are given as things in themselves, the whole series and the unconditioned are likewise so given. As so given, however, they are not posited in time and therefore given as simultaneous. If, however, the conditioned and its condition are given as phenomena in time, the series of conditions is an empirical synthesis, and given only so far as successive empirical synthesis of the regression is possible. That one of the two parties contesting in the antinomies is right, seems certain (Kant seems to deny this in the latter part of the section), but the fact that they can still oppose each other after these considerations should be taken to show that they contend about nothing. Kant now draws conclusions which point to a distinction between the two contradictories of the proposition, 'the world in infinite.' The one which figures in the antinomies is the proposition, the world is not-infinite, i.e. is finite. The other would be 'the world is not finite,' meaning that the world is not subject for absolute determination as to its
limits in time and space. Such absolute determination can be predicated only transcendentally, whereas the world, being phenomenal, cannot become subject of such predicates. The world is neither finite nor infinite; it is no unconditioned whole, since any synthesis of phenomena is conditioned and no unconditioned absolute totality can be given under the forms of space and time.

No maximum of the series of empirical conditions can be itself given in experience. The concept of Totality, as applied to phenomena, appears, then, only as the regulative principle of pure reason, in accordance with which there must always be a regressus of conditions and there can never be any absolute limit to the regressus. This principle is not of the understanding since it is no principle of possible experience; nor is it a constitutive principle for extending the concept of the sensible world beyond the limits of experience; it is merely regulative— a modus operandi.

For the exact determination of the synthesis of a series, according to this principle, two expressions are offered: progression in infinitum, and progressus in indefinitum. The first of these properly applies to any regressus of division, to the series of internal conditions of any given whole. Here it is always necessary to meet with more members of the series. Progressus in indefinitum applies to any regressus of conditions in which it is always necessary to inquire after more members.

This regulative principle of pure reason has all the force of an axiom inasmuch as, by its application to all experience of phenomena, it has as great an effect upon our cognition as would in any case be possible. Absolute totality could be conditioned (limited) only by the void or nothing, and hence is impossible in experience. For the solution of the problems of the extent of time and space, it is necessary to discover only whether the regression of conditions is in infinitum or in indefinitum. Since, in each case, the whole is not given in intuition but only in conception, we cannot say the regressus proceeds in infinitum but only in indefinitum. We properly conclude, then, that space and time have no limits in possible experience. All beginning is in time and all limits of extent are in space. All phenomena are in the world, but the world can never be given as a whole.

A given space is infinitely divisible. Yet it is not correct to say that it consists of infinitely many parts, since by thinking an infinite process as completed, we contradict ourselves. Likewise of a body, as something which fills space. The divisibility (determining) is infinite, but the number of parts (determined) can never be given as infinite. A quantum continuum is determined only by intuition independently of the transcendental concept.
In the first two antinomies, of the mathematical-transcendental ideas, conditions have been represented as belonging to the conditioned according to the relations of space and time. Consequently the condition, and the totality of conditions, admitted of the introduction of nothing except phenomena. From this restriction resulted the fact that the regressus of conditions could never come to completion and the concept of Totality could never be satisfied by any sum of conditions. The dynamical-transcendental ideas admit of non-sensible condition, which, being no phenomenon, may be itself unconditioned. So that satisfaction may be afforded to Reason in both its antithetical contentions: the requirement of Reason may not conflict with that of the Understanding.

We can imagine two kinds of causality: according to Nature, and according to Liberty. The causality of nature, being phenomenal, can never be final; every natural cause has its own temporal condition. The transcendental idea of Liberty borrows nothing from phenomena, and the action of liberty is thus unconditioned. It is possible then to regard the actions of a person in two ways: first empirically, so as to discover for every action, as temporally and spatially conditioned, a cause which will be another phenomenon and itself causally conditioned, etc. in indefinitum; and second from the point of view of liberty, so that the action may have a cause not phenomenal but transcendental and purely intelligible, determining but not determined, and hence unconditioned. The acting subject may be regarded empirically as subject to temporal causal antecedents such as heredity and previous environment, or as free and unconditioned. The effect of such unconditioned and free activity is possible—at least thinkable, according to the transcendental concept—so that we have a causality of Reason which we represent to ourselves as the ground of obligation: the Categorical Imperative. This causality of Reason is entirely apart from the conditions of time and its condition stands altogether outside the temporal or natural sequences of causes and effects. That which ought to be stands apart from that which is. Yet in the free agent, man, effects of the undetermined causality of Reason may be known as such only in so far as they follow according to rule, or are recognizable as phenomena. Thus the actions of a free agent, as phenomena, may be considered empirically and as predictable from the empirical nature of the agent. So far as we regard these actions as determined by reason, which is undetermined in producing them, we regard reason as a cause which has effects in time but is not itself subject to the time condition. Hence Liberty is regarded as a faculty for originating series of events. Reason is, in this sense, the permanent condition of all free actions.

Liberty, as thus a cause apart from time, and having effects which, being subject also to temporal causality, are congruent with temporal causality, in no wise contradicts or interferes with the temporal sequence. To prove this is the object of this portion of the chapter. These considerations do not prove the
reality nor even the empirical possibility of Liberty, but they
do prove the contradiction of the third antinomy to be superficial
and of appearance only—which is the object of them.

Likewise with regard to an absolutely necessary Being as
the ground of the possibility of the conditioned in general.
The series of conditions in phenomena never come to any phen-
omenal condition which is itself unconditioned. Neither any
element of the series nor the whole series regarded empirically
can be regarded as absolutely necessary or self-subsisting.
But that is not to deny that a purely intelligible Being may
exist as the transcendental ground of the possibility of all
that is contingent. Such a Being could not, by hypothesis,
be proved to exist, or conversely not to exist, from any demon-
stration in concreto. The existence of such a Being as a trans-
cendent principle which conditions all empirical possibility
is not inconsistent with the unlimited regressus of the condi-
tions of phenomena.

So long as we deal with the Totality of empirical condi-
tions, in the light of Reason, our ideas may be transcendent
as running beyond all possible experience and yet cosmological,
as regarding the phenomenal world. But the ideas of the unconditioned as entirely apart from phenomena and of a different
order, are purely transcendent. They can have none but a purely
intelligible object, for the existence of which, no ground even
of possibility can be given. The knowledge of such can be deduced
only from what is necessary in itself. An investigation of an
Absolutely Necessary Being as the merely intelligible ground of
the conception of all that is contingent follows naturally from
the considerations just completed.

The Ideal of Pure Reason

The categories of the understanding may be exhibited in
concreto in phenomena, to which they properly refer. Ideas
cannot be so exhibited, because they represent only a systematic
unity of the mind which empirical possible unity approaches.
The determined thought-object of an Idea is called an Ideal.
The 'Ideas' of Plato are such, but we cannot admit for them,
as did he, a creative but only a practical force (as regulative
principles). As the Idea is the rule of Reason, so the Ideal
is the prototype; and, although we do not concede objective reality
for ideals, they are not therefore chimerical since they exhibit
the products not of individual imagination but of universal reason.
They may be termed ideals of sensibility, inasmuch as they furnish
the pattern for possible empirical intuitions, but they are deter-
minal only a priori and universally through principles; experi-
ence furnishes no object and intuition no rule adequate for their
representation.
By the principle of contradiction, of two contradictory predicates, every concept (subject) admits one. Every possible thing, by the principle of universal determination, admits one of every possible sets of contradictory predicates, so that its particular possibility seems grounded in the total possibility which contains the data for it. To cognize perfectly any thing, we must, then, determine it (affirmatively or negatively) with regard to all possible predicates. This process of determination could never be completed in experience, so that universal determination rests upon an idea which prescribes to the understanding the rule for its own perfect use.

This idea of the complex of all possible predicates, so far as it is only the ground of universal determination, is itself undetermined; but upon closer examination, it is seen to have necessarily a certain structure so that a multitude of predicates could not be attached to it as idea. It is thus a conception of a single thing (not to be met with in experience), a transcendental Ideal. If we consider all logical and transcendental predicates, we find that some represent a state of being, some of non-being. A transcendental negation (though not a logical one) represents non-being itself. But a negation can be determined in thought only as the absence of something (reality). Thus negation is founded upon possible reality, and the complex of all possible predicates (affirmative and negative) is founded upon the Ideal of an All of Reality. True negation is limitation only. The concept of the All of Reality is that of a Thing in itself as universally determined, the transcendental ideal of the Most-real Being (Individuum). All diversity of things, resting upon negation or limitation, is thus grounded in the idea of a Most-real or Highest Being. It is clear, however, that reason does not postulate the objective existence but only the idea of such a being.

The derivation of every other possibility from this original being cannot be looked upon as a limitation of its highest reality, as if this highest reality were separable into parts. Other possibility is rather founded in the highest reality in its complete continuation (its including of all that is possible). Our Idea, through the mere conception of the highest reality, is determined as one, single, simple, all-sufficient, etc.—as God thought transcendentally, the object of transcendental Theology. It is, however, determined only as Idea and not as a given or empirically possible object.

This ideal is a natural and not arbitrary object of Reason. Hence it becomes necessary to ask how Reason comes thus to found all possibility upon that of a highest reality and to conceive this reality as contained in an original being (individuum). Universal determination of a given phenomenon is possible only by the context of all-possibility. This principle, valid only for that which is empirically given, we, by a natural illusion, hold valid for all things in general. The principle of the possibility of phenomena becomes thus (by analogy) the principle of the
possibility of things in general. When we exchange the distributive unity of the experience-use of the understanding for the collective unity of an experience-whole, we proceed from the idea of the complex of all possibility to that of the Most-real Being.

The regressus of conditions does not begin from conceptions but from experience. Hence reason, in demanding the unconditioned which limits the regressus, proceeds to the idea of an absolutely necessary, as something existing. The conditioned, if it exists, demands the existence of its condition, and so on. Thus if something (any thing) exists, something exists necessarily. There is then some necessary being. The unconditioned as independent and absolutely necessary, and also as the ground of all conditions, furnishes the conception of the Highest or Most-real Being as absolutely necessary. We hold this Highest Being for the Absolutely necessary which we deduce from experience, because we find that Reason cannot stop short of the conception of the all-sufficient and finds no necessity to go further.

There are three possible proofs for the existence of God. We may begin with particular existence and ascend, by the law of causality, to the highest Being out of the world, or we may begin from experience in general—something exists—or we may make abstraction of all experience and conclude wholly a priori from the mere conception as to the existence of the highest cause. These three proofs, the physico-theological, the cosmological, and the ontological, are the only possible ones.

The ontological proof asserts that 'God exists' is an identical proposition, since that which did not exist would not be perfect. Kant admits that it is an identical proposition, but calls attention to the fact that, while we cannot do away with the predicate of an identical proposition, or negate it, and still keep the subject, we can do away with both subject and predicate. The copula 'is' is not equivalent to the predicate of existence. To assume a triangle as existing and not assume its three angles as existing is contradictory, but to do away with the triangle and its angles together is no contradiction. We can think no object—no subject and its predicates—such that if it and its predicates are denied to exist, a contradiction is involved.

The cosmological proof pretends to take its date from experience. "If something exists, then must also an absolutely necessary Being exist. Now I myself at least exist; consequently an absolutely necessary Being exists." The data of this proof is experience in general, and not any particular empirical world; in this respect it differs from the physico-theological. The proof holds further, 'that the Necessary Being can be determined in only one way, that is, in respect of all possible opposite predicates only through one of the same; consequently it must be universally determined through its conception.' Now one single conception only of a thing is possible which determines universally this thing a priori, namely that of the Most-real Being.
"Consequently, the conception of the Most-real Being, of all, is the only one whereby a necessary being can be thought—that is, there exists a Supreme Being necessarily."  

Although this proof starts from experience, it uses the data of experience only to arrive at a necessary Being in general. What the predicates of this necessary Being are is determinable only transcendentally by investigation of concepts a priori. In this respect, then, it is subject to exactly the same criticism as the Ontological proof. The Cosmological proof has involved itself also in further difficulties in that it has striven to use empirical rules and principles beyond the world of phenomena, i.e. transcendentally.

"The whole problem of the transcendental Ideal comes to this--either to find a conception for absolute necessity, or for the conception of something, the absolute necessity of it."  

But unconditioned necessity is beyond human conception except as far as we remove in the mind all conditions of a thought-object. When we do this, we can give the thought-object no real content.

If the supposed something exists, we naturally conclude that something necessarily exists, yet we can conceive nothing, the non-being of which is unthinkable. This means that we can never think the regressus of conditions of the existing as complete without admitting a necessary being, yet we can never commence from the same. Since it is inevitable to think something as necessary for existing things in general, and impossible to think any particular thing as necessary in itself, we must conclude that necessity and contingency are not objective predicates but subjective principles of reason.

The unconditioned condition of all things, the ideal of a Supreme Being, is only a regulative principle of Reason, in accordance with which we look upon all dynamically related phenomena as if they were conditioned by one and the same highest condition and thus arrive at the unity necessary for Reason.

The Physico-Theological proof concludes the existence of God from the individual character of the Cosmos, from Order as an evidence of an Intelligent Author, and from the contingent character of all particulars to a First Cause. The impossibility of this demonstration is clear. No chain of empirical causes can ever reach to an unconditioned cause (which is transcendental); no summation or synthesis of that which is given can ever be adequate for an object of the concept of Absolute Totality of the possible. The transcendental character of the idea lies just in this, that no empirical reality nor any sum of them can be adequate to give it an object. We cannot thus reach up to the idea of God through phenomena only. In order to bridge the gap between the empirical and the all possible, both the cosmological and the physical-theological proofs rest upon the ontological, since
no object can ever be determined for the Concept of a Necessary Being save such as the concept itself determines. The only cognition which may comprehend the ideal object of such a concept is that 'theoretical cognition' by which we represent to ourselves what ought to be, the practical object of Human Reason. We must conclude that speculative reason cannot demonstrate any truth of Theology and that the natural principles of Reason do not lead to any theology at all. We have no ground for affirming or for denying the existence of a Supreme Being, which remains for us a faultless but mere Ideal.

Yet the inevitable tendency of human reason to overstep the bounds of experience shows that transcendental ideas are as natural to it as the categories. Since reason cannot be so constituted as to continually deceive us to no purpose, these transcendental ideas must have their immanent use. The use may be immanent though the idea be transcendental. It may be that only when wrongly applied, beyond experience, they are deceitful. Reason never refers to an object directly but only through the Understanding. It produces no conceptions of objects—when rightly used—but only serves to order concepts and give unity to the understanding. The idea-object of the transcendental idea is a mere point, lying altogether outside experience, with reference to which the series of conditions are ordered. The object of reason is the systematization of cognition through the conception of a Whole of cognition, which determines (conditions) the parts, giving to each a priori its place and relations. The transcendental ideas are the 'conceptual shorthand' of experience. The principles of reason are regulative, not constitutive. Systematic unity is a projected unity (of experience outside experience) which is in itself merely hypothetical. To this unity the order of experience approximates so far as is possible. This presupposed unity is in accord with the principle of logical economy, since it seeks to explain phenomena with the fewest possible presuppositions.

It is clear, however, that such transcendental principles could find no ground of application in case phenomena were such as to have no resemblance as a basis for classification. Certainly no such world could be cognized, as all ground of synthesis would be removed. A certain homogenousness is presupposed in the diversity of phenomena. Contrariwise, diversity is necessary, for resemblance is impossible between phenomena which cannot be distinguished. Moreover, classification involves exclusion according to differences as well as inclusion according to resemblances.

As the intention of the concept of genus is subject to addition in thought so that the extension is subject to substraction or dimunition, there must be species under the genus, sub-species etc. Beside the principles of Homogeneousness and Variety, or Specification, we have, therefore, that of Continuity. The intention of any concept may be increased or diminished by any
degree, and its extension inversely altered. But if the inten-
sion be regarded empirically, we know that it will not always
change with change of intention, since the world as quantum discretum
cannot be continuous. The merely regulative character of the
transcendental principles appears in this, that they teach the
understanding how to classify or synthesize (how to produce and
alter intentions) but never what may be given empirically in
extension, consonant with the classifications. The simple unity
of the Supreme Being as least intention is consonant with the
unity of all possible as the greatest extension. The objects
corresponding in any empirical extension belong to some limitation
of the all possible, from which follows the law non datur vacuum
formarum.

Reason thus seeks unity of the rules of the Understanding,
which it has for object, as the Understanding has for its object,
Sensibility. Although transcendental, the principles of Reason
have, as we have seen, objective though undefined validity.
The unity of Reason is undetermined in itself as in the Under-
standing. The schemata of intuition determine the understanding.
There are no schemata discoverable for the systematic unity of
all possible conceptions of the Understanding: Reason is deter-
mined by analogy in the principles of the maximum of division
(diversity), and of unity. The empirical approximates to this
schematization but can never wholly correspond to it.

The Ideas of Pure Reason admit of no deduction of the
same kind as the categories, yet if they have an objective though
undetermined validity, a deduction of some kind must be possible.
This may be accomplished if it can be shown that the three trans-
cendental ideas—of the unity of the thinking subject, of phe-
nomena in nature, and of all possible objects in general—although
they are referable directly to no corresponding objects, yet
lead to systematic unity so as always to extend the cognition
[comprehension?: ed] of experience, but can never be contrary
to experience. They will then appear as necessary maxims of
Reason, as rules which serve its interest in unity of concepts.
We will thus look upon all internal phenomena as the states of
one simple thinking subject, upon all external phenomena as the
states of one dynamic whole of Nature, and finally upon all
possible experience as a whole, all parts of which are always
conditioned but which has a single, supreme and unconditioned
ground in a Supreme Being outside the sphere of all experience.
In thinking these ideal objects, we think only a relationship
to the subsumed phenomena analogous to that which the phenomena
have with one another. We do not thus extend our cognition of
objects, but only our empirical unity to ideal limits. To think
these unities the Ideal object is necessary, not absolutely, but
relative only to their relations. Pure reason is thus interested
only in an extension of the schemata of the Understanding. The
categories are applicable only so far as objects are given in
intuition. Thus systematic unity can never be attained, save by
the extension of the schemata through the ideal concepts of Reason.
The concept of 'I' contains a priori a certain form of thinking
according to which all internal phenomena are ordered. Correspondingly the ideal of Nature gives us the unity of the series of all phenomenal conditions in one dynamic whole, and the conception of God as the Being of pure reason, the unity of all phenomena in one whole which is ordered according to intelligent and therefore intelligible purpose.

If, however, we forget that these ideal objects can never be cognized and furnish us only rules for procedure in the cognition of that which is given, we shall make the mistake of looking upon these unities as themselves given, whereas properly we are warranted only in expecting to find phenomena capable to being so ordered by reason itself.

The first error of this kind, termed ignava ratio, consists in ignoring the natural laws of phenomena for the investigation of which the regulative principle is intended and merely explaining phenomena according to the ideal unity, as if that unity had been already cognized, apart from its exhibition in natural law. The person in error thus 'pays himself with words' and discovers nothing.

The second error, of 'perverted reason,' consists in deducing particular phenomena from the ideal principle as a law (e.g. Teleology). The regulative principle thus loses all value, since instead of being regarded as a rule for the procedure of reason, it becomes a law for phenomena and invalidates the schemata of intuition for the extension of which according to analogy it alone existed.

The perfect unity of the transcendental ideas is intentional and cannot be wholly given in extension—the adequate object is given in idea only.

We are warranted in thinking a Supreme, all-powerful Being outside the world as the intelligent Author of it, according to an analogy to the objects of experience. But if we ask whether this Being is Substance, the question has no meaning, because the object is Ideal and can be thought by analogy to experience only and never cognized. We are warranted in making use of this conception as a presupposition in rational thinking of the universe, and this use as a regulative principle is its only legitimate application. God and Nature (as a totum) are thus terms which are interchangeable in all rational thinking of phenomena.

"Thus, all Human Cognition begins with Intuition, proceeds thence to Conceptions, and terminates in Ideas." It has, with respect to all three, sources of cognition a priori, but these can never lead us beyond experience. They rather teach us the method and principles of cognition so that we may never be baffled in any investigation of phenomena but may proceed according to an a priori rule. Dialectic Illusion is the result not of the nature of our reason but of wrong judgment in seeking to apply merely regulative principles beyond the field of possible experience.
Transcendental Method

What has preceded in the Critique of Pure Reason has provided the materials for the edifice of our knowledge. The determination of the formal conditions of knowledge, the structure of the edifice, is treated under the above title. General logic, not being limited in its scope, cannot furnish the method for the transcendental system; it cannot do more than produce titles for possible methods.

The discipline of Pure Reason is a restraint to check our constant inclination to deviate from certain rules. It is negative in its character, but more useful than much positive instruction because it teaches us to avoid a most persistent illusion—that of transcendental dialectic. Reason here is set to mark out its own limitations.

In its empirical use, reason does not require such criticism, because its principles are constantly subject to the test of experience. Nor is such criticism required in mathematics, where concepts are exhibited in concreto through the pure intuition and transcendental illusion easily detected. Moreover, the limitations of Pure Reason, with regard to its materials or contents, have been prescribed in the preceding chapters, so that we are concerned here solely with the critical examination of the methods of reasoning about that which transcends experience.

The brilliant success of Pure Reason in making valid synthetic propositions a priori in mathematics has led some to attempt a similar dogmatic use of reason in philosophy.

In order to discover the error involved, we have to consider the necessarily different operation of reason in these two fields. Philosophical knowledge is that which reason gains from concepts; mathematical, that which it gains from the construction, through pure intuition, of concepts. Philosophical knowledge considers the particular in the general only; mathematical, the general in the particular, the singular. The difference is one of form only. Those who thought to distinguish mathematics as the science which deals with quantity, philosophy, with quality, have erred. Philosophy also deals with quantities, e.g. infinity, only in a different way. But the mathematical concept, as something capable of construction a priori, can deal only with quantity. Philosophy can do nothing with the pure concept, as for instance, of a cause in general, but apply it directly to experience—namely, find an example. Mathematics constructs the concept through the pure intuition. To be sure, the construction of the concept a priori may be exhibited in an empirical example, as the triangle drawn on the paper, but this example is considered only with regard to the qualities of it which are general and do not belong to it as a particular object.
The philosopher can do nothing with the pure concept but analyze it. He can discover that a triangle has three angles and three sides, but what the relation of a greatest angle would be to a greatest side cannot be discovered from the pure concept itself.

"In mathematics we construct not only quanta (as in geometry), but mere quantities (as in algebra)." (Kant's explanation of how this is done seems to be deficient and not convincing.) The construction here consists in writing down the symbols for the quantities involved and the expression of the relation by other symbols. "We thus arrive----at results which our discursive knowledge could never have reached by the aid of mere conceptions." The secret of the difference between philosophy and mathematics lies in this: in the latter, synthetic propositions a priori are possible; in the former, they are not. The concepts of Pure Reason have their legitimate use only in application to experience. Nothing can be added to or joined with a pure concept to form a synthetic judgment except empirical intuition or pure intuition. But if the empirical intuition be joined, then our reasoning is not a priori but a posteriori, and the only way of using the pure intuition is by construction of the concept, i.e., by mathematics. There is no doubt a transcendental synthesis of mere concepts (in definition of that which is only problematic as regards its existence), but such a synthesis never relates to more than a thing in general. Such synthetic use of the pure reason is merely discursive. They, discursive concepts, cannot lead to any intuition, although we may have from them an indefinite synthesis of possible sensations as a notion of a possible experience. That is, we may think a thing by pure reason, but cannot know it as a given fact.

The success of mathematics is due to its definitions, its axioms, and its demonstrations. We shall discover more clearly the limitation of Pure Reason if we find that these three are not possible in philosophy.

Definition means the representation of the precise and well-marked concept of a thing. An empirical concept cannot be defined but is explained only, since the concept by which it is represented is never complete. We can never be certain that new observations of the object will not discover new qualities (predicates) or invalidate some which we have previously attached to it. The word which refers to empirical things is a designation only and not a concept. We have not much need for the latter since we always proceed to experiments upon the object (i.e. to empirical intuitions.) The completeness of an analysis by experiment may be probable but cannot be certain, so that definition of a real object, either a priori or empirical, is never certainly adequate. We may arbitrarily define an object, but the existence of such (its reality) is problematic only.
We should not, in philosophy, begin with definitions, except by way of experiment. In philosophy, the definition marks the completion, not the beginning, of our work. Mathematical definitions can never be erroneous, because they make the concept and through pure intuition the object. A mathematical definition may be faulty if it contains more or less than is necessary to the construction of the concept. But analytical definitions have no sure criterion of their correctness.

Axioms are synthetic principles a priori. Mathematics may well have such, since the construction of the concept makes it possible to join the predicates of the concept immediately. A synthetic principle, made up of concepts only, can never be immediately certain, as for example, that everything which happens has a cause. Here we have to appeal to experience (empirical intuition) to mediate between the concept of a phenomenon as something conditioned and the form of time intuition. The axioms of intuition given in the Analytic are only principles of the possibility of axioms and [are] put forward only to show the possibility of mathematics.

Only an apodictic proof that is also intuitive can be properly called a demonstration. Empirical arguments cannot produce such, since experience does not demonstrate the contradiction of the non-existence of what is, i.e., that whatever is, is necessary. Moreover, from discursive concepts, a priori, no such proof can be given, for it is impossible that intuitive evidence be adduced. Demonstration is possible then only in mathematics where construction of the concept in pure intuition is possible. The proofs of philosophy, whose concepts can be exhibited only in the abstract, Kant calls acroamatic (discursive).

A directly synthetic proposition, if based on concepts, is a dogma; if on the construction of concepts, is a mathema. It has already been shown that no objectively valid proposition can arise from a priori synthesis of pure concepts. Reason establishes some certain principles which apply to the manner of synthesis of experience by the understanding, but the objects of pure concepts are, as regards existence, purely problematical. There are no valid dogmata whatever in the speculative use of Pure Reason.

In the polemical use of reason, however, it is allowable to use the acroamatic proofs of Pure Reason, in order to thwart the negative dogmatism represented in the antitheses of the Antinomies. For although Pure Reason can never demonstrate the thesis, we are certain that the antithesis is likewise without ground of proof. And the thesis as a subjective maxim of reason, in which sense it is not in contradiction with the argument of the antithesis, has always its practical justification and its empirical use as the principle of unity. Criticism will put an end to this battle of dogma with dogma by fixing the limits of our knowledge.
Ignorance may be accidental or necessary. If accidental, it should incite us to investigate things dogmatically; if necessary, to investigate the limits of knowledge critically. The latter pursuit must, from the nature of the problem, be carried on transcendentally; experience may teach that we are not all-wise but cannot discover the bounds of knowledge. We may be intuitively conscious of the limit of our knowledge at any particular moment, but cannot know a posteriori the limits to all possible knowledge.

Now it is a fact that we are in possession of certain kinds of knowledge a priori, as shown by the principles of the understanding which anticipate experience. What the limitation of this use of Pure Reason is, reason itself must determine and give account. All skeptical polemic should properly be directed only toward the dogmatist. But no censure can put an end to disputes regarding the rights of human reason.

Hume, the ablest of Skeptics, seems to have been dimly aware of the existence of what Kant calls 'synthetical' judgments. It has been shown in the Critique how such synthetical judgments are through intuition (synthesis of experience) legitimate, but are not objectively valid when they are formed a priori by synthesis of pure concepts. This distinction, Hume never apprehended, but he regarded all synthetic judgments as equally without ground and resting upon a practical justification which he mentions as 'habit.' He fails thus to distinguish between the well-grounded claims of the understanding and the pretenses of the dialectic of reason. A complete critical survey of the grounds of judgment would have revealed his error. Such skeptical attacks are not dangerous, but rather serve to stamp out dogmatism. But the skeptical method cannot satisfy the reason, as can the critical, by pointing out the legitimate field and the limits of its use.

The impossibility of knowledge in the transcendental realm opens wider the door for hypotheses. But if hypothesis is to be more than extravagant pretension, it must be founded upon something—namely, the possibility of the object in question. Since we have no conception a priori of the dynamical relation, it is not allowable to hypothecate objects having radically different qualities or properties from those which we know. And we must not imagine strange and incomprehensible forces. A substance which does not occupy space, or one which occupies space without being impene- trable are not allowable hypotheses. Such objects are not possible, could not be given in experience. It is allowable to think the soul as a simple substance, so long as this idea is taken merely as a regulative principle which makes for unity; but to assume the soul as a simple existing substance would be blind hazard, since the simple can never be given in experience. Merely intelligible beings or properties of things may be received as opinion with no valid title of reason, but they should never be used as the ground of explanation of the empirical. Only that which could possibly be connected with the phenomenon according to known laws of phenomena is permissible as a ground of explanation. Explanation by a mere transcendental idea is not explanation at all;
by its use, reason is not advanced but rather reposes in an ignava ratio. In this way a phenomenon is said to be explained by its connection in the mind with something merely intelligible, when we are entirely unable to understand such connection. Secondly, a hypothesis should be sufficient to explain the event without further assumptions. Transcendental ideas may not then be adduced as hypotheses, since the nature of their connection with phenomena is not comprehensible. If they be assumed as dogmata then must the existence of their objects be proved with apodictic certainty, for to wish to render their existence merely probably by some sort of proof is absurd. Further, opinion which holds the existence of something which is neither a reasonable hypothesis as explanation of that which is really given, nor is given itself, nor can be proved from a priori necessity by reason, is unwarranted opinion, unless it is held merely as a means to find out truth (as conceptual shorthand).

Although the transcendental ideas are not allowable hypotheses, still, as has already been said, their defense simply for the frustration of negative dogmatism is permissible. Only as weapons for the defeat of error is any such assumption warranted according to the use of speculative reason. But when honors are so equally divided between the combatants, nay, when neither can assert the least advantage with right, then the need of Practical Reason may be considered. The assumption of certain transcendental ideas is of great practical advantage here, and no valid reason can be found why they should not be assumed, provided we remember that we have left the occupation of speculating about that which exists.

"The proofs of transcendental and synthetic propositions have this peculiar to themselves, amongst all proofs of a synthetic cognition a priori; that reason in such, by means of its conceptions, must not apply itself directly to the object, but previously must prove the objective validity of the conceptions, and the possibility of the synthesis of the same, a priori."9 Some clue must then be given whereby the conception may issue out from itself.' In mathematics, this is the construction in pure intuition; in transcendental cognition through the understanding, it is possible experience. We show that a given conception (e.g. an event) leads to another (that of its cause), not directly, but in this way, that unless such a connection exists, experience itself cannot be synthesized; the object of it cannot exist. Mere subjective (habitual) association of concepts can never be anything but doubtful.

The propositions of Pure Reason can never be sufficiently demonstrated, because by transcendental concepts nothing is thought which can be given either in pure or empirical intuition, so that the one concept (subject) must be joined with the other (predicate) directly (a procedure which has already been censured) or else these concepts cannot be joined at all. We should seek no transcendental proof without first considering what kind of ground it may have. If it is to be deduced from principles of the Understanding, there is no hope, since these are valid only for possible objects of experience; if from Pure Reason, then also hope is vain, for the principles of pure reason have a legi-
timate use only as the schematic unity of the principles of the understanding through which they thus refer to experience.

Secondly, for a transcendental proposition only one proof can be given. Intuition, (pure) in mathematics and (empirical) in natural sciences, furnishes a diverse matter for synthesis, so that the conclusion may be drawn in different ways. But each transcendental proposition emanates from one conception. Only from this one concept can the object be determined, so that only one proof (if any at all) can be given. For instance, the existence of God rests only upon the reciprocability [reciprocal?: ed] of the most-real and the necessary being. If the dogmatist advances ten proofs we may be sure they are all mere specious reasoning.

Thirdly, transcendental proof must be ostensive, not apagogic. The former shows not only that a thing is true but why it is true; that is, it establishes directly the connection of concepts or the chain of concepts which leads from the premises to the conclusion. The apagogic proof (reductio ad absurdum) never gives clearness in the representation of the connection of subject and predicate. The apagogic proof is used in some sciences because it is sometimes easier to prove the impossibility of that which contradicts the assertion than it is to prove the certainty of the assertion. In using this proof we must be sure to exhaust all the possibilities; otherwise, a degree of probability only can result.

This method of proof is well adapted to mathematical uses since the construction of the concept immediately exhibits in concreto (though does not intuit) all its consequences. In physics, although all results cannot be exhibited, yet by the various inductive methods, this result is approximated and the apagogic proof is useful. But this kind of demonstration is peculiarly unsuited to transcendental propositions, for that which contradicts the subjective conditions of a concept only, may readily be mistaken for that which contradicts its possibility; the cognition itself may be confused with that which is in the object. Both parties to the dogmatic quarrel amuse their admirers with this proof: the positive dogmatists assert the impossibility of that which contradicts their thesis, the negative sophists, the inconsistency of the concept itself. How both may succeed in this negative fashion without proving in the least their own assertions has been well illustrated in the antinomies. Everyone must establish his assertions with regard to that which transcends experience by direct proof. In this way, both parties will discover the difficulty or impossibility of proving their assertions and thus surrender them to Critick, which will discover the illusion of transcendental speculative reason and limit transcendental propositions to their peculiar realm—the Practical Reason.

*The term evidently covers the reductio ad absurdum in Mathematics and also in its indispensable use in all inductive proof.
Method of Transcendentalism Ch. II.

The Canon of Pure Reason

Reason can achieve nothing by itself. Yet it is its own censor. The greatest and perhaps the only advantage of Pure Reason is negative only, that of merely preventing the error of transcendental dialectic.

Yet Reason has a presentiment of transcendental objects which greatly interest. The path of Practical Reason is the only means of approach. The only possible canon of Pure Reason will be a canon of Pure Practical Reason.

Of the Ultimate Aim of the Pure Use of Reason

Reason is impelled to find a systematic whole of knowledge. The highest aim of reason in its transcendental use is the comprehension of three objects: the freedom of the will, the immortality of the soul, and the existence of God.

Our will may be free, but this would only refer to the intelligible cause of our volition. The phenomena of will-actions must be subject to the laws of nature. Nor could any conclusions about the phenomena of this life or another be deduced from a knowledge of immortality. Again, from the existence of God we may deduce design in the world, but no particular arrangement of things, and explanation of particular things must always proceed by natural causes. The true value of these propositions can, then, be practical only and not speculative. "I call practical whatever is possible through freedom. When the conditions of the exercise of our free will are empirical, reason can have no other than a regulative use, serving only to bring about the unity of empirical laws."10 Reason can give us none but pragmatic laws of free action for the attainment of the objects recommended to us by our senses—of happiness. Pure moral laws convey commands, not under empirical conditions, but absolutely. The three problems of pure practical reason are to know what ought to be done, if the will is free, if there is a God, if there is a future world.

A free will, in the practical sense of the word, is one determined solely by considerations which reason presents to it. Considerations as to what is desirable with regard to our whole state are based on reason. Reason, therefore, gives objective laws of freedom, imperatives, laws of what ought to take place. We know practical freedom by experience.
Of the Ideal of the *Summom Bonum*, etc.

1. What can I know?
2. What should I do?
3. What may I hope?

The first question is purely speculative; the second purely practical. The third is both, since hoping implies that something is because it ought to be. The practical law derived from the motive of happiness is the *pragmatic* rule of prudence; but the law, if there be such, which has no other motive but to deserve to be happy, "...I call moral (law of morality)..." The first regards empirical conditions; the second, only the freedom of rational beings. The second is based on pure reason *a priori*. As reason commands such actions, they must be possible; and a certain kind of systematical unity also, namely the moral, must be possible although it is impossible to prove the systematic unity of nature by speculative reason. This systematic unity, the intelligible or moral world, is the sensible world conceived of as an object of pure reason, and as a corpus mysticum of rational beings dwelling in it so far as their free will, placed under moral laws, possesses a thorough systematic unity both with itself and with the freedom of everybody else.

"I call the idea of an...intelligence in which the most perfect moral will, united with the highest blessedness, is the cause of all the happiness in the world; so far as it corresponds with morality—worthiness to be happy—the ideal of the supreme good. It is, therefore, in the ideal only of the supreme original good that pure reason can find the ground of the practically necessary connection of both elements of the highest derivative good, namely of an intelligible, that is, moral, world." Thus—in the causality of the good, we find the union of that which is and ought to be, of the kingdoms of nature and of grace. The moral theology leads, thus, inevitably to a sole, most perfect, and rational first Being, as speculative reason cannot. This being must comprehend not only moral but also natural laws in order that his commands also imply threats. There must therefore be a unity of design in nature, which is founded on the essence of free will—that can act according to reason. But we cannot, after deducing this Being from practical laws, again regard the laws as deduced from Him. We could have no conception of His Will if we had not formed it in accordance with these laws.

Of Opining, Knowing, and Believing

Persuasion is subjective and [is] an illusion if held as objectively valid. Conviction requires that objectivity which makes it inevitable for all beings as reasonable.
Among convictions, trowing is holding true with the consciousness that the grounds are both subjectively and objectively insufficient. Trowing is pragmatic belief. Moral belief, being necessary to action in accordance with reason, rests on a moral certainty which is not logical. The basis of it is subjective, being grounded in the nature of the 'I' as moral, but objective in the sense of being inevitable to beings so far as reasonable.

Method of Transcendentalism Ch. III.

The Architectonic of Pure Reason

Architectonic, the art of constructing systems, is the doctrine of what is really scientific in our knowledge—system. "By system, I mean the unity of various kinds of knowledge under one idea."13 This scientific concept of reason determines a priori the place of every part of knowledge, and contains the end and form of the whole. This idea is the hidden germ which impels the philosopher in his collection of concepts.

The mathematician, the student of nature, and the logician are only artists of reason. There is but one perfect highest ends, and with reference to this, the philosopher orders their productions.

Metaphysic is divided into that of Nature and that of morals.

Ch. IV. History of Pure Reason

With reference to the object of all knowledge of our reason, some philosophers were mere sensationalists (Epicurus) and some were intellectualists (Plato).

With reference to the origin of pure concepts of reason, there are empiricists and noologists.

With reference to method, there are naturalists and scientists. The latter are dogmatic or skeptical. The only path open is the critical.
The Metaphysic of Morals

Formal philosophy is Logic. Material philosophy is two-fold; its laws are of nature or of freedom—natural and moral philosophy. Logic cannot have any empirical part. Pure philosophy, as opposed to empiric, is merely formal—logic—or is restricted to certain objects of the understanding—metaphysic. Thus there is metaphysic of nature and metaphysic of morals. Ethics, as well as physics, will have an empirical and a rational part. The empiric ethics is practical anthropology; the rational is morality.

Kant's attempt is to construct a pure metaphysic of morals, entirely a priori. This is possible from the fact of the necessity which attaches to moral law. Moral laws deducible from reason hold for all rational beings. The application, though not deduction, of these laws requires experience. A moral action, to be good, must not only conform to the law, but must be done for the sake of the law. The metaphysic of morals has to examine the idea and principles of a possible pure will, not the principles of volition in general. (Play on the word pure (?) There is no foundation for such a metaphysic except the critical examination of a pure practical reason, the supreme principle of morality.

First Section: Transition from the common rational knowledge of morality to the philosophical

Nothing can be possibly conceived in the world, or even out of it, which can be called good without qualification, except a good will. Talents, or gifts of fortune, may both be mischievous if the will which is to use them be not good. Some qualities are of service to good will, though not themselves intrinsically good. A good will is good not because of its effects, but in itself. If happiness were the aim, instinct would secure it better than reason and will. (Teleological argument.) Reason [is] absolutely necessary to the will. The notion of such a will, good in itself, exists already in the common understanding, but may be cleared up by a consideration of the nature of duty.

Maxims have moral worth only when the actions which flow from them not only accord with the dictates of duty but are done because duty requires. Love as an affection may not be commanded; we are impelled to rational love, which is not an inclination. An action done from duty derives its worth not from the purpose which is to be attained by it but from its maxim, principle of volition.

Duty is the necessity of acting from respect for the law. The preeminently good can consist in nothing but the conception of the law itself, which is possible only for a rational being. It is respect for this law which determines the pure good will. As the will is deprived of every impulse which could arise to it from obedience to any law, there remains nothing but the universal
conformity of its actions to law in general, which alone is to serve
the will as a principle, i.e., I am never to act otherwise than
so that I could also will that my maxim should become a universal
law.

It is wholly different thing to be truthful from duty,
and to be so from apprehension of injurious consequences—
prudence. Knowledge of duty, though not in the abstract form
here presented, is the commonest of knowledge.

But reason issues its commands without promise to inclination,
and there arises a natural inclination to a dialectic questioning
of the right of reason and an attempt to make exception of its rule
in favor of our own wishes. Thus the common reason of men is
impelled to take a step into practical philosophy—a thorough
critical examination of our own reason.

Second Section: Transition from popular moral philosophy to the
metaphysic of morals

Perhaps no purely moral act was ever done. Thus some
philosophers ascribe all moral actions to self love. But even
if there never was a sincere friend, pure sincerity in friend-
ship is nevertheless required of every man, prior to all experience,
as duty in the idea of reason determining the will by a priori
principles. This law has absolute necessity for all rational beings.

Nothing is more fatal to morality than to base its principles
on examples. None is good but God only. We must found ethics on
metaphysics. It is just this purity of the moral principle which
makes it worthy to serve as the supreme practical principle.

Everything in nature works according to laws. Rational
beings alone have the faculty of acting according to the concep-
tion of laws, i.e., according to principles, have a will. Since
the deduction of action from principles requires reason, the will
is nothing but practical reason. If reason infallibly determines
the will, then the actions of such a being which are recognized
as objectively necessary are subjectively necessary also; i.e.,
the will is a faculty to choose that only which reason independent
of inclination recognizes as practically necessary, i.e., as
good. But if reason of itself does not sufficiently determine the
will, if the latter is subject also to subjective conditions
(particular impulses) which do not always coincide with the
objective conditions, in a word, if the will does not in itself
completely accord with reason (which is actually the case with men),
then the actions which objectively are recognized as necessary are
subjectively contingent, and the determination of such a will
according to objective laws is obligation; that is to way, the
relation of the objective laws to a will that is not thoroughly
good is conceived as the determination of the will of a rational
being by principles of reason, but principles which the will from
its nature does not necessarily follow.
The conception of an objective principle, in so far as it is obligatory for a will, is called a command (of reason), and the formula of the command is called an imperative.

A perfectly good will would be equally subject to objective laws but would not be obliged.

Imperatives are hypothetical if the action is good only as a means to something else, but categorical if it is the principle of a will which of itself conforms to reason—is good in itself. The categorical imperative is valid as an apodictic (practical) principle.

There is one end which all human beings have of practical necessity—happiness. The imperatives to happiness are assertorical. The imperatives of prudence (means to happiness) are hypothetical; those which immediately command without the condition of any other purpose, categorical. It is the law only which involves the conception of the unconditional and objective necessity. Only the imperatives in the third class are moral. Happiness is not an ideal of reason but of imagination, resting solely on empirical grounds. Actions to our own interest are determined by pragmatic precepts.

The difficulty of discerning the possibility of this categorical imperative or law of morality is profound. It is an a priori synthetical proposition. But the mere conception of a categorical imperative supplies us the formula for it—simply the requirement that there shall be law, i.e., requirement of universality.

Act only on that maxim whereby thou canst at the same time will that it should become a universal law.

It is the nature of will itself which is found in all rational beings, to be determined by the conception of objective laws. Hence the categorical imperative is valid for all rational beings.

So act as to treat humanity, whether in thine own person, or in that of an other, in every case as an end withal, never as a means only. The foundation of this principle is: rational nature exists as an end in itself.

The will of every rational being must be regarded as a universally legislative will.

Choice of action according to the categorical imperative constitutes autonomy of the will. If the will seeks the law which is to determine it anywhere else than in the fitness of its actions to be universal laws of its own dictation, and consequently if it goes outside of itself and seeks this law in the character of any of its objects, there always results heteronomy. Heteronomy is the basis of all spurious principles of morals.
Third Section: Transition from the Metaphysics of Morals to the Critique of Pure Practical Reason

The will is a kind of causality belonging to living beings so far as they are rational, and freedom would be this property of such causality that it can be efficient, independently of foreign causes determining it. What else then can freedom of the will be but autonomy, that is the property of the will to be a law to itself? But the proposition that the will is in every action a law to itself only expresses the principle to act on no other maxim than that which can also have as its object itself as a universal law. Now this is precisely the formula of the categorical imperative and is the principle of morality, so that a free will and a will subject to moral laws are one and the same. This synthetic principle is produced a priori by the 'mean' consideration that freedom must be presupposed as a property of the will of all rational beings.

There is a distinction between the world of sense and the world of reason—noumena. Man may know himself only as he belongs to the world of sense, but in respect to whatever in him is pure activity, he must reckon himself as belonging to the intellectual or noumenal world. Now man really finds in himself a faculty by which he distinguishes himself from everything else, even from himself as affected by objects, and that is reason. This, being pure spontaneity, is elevated even above understanding or the faculty of rules for synthesis of perception. As belonging to the intellectual world, man conceives himself as independent of the determining causes of the sensible world—as free.

The categorical imperative is possible because we are free. However, this freedom is not a concept from experience; it is only an Idea (ideal conception) whose objective reality is problematical. Since the postulate of freedom is necessary for the use of freedom in conduct, and since the antinomy in which it stands with physical necessity can never argue it away, we must therefore think freedom according to Practical Reason. So far as a man so thinks himself, he is conscious of his good will.
Footnotes

Page numbers (below and in the Introduction) refer to the unabridged translation of *The Critique of Pure Reason* by Norman Kemp Smith.

11. A806/B834, p. 536.