1954

Physical Causality in Kant's Critique of Pure Reason

Walter Joseph Bado
Loyola University Chicago

Recommended Citation
http://ecommons.luc.edu/luc_theses/902

This Thesis is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Master’s Theses by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.

This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License.
Copyright © 1954 Walter Joseph Bado
PHYSICAL CAUSALITY IN
KANT'S CRITIQUE OF
PURE REASON

by
Walter Joseph Bado, S.J.

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts

August
1954
LIFE

Walter Joseph Bado was born in Chicago, Illinois, December 6, 1928.

He was graduated from St. Ignatius High School, Chicago, Illinois, June, 1946. In the fall of that year, he entered the Society of Jesus at Milford, Ohio. Also at that time he enrolled at Xavier University, Cincinnati, Ohio. After two years of Novitiate, he spent two years in the Juniorate studying the English, Greek, and Latin classics. In September, 1950, he transferred to West Baden College, affiliated with Loyola University, and received the degree of Bachelor of Arts, June, 1951. At the time of writing this thesis he was engaged in teaching English, Latin, and Greek at St. Ignatius High School, Cleveland, Ohio.

Besides the present study, he is author of several published articles, among them "Protagoras' Faulty Yardstick," a study of the concepts of physis and nomos in Greek and Thomistic moral philosophy; and "Qui Nil Molitur Inepte," a study of the dramatic elements in the first book of Homer's Odyssey. Both of these articles appeared in the Classical Bulletin.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>Contemporary attitude toward efficient causality--</td>
<td>viii</td>
</tr>
<tr>
<td>Importance of Kant's analysis of causality--For his own system--For</td>
<td></td>
</tr>
<tr>
<td>the contemporary attitude--Purpose, scope, and procedure.</td>
<td></td>
</tr>
<tr>
<td><strong>I. PHYSICAL CAUSALITY AND KANT'S PREDECESSORS</strong></td>
<td>1</td>
</tr>
<tr>
<td>A. BRITISH EMPIRICISTS: Locke's sensism and representationalism--</td>
<td></td>
</tr>
<tr>
<td>Berkeley's extension of Locke's premisses--Hume's challenge of the</td>
<td></td>
</tr>
<tr>
<td>objective validity of the causal principle--Negative aspect of his</td>
<td></td>
</tr>
<tr>
<td>philosophy--Positive aspect: doctrine of belief.</td>
<td></td>
</tr>
<tr>
<td>B. RATIONALISTS: Leibniz' <em>a priori</em> system--Legislative nature of</td>
<td></td>
</tr>
<tr>
<td>thought--Analytic character of all judgments--Principle of</td>
<td></td>
</tr>
<tr>
<td>contradiction--Principle of sufficient reason--Position on causality--</td>
<td></td>
</tr>
<tr>
<td>Wolff's excessive formalism--Attacked by Crusius--Kant's early</td>
<td></td>
</tr>
<tr>
<td>philosophizing--A rationalist by background, education, and</td>
<td></td>
</tr>
<tr>
<td>temperament.</td>
<td></td>
</tr>
<tr>
<td><strong>II. PHYSICAL CAUSALITY IN KANT'S CRITIQUE OF PURE REASON</strong></td>
<td>36</td>
</tr>
<tr>
<td>A. PROBLEM OF THE SYNTHETIC <em>A PRIORI</em>: Fusion of two streams of</td>
<td></td>
</tr>
<tr>
<td>thought--Hume's analysis of the synthetic nature of the causal</td>
<td></td>
</tr>
<tr>
<td>principle--Kant's study of the mysterious character of <em>a priori</em></td>
<td></td>
</tr>
<tr>
<td>knowledge--Critique of Pure Reason, Kant's answer to the problem of</td>
<td></td>
</tr>
<tr>
<td>the synthetic <em>a priori</em>--Rationalism established on a new basis--</td>
<td></td>
</tr>
<tr>
<td><em>A priori</em> no longer absolute--Relative to sense experience--</td>
<td></td>
</tr>
<tr>
<td>Reality unknown and unknowable.</td>
<td></td>
</tr>
<tr>
<td>B. THE TRANSCENDENTAL DEDUCTION OF THE CATEGORIES: Physical</td>
<td></td>
</tr>
<tr>
<td>causality the prime historical and logical instance of the synthetic</td>
<td></td>
</tr>
<tr>
<td><em>a priori</em>--Objective validity of the causal concept, or category,</td>
<td></td>
</tr>
<tr>
<td>treated in this section--Importance of</td>
<td></td>
</tr>
</tbody>
</table>
the section—Five major points: 1) Knowledge of succession implies self-identity—2) Knowledge of succession implies knowledge also of objects—3) Self-identity and knowledge of objects imply one another—4) Unity in both depends on necessary laws of connection—5) These laws are the indispensable conditions to which all objects of experience must conform.

C. THE SECOND ANALOGY: Kant's vindication of the causal principle—Central argument—Its starting point: consciousness of objective succession—Necessity involved in objectivity—Necessity to be explained by an a priori principle—Role of time in the proof—Transcendental schema of necessary succession—Its corresponding category that of causality (ground and consequent)—Causal category the indispensable condition of consciousness of objective succession—Therefore objectively valid, universal, and necessary—Physical causality proved to be necessary sequence of appearances.

III. CRITIQUE OF THE KANTIAN DOCTRINE OF PHYSICAL CAUSALITY

A. KANT'S SUBJECTIVISM: First of Kant's two tendencies—Subjectivity of appearances—Analysis of texts—Opinions—N.K. Smith's benign interpretation—Objected to by Prichard—Marechal's analysis—Comparison of Kant's phenomenal object with Thomistic Verbum.

B. KANT'S PHENOMENALISM: adulterated meaning of causality considered as necessary succession—Kant's addition of the ground-consequent relation to his causal analysis—Necessary connection thus implied—But illegitimately presupposed—Proofs of this; 1) Formalistic view of judgment the only basis for the ground-consequent relation—2) Grounds and consequents impossible among appearances—3) Vs. Paton; necessary succession of appearances not the phenomenal correlate of ground-consequent relation—Examples of Kant's illegitimate presupposition of necessary connection—Kant's treatment of particular causes—Vs. Ewing; necessary connection still illegitimate for Kant even if
restricted to noumena—Kantian causality considered as necessary succession not necessarily invalidated—Meaning of causality considered as necessary succession—Relative and extrinsic nature of causality as necessary succession—Its effect on Kant's answer to Hume—Difficulties inherent even in necessary succession—Final argument: Kant's starting point invalid—No such thing as the synthetic a priori—Ewing's attempt to salvage the Kantian argument—Ewing answered.

CONCLUSION

Kant's proof of physical causality restricted to necessary succession—Hume's problem one of necessary connection—Kant's failure to answer Hume—Result of Human presuppositions—Effect on contemporary attitude toward efficient causality—Kant's contributions.

BIBLIOGRAPHY
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>THE CRITICAL AND THOMISTIC THEORY OF THE OBJECT OF COGNITION</strong></td>
<td>97</td>
</tr>
<tr>
<td>2. <strong>LOGICAL ELEMENTS INVOLVED IN THE KNOWLEDGE OF PHENOMENAL OBJECTS</strong></td>
<td>137</td>
</tr>
</tbody>
</table>
INTRODUCTION

In an age of relativism, when absolutes are often absolutely denied, the lot of efficient causality is not an enviable one. The causal concept is considered in some circles as nothing more than the naive outlook of a decadent rationalistic age. According to the Heisenberg uncertainty principle, a complete knowledge of the state of a physical system at any given instant is not sufficient to permit an exact prediction of that system's future behavior. The best one can do is to make statistical calculations. "As a consequence," says Tolman, "we now have to regard the true connection between physical cause and effect as a statistical one." The causal principle is also attacked. For Ayer, it is an example of nonsensical metaphysical assertions:

We may . . . define a metaphysical sentence as a sentence which purports to express a genuine proposition, but does, in fact, express neither a tautology nor an empirical hypothesis. And as tautologies and empirical hypotheses form the entire class of significant propositions, we are justified in concluding that all metaphysical propositions are nonsensical.2

---

This contemporary attitude toward efficient causality is not a recent phenomenon. Its historical and ideological roots can be traced back through Hume to Descartes. With the Cartesian philosophy, as Maritain points out, began a retrogression in which human reason gradually lost its grasp on Being, and became available only for the mathematical reading of sensory phenomena, and for the building up of corresponding material techniques, "a field in which any absolute reality, any absolute truth, and any absolute value is of course forbidden."3

But the post-Cartesian period also saw the rise of one of the most ambitious defenders of causality, Immanuel Kant. His Critical philosophy was an arresting display in the philosophical pyrotechnics set off by Hume in the twilight hours of eighteenth century rationalism and the Enlightenment.

The problem of causality not only roused Kant from the "dogmatic slumber" of rationalism but also constituted the crucial test of his philosophy. As the clearest and most indispensable instance of the synthetic a priori, causality was the obstacle before which both empiricism and rationalism had been brought to a complete standstill. The rationalist was confronted with the very difficult task of demonstrating a principle which was considered indispensable for science and practical life and yet the opposite of which did not seem, prima facie at least,

contradictory. He was further faced with the awkward fact that particular causal laws in nature were held to be unintelligible and indemonstrable a priori but discoverable only by means of induction from particular experiences. The empiricist, on the other hand, if he wished to be consistent with his first principles, had the still more difficult, if not impossible, task of deriving the universal and necessary principle of causality from a mere enumeration of particulars.

Kant claimed that with his Critical philosophy he could prove the objective validity of the principle of causality. Causality is thus a test-case in a larger issue. Upon the truth or falsity of Kant's causal teaching depends the success or failure of Kant's Critical philosophy to answer the challenge of the synthetic a priori.

In this thesis we shall center our attention upon Kant's doctrine of causality. The larger issue of the synthetic a priori will only be touched upon. Our purpose will be to see whether Kant's causal doctrine, springing from the roots of his Critical philosophy, conclusively answered Hume's challenge or whether the Humean disdain of efficient causality in certain contemporary circles only emphasizes Kant's failure.

The study of Kantian causality naturally presupposes a study of its leading lines of thought as well as its dependence on the findings of previous thinkers. But Kant's causal doctrine is obviously too complex to be treated in all its ramifi-
cations within the bounds of this thesis. Consequently, only one aspect of Kantian causality will be treated, that of causality in the phenomenal physical order. The problem of causality in the noumenal order of free will (Kant's moral order) as well as the role of causality in the phenomenal psychical order of the empirical ego will not be treated.

To limit the scope of the thesis to still more manageable proportions, we shall concentrate on two important and rather intricate passages in the Critique of Pure Reason, the "Transcendental Deduction of the Categories" and the "Second Analogy." The first passage deals with the objectivity of the causal concept, or category. It is the foundation for the second passage in which Kant explains the objectivity of the causal principle. The text usually cited is the second edition of the Critique of Pure Reason, in Norman Kemp Smith's translation.4 We note here that, following Smith, we employ the term "appearance," rather than "phenomenon," for Kant's Erscheinung.

The matter of the thesis will be as follows. After posing the problem of causality in its historic form by a perusal of the doctrines of the chief representatives of eighteenth century rationalism and empiricism (Chapter I), we shall focus attention on Kant's solution (Chapter II). Here we shall bring

---

out the radical Kantian view of thought and experience, and his corresponding causal doctrine, by a survey of the "Transcendental Deduction of the Categories" and the "Second Analogy." Chapter III will be the critical portion of the study. In the course of the critique, the opinions of leading Kantian commentators will be weighed.

Prichard, for example, insists upon Kant's subjectivism. Does this subjectivism invalidate the whole Kantian argument for causality? Was the historical evolution of Kantianism from Becker, Kant's Fichte-izing disciple, to Hegel an indication of a fatal flaw in the Kantian argument for objectivity? What about Daval's statement that Kant's post-Critical work was a continuous effort to resolve the problem of the ambiguity of the object?6

But Kant's subjectivism is only the less important part of his theory. Is his causal doctrine without flaw when viewed in the light of his phenomenalism? Are Smith and Paton justified in accepting for the most part this phenomenalist position in their commentaries?7 A.C. Ewing contends that Kant's arguments for causality, though in themselves too bound up with the system

to have given general satisfaction, can be re-stated in a way acceptable to all schools of thought.\footnote{8} Is it true that it is not the doctrine but only the method of transcendental idealism, i.e., the method of proof by appealing to the possibility of experience and knowledge, that forms the real presupposition and basis of the Kantian deduction of causality?\footnote{9}

Among those who profess realism, Maréchal interprets Kant's transcendental method of analysis as a study of the immanent and objectivating activity of cognition. Is he going too far when he finds parallels with the epistemology of St. Thomas?

These important points will be discussed in Chapter III.

A word on the literature related to the present study. With the exception of A.C. Ewing, no one has singled out the causal aspect of Kant's doctrine for special study, though its importance invites the attempt.\footnote{10} Smith's and Paton's commentaries are excellent for a study of the Critique as a whole. Maréchal's  

\footnote{8} Alfred Cyril Ewing, \textit{Kant's Treatment of Causality}, London, 1924, 96.


\footnote{10} The present study differs from that of Ewing in several important respects; it emphasizes the impact of Kant's Humean presuppositions on his causal teaching; it studies Kant from the viewpoint of a critical realism, in contrast to Ewing's phenomenalism; it disputes Ewing's contention that Kant's argument for causality can be suitably re-stated without essential changes.
monumental work has many interesting and valuable comments. It is especially helpful to one acquainted with scholasticism because of its frequent contrasts and comparisons of scholastic and Kantian philosophy. Prichard we found to be a most acute critic of Kant's subjectivist tendency. Of the remaining books in the bibliography, those of Adamson, Boutroux, Caird, and Watson deserve special mention.
CHAPTER I

PHYSICAL CAUSALITY AND KANT'S PREDECESSORS

In a famous passage in the Prolegomena, Kant acknowledges his debt to the past:

If we begin with a well-founded, although undeveloped thought, bequeathed to us by another, we may well hope as the fruit of continued meditation to develop it further than the keen-sighted man whom we had to thank for the first spark of this light.¹

What, then, were the influences upon Kant and what was the evolution of the problem which he tried to solve? Without denying other less important subsidiary influences, we shall limit ourselves to a discussion of Locke, Berkeley, and Hume among the empiricists and of Leibniz and Wolff among the rationalists.

A. THE BRITISH EMPIRICISTS

John Locke, in reaction to Descartes' theory of innate ideas, maintained that the human knower has no ideas except those obtained through sensation and reflection on internal operations.

¹ Immanuel Kant, Prolegomena to any Future Metaphysics, with an Introduction by Lewis W. Beck, New York, 1951, 8 (260). The numbers in the parentheses are the page numbers of the Academy edition; Kant's Schriften, ed. Koenigliche Preussische Akademie, Berlin, 1902-1908.
With Descartes, however, he made the fatal step of setting up ideas, not things, as the immediate object of knowledge. Furthermore, while admitting that the mind knows universals, Locke denied it the power to know natures of real essences through abstraction. The only essences man knows are nominal. The real essence is always an unknown substratum, the unseen statue beneath the accidents which clothe and conceal it.

Knowledge was thus limited by Locke to accidents and a presupposed substance about which we know only the bare fact of existence. But even with regard to the accidents, only the primary qualities, such as form, extension, and motion, exist as such in the object. The so-called secondary qualities, like color, taste, and sound, are purely subjective reactions of the perceiving to the primary qualities. None of the accidents flow from the nature of the substance. They are imposed on the substance by an arbitrary fiat of the divine will. Without man's being any the wiser, the deity could replace the unknown substratum with another, the accidents remaining the same. Accidents thus tell us absolutely nothing about the nature of the substance which supports them. Quite logically, Locke denied all but highly probable knowledge of scientific laws. For scientific laws are grounded in the natures of things which the mind, according to Locke, can never know.

Locke's account of causality is perhaps the least satisfactory part of his philosophy. In introducing the concept
of cause, he speaks as though causality were a possible object of perception, like color or shape. Yet Locke insists on the mysterious and unknowable character of the causal nexus. Since we can only observe sensible "ideas" or qualities in external objects, a power like causality can only be known as the potentiality of producing changes in these sensible qualities, a mysterious something that can be described in terms of its effects. Actually, Locke makes causality a relation, thus removing it from its proper category of action and passion.

As regards the principle of causality, Locke tries to prove its validity by the argument that it is obviously impossible for nothing to produce something. But as Hume was to point out, Locke can assume that if an event is not caused by something it must be caused by nothing only because he assumes the universality of the causal principle. But it is just this universality which Locke is trying to prove.

Locke's basic Cartesian assumption that ideas are the immediate object of knowledge was accepted without any reserve by his successor, George Berkeley. Far less conservative than his conceptualistic predecessor, Berkeley went on to deny the existence of universals even in the mind. Moreover, seeing that in Locke's doctrine of substance as an unknown substratum lay a fine argument against the rising tide of materialism, Berkeley denied not only the capacity of the mind to know material substance but the very existence of matter. Matter in its very concept is passive
and material. Therefore, it certainly cannot cause the existence of spiritual ideas in us. Reality was thus reduced to spirits and ideas. And since the mind does not perceive sense objects but only its ideas of them obtained through sensation, Berkeley saw no reason for admitting the existence of sensed objects outside of perception. Their esse est percipi.

As regards causality, Berkeley assumed the principle that every change must have a cause. But he denied that causal connection between physical phenomena the nature of which Locke had already asserted to be unknown. Berkeley thus made another step in the direction of Hume. His philosophy left in existence only spirits and their ideas. Now the latter cannot have causal efficacy. For, says Berkeley, an idea cannot have any qualities beyond those of which we are conscious. And we are not conscious of causal efficiency in our ideas. Ideas are, of their very nature, passive. Since we must suppose, however, that the changes in our ideas have some cause, we must conclude that spirits are the causes.

In dealing with the material world, Berkeley substituted for Locke's relation of cause and effect the relation of "sign" and "thing signified." Thus "the fire which I see is not the cause of the pain I suffer upon my approaching it, but the mark that forewarns me of it."2

---

We find by experience that ideas succeed each other in such a regular manner that we may frame laws of nature and use these laws for predicting future events. This orderly succession, however, is not dependent on any causal influence of one idea on another but is dependent only on the direct will of God. Natural science thus consists in the reduction of the many observed sequences to a few simple and universal laws of sequence, not explicable further except by an appeal to divine efficient causality.

At this point David Hume entered the philosophical scene. The stage had been well prepared for his entrance, especially regarding causality. Locke had denied the capacity of the mind to know natures and had ascribed causation to unknown powers. Berkeley had then denied that such unknowable and imperceptible powers could be real qualities and reduced all material causation to the activity of spirits. Hume, more radically

---

3 The summary of Hume's philosophy in the text above deals primarily with its negative aspects. The traditional but now less favored interpretation holds that Hume contributed nothing positive to philosophy but merely reduced the principles of Locke and Berkeley to their absurdity. A strong new school, consisting of men like Ralph W. Church (Hume's Theory of the Understanding, London, 1935) and Norman Kemp Smith (The Philosophy of David Hume, London, 1941) insists that Hume made important positive contributions also. Especially significant contributions are his theory of belief based on the primacy of feeling (derived from Hutcheson) and his teaching on the principle of association (derived from Newton). In our summary, after reviewing Hume's criticism of causality--a criticism so significant for Kant—we shall outline Hume's theory of belief in its application to causality. This positive complement to adverse criticisms of him will bring out the full import of Hume's stand on causality.
logical or logically more radical, tightened the Gordian knot tied by predecessors. He directed his main attack against causality, realizing all the while its importance for our knowledge of the physical world.4

In his argument, Hume made two basic assumptions; 1) the Cartesian one, already subscribed to by Locke and Berkeley, that the idea was the first thing known; and 2) that every simple idea corresponds to an impression whose characteristics are force and vivacity.

The warp and woof of the two Humean assumptions were: 1) his phenomenalism, by which he denied the intentionality of sense and intellectual cognition and made perceptions instead of things the complete object of knowledge; 2) his sensism, by which he denied that the intellect can know anything which is not explicitly perceived by the external or internal senses; and 3) his psychological atomism, by which he held that "whatever objects are different are distinguishable, and whatever objects are distinguishable are separable by thought and imagination."5

4 See, for example, his Treatise of Human Nature, ed. L.A.Selby-Bigge, Oxford, 1946, I, III, 2. For Kant, too, as will be seen in Chapter II, knowledge of objects depends on causality. The Kantian argument is based on this central fact: we have knowledge of objective sequence. His question is: what makes this knowledge of objective sequence possible? The answer: causality, which is thus as real as the objective sequence it conditions, or makes possible.

5 Treatise, I, 1, 7 (18). Numbers in parentheses refer to pages in Selby-Bigge's edition of the Treatise.
Thrust into such unfavorable soil, the objective validity of universal principles of knowledge, as well as all knowledge of supra-sensible objects, was impossible from the beginning. First principles, which are seen by the mind to follow upon real being and are therefore universally applicable to real beings, are valueless for Hume because, according to him, real beings are unknown. Supra-sensible beings are unknowable because only sensations can be known. Valid scientific laws are impossible because the natures upon which they are based are unknown. All substance, whether material or spiritual, is unknown because it is not given immediately in sensation. All that man can do legitimately is to affirm his own sensations. Anything beyond that is invalid. Hume’s psychological atomism, again, makes impossible anything like the factor of implication, of causal connection. A world of discrete particulars severs any necessary connection between things.6

6 “As all distinct ideas are separable from each other, and as the ideas of cause and effect are evidently distinct, ’twill be easy for us to conceive any object to be non-existent this moment, and existent the next, without conjoining to it the distinct idea of a cause or productive principle. The separation, therefore, of the idea of a cause from that of a beginning of existence, is plainly possible for the imagination; and consequent- ly, the actual separation of these objects is so far possible that it implies no contradiction nor absurdity; and is therefore incapable of being refuted by any reasoning from mere ideas; without which it is impossible to demonstrate the necessity of a cause.” Treatise, I, iii, 3 (79-80). Two serious flaws in the passage are the confusion of the logical with the real world and the absence of a notion of relativum: one thing which of its
On such a foundation, Hume now proceeded to construct his doctrine of causality. His entire investigation was a search for the impression from which the idea of causal connection arose. His treatment of the subject in Book I of the Treatise of Human Nature can be divided into four parts: 1) an attempt to show that the principle of causality is neither intuitively nor demonstratively certain; 2) an attempted reduction of reasoning on particular causal laws to constant association of impressions and ideas in the imagination, owing to constant conjunction in past experience; 3) an attempt to reduce the necessary character of causal connection to an acquired impression or propensity to pass from an object to the idea of its usual attendant; the feeling or belief accompanying this propensity is misinterpreted as representing a real necessary connection in the object itself; and 4) a corresponding theory of belief, Hume's important positive complement to his criticism of causality.

The first part is of special interest because it was

nature has a rapport for another.

R.E.Hobart, in "Hume Without Scepticism," Mind, London, xxxix, July, 1930, 273, states that Hume's "whole discovery" about cause and effect comes to this, that "a proposition may imply another proposition, but a thing cannot imply another thing."

A reflection of Hume's attitude is found in the statement which helped to start Kant on his inquiry: "How do we know that because one thing is, another thing must be?" Versuch die Begriff der Negativen Grossen in die Weltweisheit Einzuführen (On Negative Quantities), Kant's Schriften, Akademie II, 202. This is taken up in Chapter II, pp.38-49.
the alleged discovery of the synthetic character of the causal nexus which started Kant on his Copernican revolution. "All certainty," says Hume, "arises from the comparison of ideas, and from the discovery of such relations as are unalterable, so long as the ideas continue the same." Or, in other words, certain knowledge is found only in what can be deduced from the principle of contradiction or intuited via the relations of resemblance, proportions in quantity and number, degrees of any quality, and contrariety. Now the principle whatever has a beginning has also a cause of existence does not imply any of the relations necessary for intuitive certainty. Therefore, it is not intuitively certain. Nor is it demonstratively certain. For if the principle that everything which has a beginning must have a cause is to be proved, its opposite must be shown to be self-contradictory. But that cannot be shown. For to imagine the effect as occurring without the cause is not a contradiction since the effect certainly does not include in itself the cause or vice versa.

Hume criticizes the arguments used by contemporaries to establish the causal principle. The first of these arguments was that every change must have a cause for otherwise something

7 Treatise, I, iii, 3 (79).
8 Ibid.
9 See footnote 6 on page 7.
would be caused by nothing or by itself. The second argument was that all the points of space and time being uniform, a cause is necessary to determine an event to happen at one moment and in one place rather than at some other time or place. Hume points out that the arguments presuppose what they set out to prove. For if the causal principle is denied, the conclusion is not that things are caused by nothing or by themselves but that they are not caused at all. 10

Hume next expands his study of the causal principle by an examination of our reasoning about particular causal laws. "Why do we conclude that such particular causes must necessarily have such particular effects, and why do we form an inference from one to another?" 11

Every inference must begin with some impression since it cannot begin from nothing or go on indefinitely. In reasoning concerning cause and effect, the mind always goes from the present impression to the idea of the absent but correlative object. There are then three things to explain: "First, the original impression. Secondly, the transition to the idea of the connected cause or effect. Thirdly, the nature and qualities of that idea." 12

10 *Treatise*, I, iii, 3 (80-81).
Regarding the first element, the original impression is an inexplicable datum for Hume. Whether it comes from the object, the mind, or God is an apparently insoluble question.

As for the second element, the transition or inference, Hume again refers to the principle that what is distinguishable is separable. On this ground there is no implication between the impression of an effect and the idea of a cause. For the idea associated with the impression might be displaced and another substituted for it. Reason is incapable of anything like the rational penetration of essences which might reveal the necessary connection of one thing with another.

Since the causal inference is not discovered by reason, it must be experiential in nature—a conclusion particularly significant for Kant. Experience gives us the constant conjunction of repeated events. Thus after innumerable instances of flame in constant ordered conjunction with heat, we call the one cause and the other effect.

But experience of its nature can inform us only of the past and present, not of the future. How, then, justify the causal inference from past to future experience?

Hume answers that a presumption is added to the data of experience: the future will be conformable to the past.¹⁴ No

---

¹³ T*reatise*, I, iii, 6 (86-87).
"logical reason" can be offered for the presumption. Thus in all reasoning from experience there is a step unsupported by any argument, which makes anything like true causal inference impossible. The imagination, not the understanding, habit and not reason, custom and not evidence, are at work. The nature of the transition or inference from past to future experience is simply the work of association of perceptions in the imagination.

But the consciousness of necessity in the causal connection still remains to be explained. "What is our idea of necessity when we say that two objects are necessarily connected?" Hume's difficulty can be expressed thus. We ascribe real existence to the objects of our impressions, not of our mere ideas. Yet we have no immediate impression of the necessity in the causal connection. Why, then, do we think that it is real and objective?

Hume's answer is briefly this. The impression corresponding to the idea of necessity results from the frequent repetition of constantly conjoined events. By this impression the mind is determined to go from a present object to its usual attendant. This impression of determination is the source of necessity. Or in other words, through customary transition

15 Treatise, I, iii, 14 (155).
16 Ibid., I, iii, 14 (156).
between two associated objects, the connection between them becomes so forcible, vivid, and lively as to seem an impression and not merely an idea. The customary transition between the resembling instances thus produces a new impression in the mind. "Necessity, then, is the effect of this observation [of resembling instances], and is nothing but an internal impression of the mind, or a determination to carry our thoughts from one object to another." 17

Hume adds that this internal necessity is conjoined with things. 18 Just as we link secondary qualities to objects, so we suppose necessity to be in the objects we consider, not in the mind that considers them. Actually, necessity, instead of being an objective connection discernible by reason, has become a psychologically determined but logically unjustifiable process whereby we pass from a present object to the idea of its usual attendant.

The feeling with which the latter is regarded is called belief. 19 This subject brings us to one of Hume's important posi-

17 *Treatise*, I, iii, 14 (165).

18 Ibid., I, iii, 14 (167).

19 On this point that a principle like causality involves belief rather than knowledge, Bertrand Russell makes a rather startling comment on Kant's philosophy. If true, it would bring out even more the kindred elements in Hume and Kant. Russell says: "That propositions may acquire truth by being believed [constitutes] a large part of Kant's Copernican Revolution." *Philosophy of Leibniz*, London, 1937, 14. Russell admits the
tive contributions to philosophy. The Humean theory of belief may be summarized thus. Belief does not consist in the addition of any fresh idea to that already entertained by the mind. It names the manner in which the mind apprehends an object as existent. It involves three conditions: a present impression, a lively idea, and an association between them. It is defined as "a lively idea related to or associated with a present impression." To believe in an object as existent is, then, to accord it the same value as the accompanying sense impression. The latter is of its nature suffused with the reality feeling. Belief is thus a certain feeling with which the idea is conceived, a feeling best described as a more vivid, lively, forcible, firm, steady manner of conceiving an object as existent. The idea achieving

unorthodoxy of the statement. But his grounds for it would seem to repay investigation. See the Critique of Pure Reason, trans. N.K. Smith, 29: "I have found it necessary to deny knowledge in order to make room for faith." Italics in the original. Kant is here referring more to the practical reason. That Kant would deny speculative reason the knowledge of principles applying to phenomena is what Russell must prove.

20 Hume distinguishes between conceptual content and belief-quality, a familiar dichotomy with parallels in the scholastic distinction between concept and judgment, essence and existence.

21 Treatise, I, iii, 7 (96).
22 Ibid., Appendix to Book III, (624).
the status of belief has been ushered, as it were, into what we believe to be an external world system of continuing independent bodies. Upon entrance into that system, it is enlivened through its relation with the naturally lively and forcible impression that customarily precedes it. From the impression, the idea borrows its belief quality or vigor. Thus we believe not only in existing bodies but in their necessary connection also.

In the psychology of habit and belief, then, Hume found the explanation for causality. But in the process what had become of causality? Causality was now a question, not of necessary connection in objects, but of an instinctive response to the fleeting, discrete, but customarily conjoined phenomena that make up the systematic coherence of perceptions we call experience. In Hume's phenomenal world, causality, far from

23 On Hume's theory of the external world see Treatise, I, iv, 2 (181-218); also H.H.Price, Hume's Theory of the External World, Oxford, 1940, especially 11-37. Hume makes much of coherence as well as of constancy as bases of our belief in an objective world as opposed to purely subjective phenomena. Kant, again, made necessity the main criterion. His vindication of causality depends largely on the argument that the distinction between the subjective and the objective already implies real causal necessity. See Chapter II, pp.61-64 and 67-74.

24 Treatise, I, iii, 7 (97) and 10 (119).

25 "Experimental reasoning . . . is nothing but a species of instinct or mechanical power that acts in us unknown to ourselves." Hume, An Enquiry Concerning Human Understanding, Chicago, 1935, IX, 113. See also Treatise, I, iii, 16 (179).
showing any objective and necessary connection, can only point
to the statistical facts: this or that has happened so many times
in the past and so it can be believed as more or less probable
that, given a similar cause, a similar event will happen again
in the future.

This, despite the objections of his common sense and
despite the flaws in the argument was Hume's philosophical
position regarding causality.

B. THE RATIONALISTS

In turning from the British empiricists to the rationa-

26 "I dine, I play a game of backgammon, I converse,
and am merry with my friends; and when after three or four hours' amuse-
ment I would return to these speculations, they appear so
cold, and strained, and ridiculous, that I cannot find it in my
heart to enter into them any farther." Treatise, I, iv, 7. As
his letter of February, 1754, to John Stewart shows, Hume never
denied causality. He denied only that our belief in causality
can be logically justified. See The Letters of David Hume, ed.

27 Thus it may be pointed out that unusual rather
than usual occurrences imprint on our minds the consciousness of
necessity; that the judgment of causal connection which must be
distinguished, if only as a psychological fact, from the mere
feeling of it, implies a synthesis of perceptions; this synthesis
is not possible for a mind that is itself nothing but a series of
separate perceptions; as we usually look at an object at discon-
nected moments and not continuously, the number of times in which
we observe the effect without the cause is probably much greater
than the number of times we observe both; again, we often know
the connection between a cause and effect through a single instance
so that no habit has been formed by repeated experience of con-
junction; some things, such as day and night, are always found
conjoined without our ascribing any connection of cause and
effect between them.
list philosophy in which Kant was educated a new atmosphere is at once evident. Though we are primarily concerned with the rationalist view of causality, some prefatory remarks on the rationalist logic and theory of knowledge are in order as they were in our study of the causal doctrine of the British empiricists. Hume's contention that experience cannot by itself justify general principles by any process of induction forms a bridge over which we can pass to the viewpoint of Leibniz.

For Hume, induction must be regarded as a non-rational process of mere instinctive anticipation, "the tendency to expect repetitions of what has repeatedly occurred." Foreshadowing Dewey's naturalistic, instrumental view of thought, Hume's epistemology considers thought merely as a practical instrument for the convenient interpretation of human experience, for the expression of "a comfortable feeling of of-course-ness." Thought has no objective or metaphysical validity of any kind. In his logic, again, Hume treats the fundamental principles of

28 Martin Knutzen, who had effected a compromise between Wolffian rationalism and pietism and who tried to harmonize Newton and Leibniz, taught Kant a Wolffian version of Leibniz.


human experience as purely synthetical judgments in which no necessary relation between subject and predicate is discernible.

For Leibniz, on the contrary, thought is self-legislative. Sense experience reveals reality only in proportion as it embodies principles derived from thought itself. "Knowledge of the nature of things is nothing but knowledge of the nature of our mind." Consequently, all principles are analytic. As such, they can be justified by pure thought.

Leibniz' philosophy was a continuity of the rationalist movement started by Descartes. To the Cartesian principle of the rationality of the real, Leibniz joined the two postulates of substantial dynamism and the monadology. The wholly intrinsic activity—"les monades n'ont point de fenêtres par lesquelles quelque chose y puisse entrer ou sortir"—of these microcosms fundamentally consists in the spontaneous setting forth of obscure representative states or perceptions, each monad representing the


33 Erdmann, II, 705.
totality of the universe from its own point of view. Only in spiritual monads do these vague perceptions approach the region of apperception, that is, the luminous region of clear thought. The process of cognition in experience thus wholly consists in development from the confused to the distinct without passivity strictly so-called and without external acquisition.

In this rationalist conception of cognition, so radically innatist, pure sensation can only be a confused state of an innate idea. The vague perceptions become objective knowledge only through analysis which clarifies the perceptions and makes them distinct. Now analysis is had by making judgments, by the attribution of predicates to a subject. And every true judgment is founded upon the logical identity, whether formal or only

24 For Leibniz, as for Descartes, perceptions and ideas are not essentially distinguished but only gradually differentiated.

35 For Hume experience consists in the systematic coherence of our perceptions of fleeting, discrete, but customarily conjoined phenomena. For Leibniz, again, experience is the harmonious and pre-established development of the monads from vague to ever clearer perception. At the stage of apperception (clear and distinct knowledge), experience reveals the self-evident nature of the innate ideas. These latter are thus said to be a result of experience, even though that experience is purely internal. This experience, though internal, is objectively real for it consists in a representation of the whole universe in accordance with the pre-established harmony between substances. Human knowledge is thus at once a priori and a posteriori, innate and experiential! Latta, 126.
virtual, of the predicate with the subject. Even in empirical
(Leibniz calls them contingent) judgments, an intellect which
could penetrate to the bottom of the logical subject would see
there the predicate.

The logical identity of all true judgments, even of
those concerning contingent "truths of fact," points to the first
of the two fundamental and irreducible principles of the Leibni-
cean logic. This is the principle of contradiction; whatever
upon analysis implies a contradiction in its denial is true. But
since, in the case of contingent truths of fact, only the infinite
analysis possible to God can show the denial of the proposition
to involve a contradiction, another principle is necessary, the
principle of sufficient reason. It may be noted that the root
meaning of Leibniz' principle of sufficient reason is to be found
in the logical postulate from which his whole philosophy follows
as a corollary: every true proposition is either formally or vir-
tually identical, that is, every true proposition must in itself

36 Thus all true propositions are for Leibniz funda-
mentally analytic. Every predicate is somehow contained in the
subject.

37 "Veritates contingentes infinita Dei analysis indi-
gent, quam solus Deus transire potest. Unde ab ipso solo a priori
as certe cognoscentur . . . Talesque sunt omnes quas voco verita-
tes facti." De Scientia Universalis, seu Calculo Philosophicus,
Erdmann, I, 83. See also Latta, 60-61 and note on page 60.
be demonstrable by a reduction to a formally identical proposition. The principle of sufficient reason affirms this rightful reductibility.\(^{38}\)

Each of these two principles is concerned with a special kind of truth. In those cases where the truth follows from the law of contradiction, we have necessary truths of reason. These truths are expressible in analytical propositions. In those cases where the truth does not so follow and, in fact, the opposite, as far as finite intelligences are concerned, is possible, we have contingent truths of fact. They are expressible only in propositions which Kant was to call synthetical.

The exigency of our assent to contingent truths is explained by the principle of sufficient reason. Every object known must have its intelligible reason, its rational justification. This rational justification of the attributes of any subject is the essence from which they emanate. If this essence is the infinite essence, it is its own justification. For God is identically the plenitude of essence and of existence. If it is a created essence, then its sufficient reason, both as regards its possibility as this or that type of essence and its actual realization through existence, must ultimately be sought in an

exemplary and efficient cause. This cause is no creature for according to Leibniz there is no transitive causality among finite monads. The sufficient reason lies in the universal cause, God, who willed that out of all the logically possible worlds, the best one should exist. Actually existing finite beings and their states or attributes, e.g., that I am sitting now instead of standing, are what they are not because their opposite is self-contradictory, but because anything different would be incompatible with the goodness and wisdom of the deity. In another world system of possibilities—a system which has not been chosen by God because it was not the best possible one—I may have been standing now instead of sitting. But in the world which God did

---

39 Leibniz, Origination of Things, Latta, 344. Marshéchal points out a serious difficulty involved in the relation between the Leibnizian principles of contradiction and of sufficient reason. On the one hand, no object is a rational object except in so far as it is identical with itself or not intrinsically contradictory. On the other hand, no object is a rational object except for its sufficient reason. But in finite objects, these two rational exigencies exclude one another since the sufficient reason of a finite essence is extrinsic to it. The logical conclusion, then, is that either every finite object is essentially unintelligible and irrational, in opposition to the general postulate of rationalism that the order of being and that of thought are parallel; or that the sufficient reason is fundamentally identified with the finite object. In the latter case, the rationalist postulate would be safe but the question arises whether Spinoza's monism would not be the result. See Point de Départ, II, 23-26.

40 This Leibnizian doctrine of optimism involves that of composibility, that is, in the best possible world demanded by God's wisdom all the best possible essences which can exist side by side must necessarily exist. See Monadology, nos. 53-55, Latta, 247-248.
as a matter of fact create, His goodness and wisdom demand that I be sitting here and now. Thus the world is ultimately and essentially a system of final causes, a system which is the expression of an all-powerful Will which knows and decrees the best.

A further discussion of the relation of the possible to the actual and of the sufficient reason of essences and of acts of existence will throw more light on the preceding matter as well as introduce the Leibnizian doctrine of causality.

The possible for Leibniz is that which does not imply a contradiction when it is conceived by the mind. In God, this possibility, being that of a necessarily existing being, includes necessary existence. As regards other beings, the infinite perfection of the divine essence demands that everything which is not intrinsically contradictory and extrinsically contradictory (through lack of compossibility) be a possible term of the crea-

---

41 Latta, 107. See Russell, Philosophy of Leibniz, 34: "The law of sufficient reason, as applied to actual existents, reduces itself definitely to the assertion of final causes... In order to infer actual existence... the notion of the good must always be employed."

Latta, 238, note 59, points out an inconsistency which arises regarding the inter-relation of Leibniz' two fundamental principles. Contingent beings are said to demand an efficient cause as their sufficient reason. Then Leibniz speaks of the sufficient reason as lying in the order of final causes. Apparently, the efficient and final cause combined make up the sufficient reason. Neither is enough by itself.
tive act. 42 Otherwise something extrinsic to God would hold the
divine omnipotence in check. The divine essence is thus the
fundament, the Grund, of the possibility of every finite object
which is not logically self-contradictory.

What is the relation of these possible finite essences
to actual existence? Unlike God, they do not of themselves
involve necessary and actual existence. Why, then, do they exist
in place of an eternal void? 43

The sufficient reason for the existence of finite
beings is, according to Leibniz, the creative will of God. But
the activity of the divine will must also have a sufficient
reason. This reason is nothing other than the exigency for
existence which is the property of every possible being or essence.

We must observe that from the very fact that there

42 Latta, 243, note 75, calls the relation of God to
the other monads "the crux of Leibniz' philosophy." Leibniz wished
to maintain both the individuality of the monads and the essential
unity of dependent creatures with God. Thus he speaks of the mo-
nads as being "continual fulgurations" of the divinity (Monado-
logy, no. 47, Latta, 243). These fulgurations are apparently a
middle term between creation and emanation. A fulguration may be
described as a possible essence tending to realize itself in
actual existence, yet requiring the will of God to set it free
from the counter-acting influences of opposite possibilities.
Given God's choice, the existence of the monad arises solely from
the liberating of its essential activities. This echo of the
ease essentiae theory and a lack of a doctrine of analogy con-
tribute to Leibniz' problem.

43 We have already seen that their existence as this
or that particular type of essence is due to the doctrines of
optimism and compositibility.
exists something rather than nothing, it follows that in possible things, or in possibility or essence itself, there is a certain need of existence or, so to speak, a claim to exist; in a word, that essence of itself tends to existence.44

According to Maréchal45 the passage means that the world, considered in itself, can without contradiction be thought as not existing; and that the divine power, also considered in itself, is free to create or not to create. But the passage also means that the world, considered in relation to the divine perfection, demands existence. For the infinite wisdom of God, proposing to itself the greatest good, cannot remain indifferent to the act of creating.

For although the world is not metaphysically necessary, so that its opposite involves a contradiction or logical absurdity, it is nevertheless physically necessary or so determined that its opposite involves imperfection or moral absurdity. And as possibility is the principle of essence, so perfection or degree of essence (through which more things are composable the greater it is) is the principle of existence.46

---

44 Erdmann, I, 147; Latta, 340. The latter points out that possibility or potentiality is never an empty capacity for Leibniz. It is always, in however small a degree, a tendency to realization, which is kept back only by other similar tendencies. Optimism and compossibility are the principles according to which God decides what tendencies are to be actualized. Latta, 240, notes 64 and 67.

45 Point de Départ, III, 26.

46 Erdmann, I, 148; Latta, 342. See also the Monadology, nos. 53 and 54, Latta, 247 and note 85.
An infinitely wise being, then, seeing that combination of possibilities which constitutes the best of all possible worlds, necessarily creates that universe as a consequence of His wisdom and not because of a lack of liberty. By means of this conceptual bridge, Leibniz passes by pure a priori thinking from the logically possible to the actually existing. Pure logical thinking becomes an instrument whereby ultimate reality can be defined in a valid manner.\(^47\) It uncovers to us what no experience can reveal, the wider universe which exists eternally in the mind of God. Pure thought is essentially speculative and metaphysical.

Turning to the rationalist doctrine of causality, we can see from the preceding pages why rationalists in general tried to make causality a sub-species of the logical relation between ground and consequent. It was only natural for a philosophy which inherited such Cartesian problems as the mind-body relation and which stressed the rationality of the real to turn to the logic of the possibles in order to find there some parallel to

\(^{47}\) See the passage in Hume's *Enquiry* where he depicts a belief, false as far as Hume himself is concerned, but the truth for Leibniz: "Nothing . . . may seem more unbounded than the thought of man, which not only escapes all human power and authority, but is not even restrained within the limits of nature and reality . . . What never was seen, or heard of, may yet be conceived; nor is anything beyond the power of thought, except what implies an absolute contradiction." *Enquiry*, II, 15.
the world of actual existence.

Thus Leibniz, though he cannot be accused of the excessive rationalistic formalism of Wolff, ultimately founded the causal concept upon a real connection, not among the mutually independent and self-fulfilling monads, but among the thoughts of God. The testimony of experience notwithstanding, my will-act is not really the cause of the elevation of my arm. By a harmony pre-established from eternity by God among the best possible beings, the two activities are synchronized without any real connection. 

As for the causal principle, Leibniz, writing to Des Bosses, says that a power of determining oneself without any cause implies a contradiction. In another letter to De Volder, he says that to conceive the essence of a substance, "we require the conception of a possible cause; to conceive its existence we

48 "We may indeed say that although this body may not be an efficient physical cause of these effects, its idea is at least, so to speak, their final, or, if you like, archetypal cause in the understanding of God . . . in an ultimate analysis, the agreement of all the phenomena of the various substances comes only from this, that they are all productions of one and the same cause, to wit, God." Letter to Arnauld, Die Philosophische Schriften von G.W. Leibniz, edited by C.G. Gerhardt, Berlin, 1875-1890, II, 68.

49 Gerhardt, II, 426.
require the conception of an actual cause." Now it is a fundamental doctrine of Leibniz' philosophy that all the predicates of a subject must be included in the notion of that subject. If, then, to conceive any actually existing finite object, we must conceive its cause, the causal principle is necessarily analytic.

After Leibniz, Wolff deserves mention since it was in his philosophy that Kant was educated. The Wolffian philosophy, though modelled on that of Leibniz, toned down or eliminated the most original and striking suggestions of the latter, like the doctrine of the pre-established harmony. Wolff defined cause as "principium actualitatis" with "principium" understood as logical ground. He explained particular causes as those things from which the effects might be logically deduced. He allowed the pre-established harmony to fall into the background, practically confining it to the relation between soul and body, whereas Leibniz had postulated it as true for all the monads. Wolff allowed real interaction between physical objects, at least as a more probable hypothesis. He also attached more importance to the principle of contradiction than to the principle of sufficient reason. He made an attempt to prove the latter from the former by arguing that nothing, since it has no corresponding notion,

50 Gerhardt, II, 225.
51 Christian Wolff, Ontologia, 881.
52 Ibid., 870-880.
cannot be said to cause or account logically for something without contradiction. This is practically the same argument as that used by Locke and has already been discussed. It assumes that a change must be caused. The cause is either something or nothing. Since nothing can be a cause only at the cost of self-contradiction, the argument concludes that something must be the cause. But that a change must be caused is just what the argument was intended to prove.

For Wolff, the notions of sufficient reason (Grund) and of cause (Ursache) are convertible. Echoing Descartes, Wolff thus made God, whose divine essence is its own sufficient reason, causa sui. In all being the logical reason (logischer Grund) is the ontological cause (ontologischer Grund, Ursache) and the cause is the logical reason.

This excessively rationalistic viewpoint was fiercely attacked in a lecture delivered at Koenigsberg by the anti-Wolffian professor, Crusius. Crusius denied the convertibility of the

53 **Ontologia**, 56-70.

54 Hume's refutation seems purely verbal. For nothing to be a cause is the same as saying that there is no cause. Thus if the dilemma read: either change has or has not a cause, Hume would not have found it so easy to refute.

55 If one may judge from Kant's inaugural dissertation at Koenigsberg, the *Nova Dilucidatio*, this lecture of Crusius made a profound impression upon him.
logical reason and the real cause (*Wirklichkeitsggrund*). He main-
tained that the logical reason of an object does not always
express its cause, although knowledge of the cause of the object
necessarily furnishes the logical reason of the object. In
his *Nova Dilucidatio*, Kant would say the same thing when, substit-
tuting for the notion of sufficient reason that of determining
reason, he would distinguish the antecedent determining reason
(ratio *essendi vel fiendi*) from the consequent determining
reason (*ratio cognoscendi*).

And yet, Kant was not a wholly faithful exponent of
Crusius. Though he distinguished cause and logical reason, he
held on to the most fundamental principle of rationalism, the
principle which reduced all rational justification ultimately to
necessary identity. According to Leibniz, as we have seen, the
subject of a true judgment contains in its intelligible notes
something which is both the exigence of the predicate and the
exclusion of the contradictory of the latter. Analysis of the
subject alone can furnish the rational justification of the pre-
dicate. Consequently, the truth of an object supposes necessarily
the identity of this object with its explaining reason, with its

56 See Le Point de Départ, III, 31.

57 Immanuel Kant, *Principiorum Primorum Cognitionis
Metaphysicae Nova Dilucidatio*, *Kant's Schriften*, ed. Koenigliche
Preussische Akademie der Wissenschaften, Berlin, 1902-1908, I, 393. Roman numerals after the word Akademie in following foot-
notes will indicate volumes in the Academy edition of Kant's works.
logical ground. Kant would never abandon this Leibnizian conception of the "pure rational" reduced to the "pure analytic."58
"Omnia nostra ratiocinatio in praedicati cum subjecto, vel in se vel in nexu spectato, identitatem delectendam resolvitur."59

But to maintain that every rational demonstration is had by analysis, or that the logical reason is identified with the object whose ground it is in consciousness, seems to be entirely against the thesis of Crusius, namely, that the cause of an object furnishes its logical reason. In fact, Kant seems to have rejected Crusius altogether a short while later when he said that the cause, i.e., the ontological reason extrinsic to the essence, is not only not convertible with the logical reason, but can never be identified with it. For the logical reason deals with the identity of an object and its explicative reason. A cause, on the other hand, involves the opposition between an effect and its physical principle. A cause is by definition something other—etwas Anderes—than the effect.

This remark60 plus Hume’s argument for the synthetic

---

58 See Maréchal, Le Point de Départ, XIII, 33.
59 Nova Dilucidatio, Academia, I, 391.
60 Maréchal calls it "peut-être même prémise décisive de la philosophie Critique." Point de Départ, XIII, 33. The whole passage in which the remark occurs is significant in view of Kant's later Critical teaching on causality: "I see very well how a consequent is deduced from its ground according to the law of identity, namely, because it is discovered through analysis of
nature of causality eventually led Kant to the perplexing problem of the synthetic a priori. At the time Kant made the remark (1763), he showed that though he was a convinced rationalist who believed in the value and necessity of analysis, he was nevertheless free of the illusion which deceived both Leibniz and Wolff as to the transcendent import of the purely analytic method.

concepts to be contained in the ground. Thus necessity is a ground of immutability, composition a ground of divisibility, infinity a ground of omniscience, etc., and I can clearly understand this bond of union between ground and consequent, since the consequent is really identical with part of the conception of the ground, and inasmuch as it is already contained therein is posited with the ground according to the law of identity. But how something can follow from something else otherwise than in accordance with the law of identity, that is something I should like to have made clear to me. I call the first kind of ground the logical ground, because its relation to the consequent is logical, i.e., can be clearly realized as following from the law of identity; the second kind of ground I call the actual ground, because, while this relation belongs to my true concepts, there is no judgment possible about its nature. Now with regard to this ontological reason (actual ground) and its bond with a real consequent, here is the simple question I ask: how do we know that because one thing is, another thing must be? Negativen Grossen, Akademie II, 202. Italics not in the original.

See pp. 70-72 of the present study where it is shown how Kant's recognition of the fact that the cause was etwas Anderes and his persistent acceptance of the rationalist principle of identity as the sole norm for scientific judgments intensified the problem of the synthetic a priori bequeathed him by his philosophical progenitors, Hume and Leibniz.

61 In its historic context of causality, the problem can be put thus. How can we say that all things must have a cause when no amount of analysis can show that? Besides, Hume has conclusively proved causality to be synthetic. Is the synthesis due merely to customary conjunction, as Hume claimed? Is the vaunted necessity and universality of the principle purely subjective? Or is the causal synthesis objectively validated, i.e., owing to something special about the things we know and the way we know them?
In the preceding pages we have dealt with certain pertinent doctrines of the empiricist and rationalist schools of the eighteenth century. The empiricists maintained that all ideas can be accounted for by sense impressions. The causal concept was thus reduced to the perception of mere succession and the causal principle had no objective universality and necessity. It was founded on an instinctive response, accompanied by a feeling called belief, to the customarily conjoined phenomena of sense experience. The rationalists, while rightly repudiating the principle that all ideas can be accounted for by sense impressions, failed to realize the necessity of the empirical element for any real, as opposed to purely formal, knowledge. In Leibniz' hands, the causal concept and principle became part of a system of possibles where pure thought and its principles held sway. The teaching of Leibniz, profound in certain respects, was exaggerated by Wolff into the formalistic rationalism that Kant was to combat. Not that Kant ever wholly abandoned rationalism. Under Hume's devastating attacks and his own philosophical study, he would yield certain points, such as the analytic nature of the causal principle defended by rationalists. But the constant recurrence of the term "possibility" in his philosophy marks Kant's continued belief in the Leibnizian view of thought. The Critique is itself a criticism of pure reason or pure reason. "The subject of the present inquiry is the question how much
we can hope to achieve by reason, when all the material and assistance of experience are taken away. Obviously that is possible only by means of an a priori, purely conceptual method. But Kant departs from the extreme rationalist position when he denies that pure thought by itself amounts to knowledge. Yet Kant insists, as will be pointed out in the following chapter, that only through pure thought is knowledge possible at all.

Hume and Leibniz are thus the two protagonists that dwarf all others on the eighteenth century philosophical stage prior to Kant. Their competing claims were the cue for the latter's entrance. Each maintained his view of the function of thought. Thought, claimed Hume, is a practical instrument for the convenient interpretation of our human experience. It has no objective or metaphysical validity. Thought, insisted Leibniz, legislates universally, revealing the wider universe of the eternally possible and, prior to all experience, determining the fundamental conditions to which that experience must conform. In logical terms, Hume held that a fundamental principle of experience like causality is a synthetic judgment in which no necessary connection between subject and predicate is discoverable and which consequently cannot be justified either a priori or by

62 Critique, A xiv (11). The letters A and B in future references to the Critique will indicate the first and second editions respectively of the Critique. The numbers in parentheses give the pages in N.K. Smith's translation.
experience. Leibniz held that such principles are analytic, either formally or at least virtually founded on the identity of subject and predicate. They can therefore be justified by pure thought.

The problem of Kant's Critique, broadly stated, consists in the examination and critical estimate of these two opposed views . . . Arationalist by education, temperament, and conviction, Kant's problem was to reconcile Leibniz' view of the function of thought with Hume's proof of the synthetic character of the causal principle. He strives to determine how much of Leibniz' belief in the legislative power of pure thought can be retained after full justice has been done to Hume's damaging criticisms. The fundamental principles upon which all experience and all knowledge ultimately rest are synthetic in nature; how is it possible that they should also be a priori? Such is the problem that was Kant's troublesome inheritance from his philosophical progenitors, Hume and Leibniz.

What was Kant's answer to the problem inherited from the two streams of empiricism and rationalism? In the next chapter, we shall see how Kant answered the problem of the synthetic a priori in regard to the prime historical and logical instance of the synthetic a priori, physical causality.

63 Smith, Commentary, xxxiii. Italics in the original. See also ibid., Appendix B, 583-606.
CHAPTER II

PHYSICAL CAUSALITY IN KANT'S CRITIQUE OF PURE REASON

Historically, causality was part of the larger problem of the synthetic a priori which resulted in Kant's mind from the fusion of the Leibnizian view of thought and Hume's analysis of causality. The following pages will therefore briefly trace Kant's reaction to the general problem of the synthetic a priori. Attention will then be focussed on physical causality, the prime historical and logical example of the synthetic a priori. This latter section will be divided into two parts: Kant's treatment of the causal concept or category in the "Transcendental Deduction of the Categories;" then his treatment of the causal principle in the "Second Analogy."

A. THE PROBLEM OF THE SYNTHETIC A PRIORI

Hume awakened Kant from his dogmatic slumber by showing him that the principle of causality is synthetic, not analytic as Leibniz and Wolff had held. Hume further claimed that the only really fruitful judgments are synthetic a posteriori judgments. Analytic judgments are mere tautologies and so of secondary value. They can only clarify the existing content of knowledge,
never extend it.

Whether it was by means of Beattie's criticism or by a rereading of the *Enquiry* ¹ that Kant became acquainted with Hume's argument for the synthetic nature of the principle of causality and the correlative Humean view of thought, that acquaintance came at a significant moment in Kant's philosophical development. As early as 1763, Kant had been seeking ways to free metaphysics from the contradictions with which it was fettered. The famous letter to Marcus Herz, dated February 21, 1772, shows that this independent metaphysical research, predominantly rationalistic in tenor, gradually revealed to Kant a serious difficulty in the rationalist theory of thought. This was the mysterious character

¹ Kant, it is generally argued, could not have been acquainted with Hume's *Treatise*, of which there was as yet no German translation before 1780. Therefore, his references to Hume must refer to the later work, the *Enquiry*, of which Sulzer's translation appeared in 1754-6. Vaihinger (in his *Commentary*, 344) defends the theory that Kant became acquainted with Hume's destructive analysis of the causal principle through Beattie's *Essay on the Nature and Immutability of Truth*, a scathing denunciation of Hume's argument in the *Treatise*. Beattie's essay was translated into German around Easter, 1772, the time when Kant's writings seem to indicate some knowledge of the *Treatise*. Following Vaihinger, Norman Kemp Smith holds that Kant was somehow acquainted, if only through Beattie, with Hume's *Treatise*. But he admits as probable the theory that a rereading of the *Enquiry* in Sulzer's translation or a recalling of its argument suggested to Kant the central problem of the first *Critique*. See Smith, *Commentary*, xxviii.
of a priori knowledge of the independently real. Thus, granted that Hume's empirical analysis of causality and his corresponding theory of thought greatly influenced the development and formulation of Kant's Critical problem—ohne Hume kein Kant—Hume's influence should not be divorced from Kant's own profound questioning and study.3

The letter to Herz clearly shows that Kant arrived by himself at the problem of the objective validity of thought, at least in its first form.4 There Kant speaks of two possible kinds of intelligence, an intellectus archetypus, or creative intellect, on whose intuition things themselves are grounded; and an intellectus ectypus, or passive mind, which derives its conceptual data from the sensuous intuition of things. Our understanding is not the first kind of intelligence since it does not cause the object by representing it. Nor is the object the cause of the intellectual representations. Hence the pure concepts of the understanding, Kant goes on to say, cannot be abstracted from the data of the senses. They have their origin or

2 The basic meaning of the Kantian a priori is that which is independent of experience as regards origin and validity. Its valid criteria are necessity and universality. Its opposite is the empirical. For more on the Kantian a priori, see Smith, Commentary, 54-8; or Paton, Kant's Metaphysics of Experience, I, 74-90.

3 See Alois Riehl, Der Philosophische Kriticismus, Leipzig, second edition, 1908, I, 308; and Augusto Guzzo, Kant Precritico, Turin, 1924, 13.

4 See Smith, Commentary, 46.
source in the soul. Now Kant asks himself the further question, one which he admits he passed over in the *Nova Dilucidatio*:

How can such representations, which refer to an object and yet are not the result of an affection due to that object, be possible? I had maintained that the sense representations represent things as they appear, the intellectual representations things as they are. But how then are these things given to us, if not by the manner in which they affect us? And if such intellectual representations are due to our own inner activity, whence comes the agreement which they are supposed to have with objects, which yet are not their products? How comes it that the axioms of pure reason about these objects agree with the latter, when this agreement has not been in any way assisted by experience?

What right, in other words, have we to think that concepts, which as a priori originate from within, are valid of the independently real?

It should be noted that Kant, despite his doubts and difficulties, never denied the a priori. On the contrary, he was convinced that the growing success of the contemporary physical and mathematical sciences was the result of their a priori nature.

---

5 Written in 1770, this opuscle marks the beginning of Kant's wrestling with the problem of how the subjective conditions of our cognition are related to objective experience.

6 Quoted by Smith, *Commentary*, 220.

7 See the Preface of the second edition of the *Critique*. 
This assurance of the validity of the a priori in science and mathematics led him to investigate its possibility in metaphysics also. Yet that assurance did not remove the question how the a priori was possible.

Swept along by the two streams of his own study of the paradoxical a priori and Hume's argument for the synthetic nature of the causal principle, Kant immediately found himself in yet deeper water. Well could he refer to Hume as rousing him from his dogmatic slumber. Up to then, all synthetic judgments were considered a posteriori, or empirical, while analytical judgments were regarded a priori. Kant's Critical problem arose from the alleged discovery that the a priori and the synthetic do not exclude one another. Not only is a principle like the causal axiom obviously a priori but also, so Hume proved conclusively despite rationalist claims, it is synthetic. For in it there seems to be no connection of any kind between the subject (the conception of an event as something happening in time) and the predicate (the conception of another event preceding it as an originating cause). And yet we do not merely ascribe the predicate to the subject but assert that they are necessarily connected.

But granted that the fundamental principles upon which all experience and all knowledge ultimately rest are synthetic in nature, how can they be a priori also? How explain their apparent-

8 Critique, B 5 (44).
ly contradictory nature? What is that "x," that third something, by which, independently of particular and contingent sense experience which can never give the universality and necessity that characterize the a priori, the synthesis of subject and predicate in a synthetic a priori proposition is achieved? Kant's problem was intensified because he clung to the rationalist principle of identity as the sole norm for scientific judgments, almost at the same time abandoning, as we have seen, the rationalist doctrine that the real cause of an object and the sufficient or logical reason of the object are identical. A cause is by definition something other than its effect, premised Kant. Thus in propositions that involved a causal relation, Kant could not call upon the rationalist principle of identity to explain the connection of subject and predicate. Yet he defended against Hume the real connection between the subject and predicate, even though he could not analyze the connection in the subject. Upon what basis, then, could the subject and predicate be joined in propositions of this sort?

Kant formulated his dilemma in the opuscule On Negative Quantity: "With regard to this ontological reason and its bond with a real consequent, here is the simple question I ask: how do

---

9 This is a fundamental presupposition, never sufficiently examined either by Hume or by Kant. See Smith, Commentary, xxxiii, 27, 599.

10 Critique, A 10-8 14 (51).

11 See Mariechal, Point de Depeart, III, 33.
we know that because one thing is, another thing must be?\textsuperscript{12}

While not agreeing with Hume's conclusion that the linking in the case of causality sprang from an inner habit forged by experience, Kant paid Hume the compliment that he had seen the problem of the synthetid \textit{a priori}, though not in its universality.\textsuperscript{13} Had he done so, he would have immediately recognized that pure mathematics and science validly involve an \textit{a priori} synthesis no less than metaphysics. Certainly "his[Hume's] good sense would have saved him\textsuperscript{14} from denying the possibility of mathematical and physical science. Kant makes use of his own "good sense" and universal grasp of the problem posed by the synthetic \textit{a priori} to examine the \textit{a priori} judgments of mathematics and science, whose validity was for him unquestionable,\textsuperscript{15} to see whether such judgments cannot have a similar validity in metaphysics.

\textsuperscript{12} \textit{Akademie}, II, 202.

\textsuperscript{13} \textit{Critique}, B 20 (55).

\textsuperscript{14} Ibid.

\textsuperscript{15} On this matter of the validity of the synthetic \textit{a priori} in science and mathematics, Kant was perhaps too sanguine and oversimplified the case. Scientists and mathematicians do employ \textit{a priori} methods. But they disagree among themselves as to the import of the \textit{a priori}. Thus, if it is true that "Kant's Critical problem first begins with this presupposition of validity [of the synthetic \textit{a priori} in science and mathematics] and does not exist save through it" (Smith, Commentary, 477), then the more cautious scientific attitude of today takes some of the wind out of Kant's sails.
In the Prolegomena, there occurs another interesting passage in which Kant attributes to Hume a partial insight into the general problem of the synthetic a priori. The passage is worth quoting in full:

How is it possible, says that acute man, that when a concept is given me, I can go beyond it and connect it with another which is not contained in it, in such a manner as if the latter necessarily belonged to the former? Nothing but experience can furnish us with such connections (thus he concluded from the difficulty which he took to be impossibility), and all that vaunted necessity or, what is the same thing, knowledge assumed to be a priori is nothing but a long habit of accepting something as true, and hence of mistaking subjective necessity for objective.

Kant, who held the objective necessity of the synthetic a priori, was all too conscious of the effect of Hume's argument on science and mathematics, no less than on metaphysics. He set out to explain and establish the nature and objective validity of the synthetic a priori, with special reference to causality.

For about twelve years, Kant wrestled with the problem. In 1780, fearful lest an untimely death—he was fifty-six years old—should overtake him in the midst of his labors, he set down in the all too brief period of five to six months the thoughts that had occupied him for more than a decade. Thus was born the *Critique of Pure Reason*.

In the work, Kant develops a complex theory of cognition.

16 Akademie, IV, 277.
in answer to the famous central question: how are synthetic a priori propositions possible? In the Preface he gives an important clue:

Reason has insight only into that which it produces after a plan of its own, and . . . it must not allow itself to be kept, as it were, in nature's leading-strings, but must itself show the way with principles of judgment based upon fixed laws, constraining nature to give answer to questions of reason's own determining . . . Reason, holding in one hand its principles, according to which alone concordant appearances can be admitted as equivalent to laws, and in the other hand the experiment which it has devised in conformity with these principles, must approach nature in order to be taught by it. It must not, however, do so in the character of a pupil who listens to everything that the teacher chooses to say, but of an appointed judge who compels the witnesses to answer questions which he himself has formulated.17

Kant is here concerned with reason in its application to experience. He notes that there is much in all inquiries which cannot be anticipated a priori. "Reason . . . must approach nature in order to be taught by it." Kant thus limits the a priori of extreme rationalists like Wolff. But in so far as reason dictates the question, it also dictates the form of the answer. Reason, Kant suggests, is concerned with the principles or conditions according to which things can be understood. These principles or conditions are not statements about the nature of objects, but principles of the possibility of experience. In other words, reason is not a method of observing objects as they really exist but is directly concerned only with the way we

17 Critique, B xiii (20).
understand objects. Compromising the principles of empiricism and rationalism, Kant says that reason in its speculative or theoretical use is legislative for objects—yes, but only within the domain of possible, i.e., empirical, knowledge. "Thus the order and regularity in the appearances, which we entitle nature, we ourselves introduce. We could never find them in appearances, had not we ourselves, or the nature of our mind, originally set them there."18

This new attitude toward reason is Kant's Copernican Revolution. Copernicus reversed the usual viewpoint on the motion of the heavens by suggesting that the earth moves around the sun and not vice versa. So also Kant proposes to explain the application of the mind's a priori principles to objects by suggesting that objects conform to the mind and not vice versa.19 Echoing his remarks in the letter to Hers, Kant believes that there is a via media between the intellectus actypus, or passive mind, such as the English empiricists had defended, and the intellectus archetypus, or creative mind, of Leibniz. And whereas earlier thinkers had held that by thought we get from how things appear to how they are, Kant holds that we get from how things appear to how they will appear.

18 Critique, A 126 (147). Italicis in the original.
19 Ibid., B xvi (22).
The purpose of the Critique is to apply the Copernican Revolution to metaphysics. Kant hoped in this way to clarify the nature and capacity of the human intellect in its theoretical aspect. 20 He also hoped to show, by a study of the conditions of knowledge, the objective validity of the synthetic a priori principles of knowledge, thus bringing about the construction of an immanent (as opposed to a transcendent) metaphysics. Thus the Critique is not a work on psychology dealing with the manner in which our faculties work. Kant is focussing attention on an epistemological problem: what is it that makes our experience objective, that is, the knowledge of objects independent of ourselves. 21

20 For Kant this aspect of the mind is inferior to its practical or moral aspect. "I have found it necessary to deny knowledge in order to make room for faith." Critique, B xxx (29). Italics in the original. This complete dichotomy between the theoretical and moral aspects of human intellectual activity is one of the roots of Kantian agnosticism. But Marechal believes that this agnosticism can be avoided even within Kant's system and starting from Kant's principles. Such an attempt is Marechal's theory of the final dynamism of the intellect. See Point de Départ, V, 33. Paton also makes much of the relation between the speculative and practical reason: "I believe it is of great importance to recognize that all our willing, and especially our moral willing, is conditioned by thought or reason; but I find it hard to credit that the connection between reason and action is so external as it is commonly described to be . . . It seems that Aristotle was right, whatever his errors of detail, in speaking of ἀρετικὴ γνώση as ἀρετικὸς νοῦς or ἀρετικὴ διὰ νομίμης." In Defence of Reason, London, 1951, 16.

21 Smith believes that even though Kant eliminates as non-essential to the central inquiry of the Critique all psychological questions pertaining to the mental powers, statements as to their constitution are still implied and involved in his epistemological defense of a priori knowledge and ordinary experience. See Commentary, 51.
A brief summary of the theory of knowledge presented in the Critique will show Kant's answer to the problem of the synthetic a priori. 1) In the absence of intellectual intuition, human knowledge presupposes the reception of data. 2) The immediate elements of this sense reception are only crude representations, not as yet objective knowledge. 3) Only the a priori synthesis of these crude representations constitutes them into objects in and for consciousness. This synthesis is effected according to formal conditions of unity, the forms and categories, through the schemata. These latter are transcendental functions of the imagination which mediate the functions of perception and understanding. The categorical synthesis refers the objects or appearances to the supreme condition of unity, the transcendental unity of apperception. This form of self-consciousness (self-

---

22 See the figure on p.137 of this thesis showing the logical elements postulated by Kant for a priori knowledge.

23 The schemata have not as yet been fully evaluated. N.K. Smith, Commentary, 334, declares them to be an unwarranted tertium quid. Ewing, Kant's Treatment of Causality, 61, thinks that the general effect of the schematism is to diminish the importance of the categories. In fact, says Ewing, "It is the schema (not the category), the validity of which is proved in the second Analogy." For Daval, La Metaphysique de Kant, 8, the schematism "constitue bien la clef de toute la philosophie de Kant." For Paton also "the chapter on Schematism is essential to an understanding of the Critical philosophy." Kant's Metaphysic of Experience, II, 21. But he admits the great difficulties involved in following Kant's account of the schematism. Ibid., II, 50.
identity) is the necessary correlate of consciousness of objects. Cogito, ergo res sunt. 24 4) The categories are thus susceptible of a legitimate, objective use in so far as they enter into the constitution of objects of experience. Otherwise, they are empty forms of our understanding, 25 unable of themselves to represent any object whatsoever. 26 5) Besides the categorical synthesis 27 there are certain metacategorical principles of unity, the transcendental Ideas of God, the World, and the Soul. Being above sense experience, these ideas can find no corresponding content. Thus, despite their subjective necessity, 28 they have no objective


25 "Thoughts without content are empty, intuitions without concepts are blind." Critique, A 51, B 75 (93).

26 The Kantian theory of the category, or concept, is a wholly conceptualistic one. Unlike moderate realists on the question of universals, Kant gives the categories no foundation in reality (noumena). They are wholly a priori and the subjective conditions of the knower. Hence Kant's problem of determining how subjective conditions of thought can have objective validity. The only objective validity that he can—and finally does—give them is that belonging to appearances.

27 Paton, Kant's Metaphysic of Experience, II, 44, notes that this is not one of a whole series of syntheses taking place at different times. There is only one synthesis which combines the given manifold in one time and space. But that one synthesis has different aspects and imposes different characteristics on the objects combined.

28 The mind is necessarily impelled to these ideas to complete its synthesis of experience.
use in the theoretical order. 6) Negligence of these Critical rules leads to the "Paralogism," the "Antinomies," and the "Theological Sophistries" of pure reason.

Such was Kant's solution of the problem of the synthetic a priori which Hume's analysis of causality plus Kant's rationalist view of the function and nature of thought created. In an interesting passage of the Prolegomena, Kant evaluates his solution:

This complete (though to its originator unexpected) solution of Hume's problem rescues for the pure concepts of the understanding their a priori origin and for the universal laws of nature their validity as laws of the understanding, yet in such a way as to limit their use to experience, because their possibility depends solely on the reference of the understanding to experience, but with a completely reversed mode of connection which never occurred to Hume--they do not derive from experience, but experience derives from them.29

Nature, in other words, in its universal conformity to law, must be sought in the conditions of the possibility of experience which lie in the sensibility and the understanding.

In this way Kant established rationalism upon a new and altogether novel basis. Like Leibniz, he still believed in and emphasized the importance of the a priori, but now it was an a priori which could not be shown to be more than relative. Hume's argument for the synthetic character of the principle of causality convinced Kant that the a priori has no inherent

29 Akademie, IV, 312.
absolute content from which clues bearing on the supra-sensible can be obtained. It is thus incapable of a Leibnizian independent or metaphysical proof. It is instead relative to an experience which is capable of yielding only appearances. The a priori is as strictly factual as the experience which it conditions.

The significance and scope of this conclusion can hardly be exaggerated . . . With it the main consequences of Kant's Critical teaching are indissolubly bound up. As the principles which lie at the basis of our knowledge are synthetic, they have no intrinsic necessity, and cannot possess the absolute authority ascribed to them by the rationalists. 30

Not induced from, or intuited in, sense experience, these synthetic a priori principles are imposed upon experience by the mind. Although ascribed to human reason, they cannot be shown to be inherently rational in the rationalistic absolutist sense of that term. They can be established only as brute conditions, verifiable in fact, though not demonstrable in pure theory. They are conditions of knowing sense experience. Thus, they apply to the knowledge of appearances and are never legitimately applicable in the deciphering of ultimate reality. Without inherent content, they are valid only within the realm of sense experience where the content is supplied by the manifold of experience. They are consequently useless for the construction of a metaphysical theory of things in themselves. Their necessity, moreover, is extrinsic. They can be postulated only if, and so long as,

---

30 Smith, Commentary, xxxv. Italics in the original.
the occurrence, actual or at least possible, of sense experience is assumed.

Thus far Kant's doctrine in the *Critique of Pure Reason* has been presented as an answer to the general problem of the synthetic *a priori*. The problem must now be delimited to causality, historically and logically the most important example of the synthetic *a priori*. Since Kant's vindication of the principle is based upon the concept or category of cause, the labyrinth of the "Transcendental Deduction of the Categories," where Kant deals with the objective validity of the categories, must first be traversed.31 Ewing and Paton will be our Ariadne.32

B. THE TRANSCENDENTAL DEDUCTION OF THE CATEGORIES

The "Transcendental Deduction of the Categories"33 is

31 Smith, Commentary, xix--xxiv, defends Vaihinger's patch-work theory according to which the "Transcendental Deduction" is a hasty synthesis of manuscripts written at various dates throughout 1769-1780. Hence its contradictions and inconsistencies. Paton strongly denies the theory. See his *In Defense of Reason*, 69-90; and his *Kant's Metaphysic of Experience*, I, 457-498.

32 Ewing, *Kant's Treatment of Causality*, 40-71; Paton, *Kant's Metaphysic of Experience*, I, 457-584. In this thesis, rather than follow the actual order of Kant's arguments as found in either the first or second edition of the *Critique*, the logical order of the argument emerging from both editions will be given.

33 The "Transcendental Deduction" falls under the division of the *Critique* called the "Transcendental Analytic." The sub-title of this division is "Analytic of Conceptions" since it claims to discover and vindicate the validity of the categories. It is distinguished from the "Analytic of Principles," which aims to determine the use of the categories in judgment. More will be said about the latter when the "Second Analogy" is treated.
perhaps the heart of the Critique. This will be seen more clearly if one recalls that the German rationalists and the English empiricists had failed to explain the very possibility of acquiring fresh knowledge as opposed to particular unconnected experiences. Philosophy seemed incapable of anything other than formulating analytic judgments, which were considered nothing more than tautologies, or of inventing synthetic judgments which seemed unjustifiable. Philosophy was blocked by contradictions at every turn and had no glimpse of a method which could provide even a possible chance of progress. Moreover, philosophers failed to supply a rational justification of such fundamental beliefs as the existence of a world independent of the individual consciousness or the principle that every physical change must have a cause. Hume's theory of causality had utterly deflated all such attempts at justification. Even Berkeley's argument for a deity or spirit was without logical justification. That argument also presupposed the principle of causality, a principle proved by Hume to be incapable of demonstration by any known method. How, then, justify the fundamental presuppositions of science and ordinary life? How give some explanation of the undoubted fact that we distinguish between the subjective and the objective, between the sphere of our feelings and ideas and the world of objects? In the universal darkness, Kant's Critique offered a glimmer of hope. It claimed to justify in one stroke the fundamental presuppositions of science and ordinary life and
to discover a totally new method in philosophy, a method by which it would be possible to prove a system of really synthetic a priori principles. Of this method the foundation is the "Transcendental Deduction of the Categories."\(^{34}\)

Kant's main task is to show that a category like that of cause,\(^{35}\) which is a form of synthesis belonging to the pure understanding, has an objective value. This explains experience; nothing else does. For it is the necessary expression of the unity of thought\(^{36}\) in relation to the manifold of sense. Without the category, the manifold could not give rise to the consciousness of the world of objects.\(^{37}\) Without the synthesis effected

---

34 The term "transcendental" is primarily employed by Kant to mean the knowledge of the nature and conditions of our a priori cognition of objects. For secondary meanings of the term, see Smith, Commentary, 74-76.

35 Actually, the pure category pertaining to causality is that of ground and consequent. When the pure category is applied and restricted to its corresponding schema, that of necessary succession, it becomes the schematised category of cause and effect. But Kant generally uses the term for the schematised category even when he refers to the pure category. Thus in the "Metaphysical Deduction," the category derived from the hypothetical form of judgment is called by anticipation, not the category of ground and consequent, but the category of cause and effect. Kant's usage is followed in the greater part of this thesis. In Chapter III, the critique of Kant's doctrine of causality calls for greater precision. For more on this, see Paton, Kant's Metaphysics of Experience, II, 41.

36 Kant has just shown in the "Transcendental Aesthet-"tic" that space and time, the a priori forms of sensibility, are the necessary conditions of intuition and so are objectively valid for appearances. Now he wants to show that the categories are the necessary conditions for thinking the object.

37 "The objective validity of the categories as a priori concepts rests therefore on the fact that, so far as the
by the categories, in other words, the consciousness to which impressions of sense could give rise would be only a scattered and unconnected one. There would be a Humean world of fleeting, isolated impressions in which the so-called knower was himself but a bundle of perceptions.

But a transcendental deduction of the categories presents a problem which was not present in the deduction of the forms necessary for intuition of appearances. The forms of space and time, says Kant, necessarily relate to objects since only through them can objects appear to us in perception. The categories, however, do not represent the conditions under which objects are given in intuition. Now precisely because the categories have nothing to do with an object's being given, there seems to be no reason why given objects should conform to them.

In an interesting passage Kant cites the causal category as an example. It signifies for him the synthesis whereby upon something, A, something quite different, B, is posited according to a rule. Now

It is not manifest a priori why appearances should contain anything of this kind (experiences cannot be cited in its proof, for what has to be established is the objective validity of the concept that is a priori); and it is therefore a priori doubtful whether such a concept be not perhaps altogether empty, and have no object anywhere among appearances.38

form of thought is concerned, through them alone does experience become possible." Critique, B 126 (126). See also A 97 (130).

38 A 90-B 123 (124).
Kant goes on to point out that the regularity among appearances in experience cannot give rise to the causal concept. The concept must either be grounded completely a priori in the understanding, or must be entirely given up as a phantom of the brain.

To the synthesis of cause and effect there belongs a dignity which cannot be empirically expressed, namely, that the effect not only succeeds upon the cause, but that it is posited through it and arises out of it. 39

Kant here falls back on his Humean presupposition that the universality and necessity which characterize the a priori concepts can in no way be explained by recourse to experience. 40 "The unfolding of the experience wherein they are encountered is not their deduction; it is only their illustration." 41

Locke and Hume, continues Kant, failed to appreciate this to the full. Coming upon pure concepts of the understanding in experience, the former deduced them from the experience in which he found them. Through them, he then illogically tried to arrive at knowledge which far transcended experience. Hume, again, did not realize that the understanding itself might by means of these concepts be the author of the experience in which objects were presented to it. Thus he derived the concepts from experience, i.e., from a subjective necessity born of habit, and

39 Critique, A 91-B 124 (125). Italics in the original.

40 Typical statements of this presupposition are: "All necessity, without exception, is grounded in a transcendental condition." A 106 (135). "The concept of a cause involves the character of necessity, which no experience can yield." A 112 (139).

41 A 94-B 126 (136).
declared them totally confined to experience. Like Locke, Hume destroyed the a priori nature of the concepts, thereby contradicting what was for Kant the indisputable presence of the a priori in pure mathematics and general physics.

To Hume, who had spoken of the succession of representations as the only datum in our consciousness of causality, Kant tries to show in the "Transcendental Deduction of the Categories" that: 1) knowledge of succession implies self-identity; 2) knowledge of succession implies knowledge also of objects; 3) self-identity and knowledge of objects likewise imply one another; 4) unity in both depends on necessary laws of connection; and 5) these laws are therefore the indispensable conditions to which all objects of experience must conform.

A discussion of these various points--the fourth and fifth will lead into the "Second Analogy" where they will be fully developed--will bring out Kant's position regarding the objective validity of the causal concept and the universality and necessity of the causal principle.

Awareness of a manifold in time is Kant's primary datum. Kant realizes that no one can seriously doubt whether something exists. The very doubt is something. For Kant, too, there is undoubtedly succession in our cognitive experience. But succes-

---

42 Implied here is the Humean atomic theory of perception as opposed to Gestalt psychology or the scholastic theory of forms.
sion implies plurality, a manifold in time. Consciousness of succession, then, means consciousness of a manifold in time.

Now we cannot be conscious of a manifold in time as such unless we combine and unify in thought the successive contents of consciousness. For this a threefold synthesis is necessary. First, there is the synthesis of apprehension in intuition. It deals with the pure or a priori manifold found in individual spaces and times, i.e., given abc, we are conscious of abc together. Then there is the synthesis of reproduction in imagination. It effects the pure synthesis of the given manifold. For we could not be conscious of abc together if by the time we reached b, we forgot a. Each perception must recall the preceding ones. Hence the need for this second synthesis. The third synthesis is the synthesis of recognition in a concept. In it, the understanding brings the synthesized manifold under a conception.

43 The precise meaning of "manifold in time" is a difficult question. Does it involve consciousness only of physical objects or also the concomitant consciousness of self? Or is it, in keeping with Kant's representationalist (medium quod)position inherited from Descartes, consciousness of a manifold of perceptions succeeding each other in time? This latter view is supported by Ewing as the view upheld "by general consideration both of the text of the transcendental deduction and of the main principles of the critical philosophy." Kant's Treatment of Causality.

44 Critique, A 97 (130).

45 A 99-103 (131-3). This section constitutes the chief part of the "subjective deduction" which was omitted as nonessential in the second edition. The subjective deduction seeks to determine the subjective conditions which are necessary to make knowledge possible. It is to be noted that there are not three syntheses here taking place at different times, but one synthesis with a threefold aspect.
by means of its pure or *a priori* conceptions, the categories.
It would be useless to remember a, if we were not conscious that
it belonged to the same process as b. To go on counting, we must
be aware that the various units belong to a single process, abcd,
etc. This is effected by the third synthesis, with the categories
serving as the principles of unity. This threefold synthesis
shows how all cognition, even if the object of cognition be a
plurality, involves consciousness of a related diversity (unity
in diversity).

In the next step, Kant shows how, to be conscious of
anything as constituted by a relation of diverse elements, we
must be conscious of these elements as united, i.e., they must
be in a single, self-identified consciousness.

The thought that the representations given in intui-
tion one and all belong to me, is therefore equivalent
to the thought that I unite them in one self-conscious-
ness, or can at least so unite them; and although this
thought is not itself the consciousness of the synthesis
of the representations, it presupposes the possibility
of that synthesis. In other words, only in so far as
I can grasp the manifold of the representations in one
consciousness, do I call them one and all mine. For
otherwise I should have as many-colored and diverse a
self as I have representations of which I am conscious
to myself.46

This unity and self-identity amidst the flux of representations
is called by Kant the transcendental unity of apperception. It
is to be noted that this is not the empirical consciousness nor

46 *Critique*, B 134 (154). Italics in the original.
the noumenal ego. It is the purely a priori logical form of the unity of the ego which is required for the unity of experience.47

Thus far, Kant has proved his first point, namely, that knowledge of succession implies self-identity, or the transcendental unity of apperception. He has not as yet mentioned an object of knowledge. This is the second main point of the "Transcendental Deduction" and introduces the so-called objective deduction.48

We have seen how knowledge of succession involves knowledge of a related diversity. Now this knowledge of a related diversity has the note of necessity. For example, the different representations of the changing positions of a ship floating downstream follow a definite and necessary sequence. The representation of position B lower down the stream follows that of position A. Now an object, or the objective, is precisely that which compels us to think about it in a certain way.

The object is viewed as that which prevents our modes of knowledge from being haphazard or arbitrary.

47 B 133 (153): "For the empirical consciousness, which accompanies different representations, is in itself diverse and without relation to the identity of the subject." By the transcendental unity of apperception, again, is meant, not that I merely accompany each representation with consciousness, but that "I conjoin one representation with another, and am conscious of the synthesis of them." Italics in the original. "Apperception" is a term borrowed from Leibniz who used it to designate consciousness of objects and concomitant self-consciousness.

48 Unlike the subjective deduction, the objective deduction deals with objective validity, not with psychological processes.
and which determines them a priori in some definite fashion. For in so far as they are to relate to an object, they must necessarily agree with one another, that is, must possess that unity which constitutes the concept of an object. 49

Kant has thus proved his second point, that knowledge of succession implies knowledge also of objects.

But if knowledge of objects carries with it an element of necessity, then there must be some transcendental condition to explain it. For "all necessity, without exception, is grounded in a transcendental condition." 50 This brings Kant to the proof of the first half of the third major point of the "Transcendental Deduction": knowledge of objects implies self-identity. For the transcendental condition of knowledge of objects is none other than self-identity or transcendental unity of apperception. 51

Knowledge consists in the determinate relation of given representations to an object; and an object is that in the concept of which the manifold of a given intuition is united. Now all unification of representations demands unity of consciousness in the synthesis of them. Consequently it is the unity of consciousness that alone constitutes the relation of representations to an object, and therefore their objective validity and the fact that they

49 A 104-105 (134-135).

50 A 106 (135).

51 Why not some other transcendental condition? Kant would probably reply that, as was shown in the first main part of the deduction, self-identity is the transcendental condition whereby the manifold is not only synthesized through categories but is also recognized as part of one and the same consciousness. In a fleeting, atomic consciousness, there would be no relating of the manifold in time—and so no knowledge of objects.
are modes of knowledge.\textsuperscript{52}

But just as knowledge of objects implies self-identity, so vice versa self-identity implies knowledge of objects. For self-identity is possible only because it is conscious of accompanying given representations and, more importantly, of synthesizing the manifold through the categories for one and the same consciousness. "For this unity of consciousness would be impossible if the mind in knowledge of the manifold could not become conscious of the identity of the function whereby it synthetically combines it in one knowledge."\textsuperscript{53} Of itself, self-identity (like the forms and categories) is an empty and purely formal transcendental condition.\textsuperscript{54} When, then, there exists self-identity, there must also exist the synthesis of a manifold through the categories. But as was shown in the first and second points of the deduction, synthesis of a manifold through the categories involves consciousness of objects. Self-identity thus implies knowledge of objects.

The fourth main point of the deduction, namely, that the

\textsuperscript{52} B 137 (156). Italics in the original. Kant's position in the first edition is not as clear. In A 104 (134) he seems to say that the objective in experience is determined by the non-empirical object. Then in A 106-7 (135-6) he argues that the transcendental unity of apperception accounts for the necessity involved in objectivity. In A 109 (137) he more or less unites the two positions.

\textsuperscript{53} A 108 (136).

\textsuperscript{54} Thus in a later passage Kant speaks of it as "thing that thinks," "a transcendental subject=\textit{X}." A 345-B 403 (331).
unity involved in both our knowledge of objects and in self-
identity depends on necessary laws of connection, follows from
the preceding three and directly brings up causality. For of the
laws of combination or necessary connection, causality is the
most important. Of the several lines of approach possible in this
section\textsuperscript{55} we shall concentrate on the argument which is intro-
duced in the second edition of the "Transcendental Deduction"\textsuperscript{56}
and developed in the "Second Analogy."

The point of the argument is that all judgment\textsuperscript{57} and
cognition imply a distinction between the objective and the sub-
jective. Kant suggests that this objectivity implied in judgment
would be impossible without principles of necessary connection.
Thus in the judgment "bodies are heavy," we do not assert, says
Kant, that that the representations of "body" and "heavy" neces-
sarily belong to one another in the empirical intuition. We

\textsuperscript{55} Ewing, Kant's Treatment of Causality, 53, gives three.

\textsuperscript{56} B 141-2 (158-9).

\textsuperscript{57} In this passage Kant defines judgment as "the
manner in which given modes of knowledge are brought to the
objective unity of apperception." The copula serves the purpose
of distinguishing between objective and subjective unity. He
defines objective unity as "the unity through which all the
manifold given in an intuition is united in a concept of the
object." It must be distinguished from the subjective unity
"through which the manifold of intuition for such [objective]
combination is empirically given." B 139 (157).
assert that they belong to one another "in virtue of the necessary unity of apperception in the synthesis of intuitions, that is, according to principles of the objective determination of all representations." 58

Thus to say "The body is heavy" is not merely to state that the two representations have always been conjoined in my perception, however often that perception is repeated; what we are asserting is that they are combined in the object, no matter what the state of the subject may be. 59

This remark indicates that objectivity implies necessary determination in the knower's experience independently of the representations of the manifold, which are merely the knower's subjective states. Since it foreshadows the "Second Analogy" the final proof of the fourth main point of the deduction must wait until the treatment of the "Second Analogy."

The same is true of the fifth main point: the necessary laws of connection are the indispensable conditions to which all objects of experience must conform. But the direction that Kant's proof will take in the "Second Analogy" can now be pointed out from the following passage in the "Transcendental Deduction of the Categories."

The order and regularity in the appearances which we entitle nature we ourselves introduce. We could never find them in appearances, had not we ourselves, or the nature of our mind, originally set them there.

58 B 142 (159). Italics in the original. Ewing, Kant's Treatment of Causality, 54, says this refers to the three Analogies.

59 B 142 (159). Italics in the original.
For this unity of nature has to be a necessary one, that is, has to be an a priori certain unity of the connection of appearances; and such synthetic unity could not be established a priori if there were not subjective grounds of such unity contained a priori in the original cognitive powers of our mind, and if these subjective conditions, inasmuch as they are the grounds of the possibility of knowing any object whatsoever in experience, were not at the same time objectively valid.60

Kant's answer in the "Second Analogy" to Hume's challenge of causality will be founded precisely on this indispensable objectivating role of the mind in its consciousness of objects.

The vindication of the categories in the "Transcendental Deduction of the Categories" can now be summarized. Starting from the fact that we perceive a succeeding sensible manifold, we find that the thought of objects involves a synthesis of the manifold according to necessary principles, the categories. To deny, therefore, that the manifold is so connected by the categories is implicitly to deny the fact that we apprehend objects. Either accept the only possible61 explanation of the fact or deny the fact. Aut Caesar aut nullus. We can also start from the equally obvious fact that we must be aware of our own identity throughout our apprehension of the sensible manifold. Here again is involved a combination of the manifold according to the categories. Kant believes that he has now established the exis-

60 A 125 (147). Italics in the original. See also B 166-7 (173-4).

61 That Kant's is the only possible solution is of course disputable.
C. THE SECOND ANALOGY

We have dealt with the "Transcendental Deduction of the Categories" at length because it is the basis of the "Second Analogy." This latter section from the viewpoint of logic is as interesting and important as the section just discussed. Historically, it is even more so. For it is Kant's answer to Hume's denial of the objective validity of the causal principle. Hume had maintained that we can never be conscious of anything but mere succession; Kant hopes to prove in the "Second Analogy" that consciousness of succession is only possible through consciousness of a necessity that determines the order of the

62 See A 128 (149).

63 In its clearest meaning the term "analogy" seems to mean the following for Kant. We have in the law of causality something in experience which, though not identical, is parallel with the logical relation of ground-consequent in the hypothetical judgment of formal logic. Thus the connection of reason and consequent in the pure hypothetical judgment, when applied to successive events or changes, appears as their necessary sequence. See A 181-B 224 (212). Paton notes: "Kant is not arguing that because we must be able to judge any object under the form 'if A, then B,' therefore every object must be governed by the law of cause and effect. (Such an argument would be manifestly invalid since the hypothetical form of judgment involves no reference to time.) On the contrary, the hypothetical form of judgment is for him an empty form awaiting an object; and what we now have to prove is that all objects given to us under the forms of space and time must have a characteristic which enables them to be judged by the hypothetical form of judgment. That characteristic is necessary succession, and the proof of necessary succession must be a proof independent of the form of judgment." Kant's Metaphysic of Experience, II, 223.
successive events.

The importance of the "Second Analogy" may be the reason why Kant has so multiplied the proofs. He gives no less than six separate arguments. It seems best, given the limits of the present study, to take up the central argument which Kant gives in the proofs. In the spirit of Paton, an attempt will be here made to present the Kantian argument in as favorable and consistent a light as possible. Inescapable problems, mooted interpretations, presuppositions, alleged contradictions, if mentioned at all, will for the most part be relegated to the footnotes. From these the more important objections will later be resurrected and added to other difficulties in Chapter III.

Paton's comment should be kept in mind throughout the following pages:

Unfortunately there is a real difficulty in understanding some of Kant's statements and a still greater difficulty in understanding the relation of his statements to one another. To unsympathetic critics it may easily seem that he is one of those philosophers who conceal the weakness of their argument under a cloud of words. I believe, on the contrary, that his obscurity is due to the fact that he is struggling with new and difficult thoughts. I believe also that, even if he is in error, there is much in his view that is worthy of serious consideration.

64 The arguments are: 1) B 232-4 (217-19); 2) A 189-194, B 234-239 (219-222); 3) A 194-5, B 239-240 (222-3); 4) A 196-9, B 241-4 (223-5); 5) A 199-201, B 244-46 (225-6); and 6) A 201-2, B 246-7 (226-7). Paton, Kant's Metaphysical of Experience, II, 224, believes that the arguments involve a development of Ideas, whatever may be their dates of composition.

65 Paton, ibid., II, 222.
The starting point of Kant's analysis is our consciousness of an objective order in time. When we apprehend any very large object, such as a house, though we do so by successively perceiving the different parts of it, we never think of regarding these successive perceptions as representing anything successive in the house. On the other hand, when we apprehend successive events in time, such as the successive positions of a ship sailing downstream, we do regard the succession of our perceptions as representing objective succession in what is apprehended. Kant uses these illustrations to make clear the fairly obvious fact that while in certain cases the order of our perceptions is subjectively initiated, in other cases we apprehend the subjective

---

66 A 189-194, B 234-239 (219-222).

67 Paton, Kant's Metaphysics of Experience, II, 239, regards this as a crucial statement on the part of Kant, one which it is "absolutely vital not to misunderstand . . . Kant is not arguing from the observed irreversibility of my sense-perceptions to an objective succession. He is on the contrary arguing from an assumed objective succession to the irreversibility of my sense perceptions. He is not saying that I find I cannot reverse the order of my sense-perceptions, and then conclude that I must be dealing with an objective succession. . . Kant starts with the assumption that we are aware of an objective succession and asserts that, if so, our sense-perceptions must occur in a particular order." See also ibid., 239, note 3: "I am not denying that on Kant's view the irreversibility of our sense-perceptions may entitle us to assert objective succession, if we already assume that we are perceiving objects whose states must be either successive or coexistent. I deny only that such an observed irreversibility can by itself give us necessity." Italics in the original. Prichard, however, disagrees and argues that Kant is proceeding from awareness of the subjective to knowledge of the objective. This is the central matter on which my interpretation differs consistently from Professor Prichard's penetrating analysis." Paton, ibid., II, 272, note 1.
order of our perceptions as corresponding to, and explicable only through, the objective sequence of events. Consequently, Kant feels justified in taking as fact that we can distinguish between subjective and objective succession, i.e., between sequences which imagination can control and sequences which are given independently of us. This fact affords a precise manner of formulating the problem of the "Second Analogy": how is consciousness of objective change, as distinguished from subjective succession, possible?

Formulated thus, the problem demands careful definition of the term "objective."

It is a question for deeper inquiry what the word "object" ought to signify in respect of appearances when these are viewed not in so far as they are (as representations) objects, but only in so far as they stand for an object.

To apply the illustration mentioned on the preceding page, the house as apprehended is not a thing in itself but only an appearance for the mind. What, then, do we mean by the house, as distinguished from our subjective representations of it, when that house is nothing but a complex of representations? The question

68 See A 201 (226).
69 A 190-B 235 (219).
70 A 191-B 236 (220). In a very subjectivist line, Kant seems to equate that which appears in consciousness with the act of being conscious of it: "The appearances, in so far as they are objects of consciousness simply in virtue of being representations, are not in any way distinct from their apprehension." A 190-B 235 (219). Prichard, of course, includes the passage in his attack on
and Kant's answer to it are stated in the subjectivist fashion. To contrast an object with the representations through which we apprehend it is possible only if these representations stand under a rule which necessitates their combination in some one particular way and so distinguishes this particular mode of representations from all others as the only true mode. 71

Kant means that objects and objective succession, being in space and time, are as much in consciousness as are subjective states like feelings and representations. 72 Both are alike objects of consciousness, using the term "objects" in the most general sense as anything present to our consciousness. 73 The difficulty is that if all objects alike are in consciousness, how do we distinguish—that we do distinguish is a fact—the sequence of our subjective feelings from the sequence of real events? The old distinction, that subjective sequences are in the mind, and objective sequences are outside the mind, does not hold. The origin, therefore, of our distinction between the subjectively and the objectively successive must be due in the one case to the

---

Kant's subjectivism. See Chapter III of this thesis. But may there be a groping for a representationalist version of the verbum here? Or is Kant trying to say what scholastic philosophers mean when they say: sensibile in actu est sensus in actu; intelligibile in actu est intellectus in actu?

71 A 191-B 236 (220).
72 See A 197-B 242 (224).
73 See page 87 of this thesis.
presence of a rule compelling us to combine the events in some particular order, and in the other to the absence of such a rule. The mind, far from simply analyzing what is already given in our knowledge of objects, as rationalists claimed, must make that knowledge of objects possible. Application of a rule is the method. Apart from such a rule we would never distinguish objective from subjective sequences at all. At most, we would have a play of representations which come and go.\(^7\)\(^4\) We would have no knowledge of objects as connected in time.

Our apprehension of the house, for example, may proceed in any order, from the roof downward or vice versa. Since the order may always be reversed, the mind is not compelled to regard the order of its apprehension as representing objective sequence. In our apprehension of an event B in time, however, the representation of B follows upon the representation of a previous event, A. We cannot reverse the order. The mind is compelled to view the order of succession as necessitated, and therefore as objective.\(^7\)\(^5\)

But is there not here merely a necessary order of representations? No, for not only would that be a contradiction

\(^7\)\(^4\) A 262 - B 247 (227).

\(^7\)\(^5\) Paton considers the proposition that objective succession must be necessary succession as "the inner core of Kant's argument." Kant's Metaphysic of Experience, II, 273. See also ibid., 292.
for Kant (the purely subjective would be objective because objectivity, Kant has just shown, implies necessity), but also it was shown above that representations following a definite order stand under a rule which distinguishes this particular mode of representations from all others as the only true mode. In other words, since events A and B are only appearances to us, they are in this case identical with the representations of A and B. Such an identification would, of course, be impossible if A and B were considered things in themselves. Kant readily admits this.

Kant's argument here, it should be noted, bears a resemblance to an argument already seen in the discussion of the "Transcendental Deduction." There he asserted that when we have knowledge of an object, necessity is always implied. The object is regarded as that which prevents our cognitions from being arbitrary or which imposes upon our cognitions a necessary synthetic unity. He then argued that we are concerned only with our own representations and that the concept of the object is simply the concept of the necessary synthetic unity of representations, a unity which has for its necessary transcendental condition the transcendental unity of apperception acting through

76 "The succession of perceptions and the succession of events are in this case not two successions, but only one. I can see no other way of interpreting the argument." Paton, Kant's Metaphysic of Experience, II, 264. Prichard disagrees. See Ch. III.

77 A 190-B 235 (220).

78 See page 40.
the categories.\textsuperscript{79}

Kant would have us believe, then, that the order of A and B is a necessary order not in the sense that A must always precede B, or that A is the cause of B, but that the order, if we are to apprehend it correctly, must in this particular case be conceived as necessary.\textsuperscript{80} In other words, the succession need not be conceived as a causal one, but in order to be conceived as objective succession it must be conceived as rendered necessary by connections that are causal.\textsuperscript{81}

\textsuperscript{79} "In so far as they [our representations] are to relate to an object, they must necessarily agree with one another, that is, must possess that unity which constitutes the concept of an object." A 105 (134). See Paton, \textit{Kant's Metaphysic of Experience}, II, 265.

\textsuperscript{80} Why necessary? "Such thinking may of course be 'obscure'; perhaps we should say that we 'consciously or unconsciously) 'assume' or 'presuppose' B necessarily follows A."

Paton, \textit{ibid.}, 228, note 5. Paton obviously is proposing a solution he himself does not accept. For him, no doubt, B necessarily follows A because apart from our consciousness of it, it simply does not exist (for us). In other words, Kant is concerned with the conditions of experiencing events. This, as will be brought out in the text, involves one common homogeneous time. This time is continuous and irreversible. Now we could not, says Kant, experience events in such a time unless appearances conformed to necessary succession. See A 199-200, B 244-245.

\textsuperscript{81} Though the example presents a difficulty for the Kantian category of causality, we can illustrate the above statement as follows. One event, the lighting of a cigarette, is followed by another, a peal of thunder. Now through experience we learn that the first event is not the cause of the second. Yet we know that the sequence is objective. That can be the only reason for its irreversibility (this is Paton's view, i.e., irreversibility presumes objectivity; Prichard's is: irreversibility proves objectivity. Depending on which view is taken, Kant becomes a phenomenalist or a subjectivist). Being objective, it
Having in this general fashion shown the bearing of Kant's analysis of objective experience upon the problem in hand, we can proceed to develop from it his proof of the principle of causality: all alterations take place in conformity with the law of the connection of cause and effect. The schema of causality is necessary succession in time, and it is through this, its time aspect, that Kant approaches the principle. He will show that

is, on Kant's principles, necessary. As such, its necessity must be due to the schematized category which deals with objective and necessary succession, namely, causality. More will be said about the peculiar nature of Kantian causality in Chapter III.

82 See A 199-201, B 244-246 (225-226). "Kant's doctrine of time forms a strand which runs through his whole discussion . . . but it finds its clearest . . . and its most difficult expression in the special argument which deals with the continuity and irreversibility of time." Paton, Kant's Metaphysic of Experience, II, 273.

The role of time in Kant's doctrine of causality is briefly as follows. Our perception of succession must become a conception of succession because one without the other is no knowledge at all. Now the pure conceptions or categories of the understanding are entirely heterogeneous to empirical intuitions. But in all subsumptions of an object under a conception, the perception of the object must be homogeneous with the conception. In order, then, that the categories can be applied to perceptions, there must exist a third and mediating factor, homogeneous with both. (The phantasm presents a not altogether dissimilar problem for the Thomistic theory of ideation. Its classic solution is the agent intellect). This homogeneous factor is the schema, a generalized form of temporal existence. Time, as a form a priori, is homogeneous with the a priori categories of the understanding. As a form of sensibility, it is homogeneous with the appearances in sense inasmuch as every empirical intuition occurs in time and lasts throughout time. Consequently, a category of the understanding like cause can be applied to appearances through one of these transcendental functions or qualifications of time called schemata. The particular schema involved in causality is that of necessary succession.
a necessary time-order in the appearances is the condition of
a necessary rule of apprehension. 83

To be conscious of change, says Kant, we must be
conscious of an event, that is, of something as happening at a
particular point in time. 84 The change, in other words, must be
dated. It cannot be dated by reference to time in general (time
per se) since we are not conscious of time in general. 85 Time is
not something that can be observed but a form that comes into
knowledge only in relation to known objects. The change, then,

83 Paton, Kant's Metaphysic of Experience, II, 238,
adoits the ambiguity of the phrase "condition of a rule." He
thinks it means the transcendental schema. "It is ... the
transcendental schema of relation [necessary succession is the
schema of relation for causality] which Kant must show to be
present in objects, if he is to prove the truth of the Analogies.
Indeed, he has to show that an object exists as an object only
so far as there are present in it the transcendental schemata." It
is perhaps for this reason that Ewing, Kant's Treatment of
Causality, 61, believes Kant proved universality and necessity,
not of the category, but of the transcendental schema of neces-
sary succession.

84 For Kant an object may be said to exist and so to
be a real or actual object only if it has a determinate position
in one common homogeneous time (and space). The same doctrine
applies to the case of change, or succession, in the object. If
a succession is objective, then the changes must have a deter-
minate position in one common homogeneous time (and space). See
Paton, ibid., II, 273.

85 B 234 (219).
must be dated by reference to other events. In this case the events are preceding ones, in contrast to which the event in question is apprehended as change. But according to the results of our analysis of what constitutes objective experience, the event can be fixed in its position in objective time only if it be conceived as related to the preceding events according to a necessary law. And the law of necessary connection in time is the law of causality. In order, then, that something which has taken place may be apprehended as having occurred, that is, as being an objective change, it must be apprehended as necessarily following upon that which precedes it in time. And since necessary succession in time is the schema of causality, the objective change--any objective change--involves causality. All alterations, then, take place in conformity with the law of the connec-

86 That there must be preceding events is insisted upon by Kant. For otherwise there would be an empty time. But "an event which should follow upon an empty time, that is, a coming to be preceded by no state of things, is as little capable of being apprehended as empty time itself. Every apprehension of an event is therefore a perception that follows upon another perception." A 192-B 237 (221).

87 A 193-B 238 (222).

88 Kant proves the universality and necessity of the causal principle in his system precisely because he limits himself to appearances, i.e., objects which can exist for us in consciousness only if our mental forms have been applied to them. All objective sequences, then, must be causally connected because without the causal category they simply would not be objective sequences.
tion of cause and effect.

Experience itself—in other words, empirical knowledge of appearances—is thus possible only in so far as we subject the succession of appearances, and therefore all alteration, to the law of causality; and, as likewise follows, the appearances, as objects of experience, are themselves possible only in conformity with the law.89

The principle of causality thus conditions consciousness of objective succession. Norman Kemp Smith points out90 that Hume, in asserting that we are conscious of the succession of events, had admitted all that Kant needed to prove the principle of causality as he interpreted it. Kant's contention is that the apprehension of change as change, i.e., a succession of events, presupposes, and is possible only through, an application of the category of causality. The principle of causality is thus applicable to everything experienced, for the sufficient reason that experience is itself possible only in terms of it.91 This conclusion finds its most emphatic and adequate statement in the passage of the Critique entitled "Methodology":

Through concepts of understanding, pure reason does, indeed, establish secure principles, not however directly from concepts alone, but always only indirectly through relation of these concepts to something altogether contingent, namely, possible experience. When such experience (that is, something as object

89 B 234 (239).

90 Commentary, 369-371.

91 Kant's proof of the principle of causality is thus a particular proof for the fourth and fifth main points of the "Transcendental Deduction." See pages 61-64.
of possible experiences) is presupposed, these principles are apodeictically certain; but in themselves, directly, they can never be known a priori. Thus no one can acquire insight into the proposition that everything which happens has a cause, merely from the concepts involved. It is not, therefore, a dogma, although from another point of view, namely, from that of the sole field of its possible employment, that is, experience, it can be proved with complete apodeictic certainty. But though it needs proof, it should be entitled a principle, not a theorem, because it has the peculiar character that it makes possible the very experience which is its own ground of proof, and that in this experience it must always itself be presupposed.

Summarizing Kant's central argument for the objective validity, and hence the universality and necessity, of the principle of causality, we see that it deals with the connection between objectivity and necessity. Kant starts with consciousness of objective sequence in time, a point which he had already established in the "Transcendental Deduction" and which he proved independently, but with special reference to causality, in the "Second Analogy." He then asks how can we be conscious of such sequence and distinguish it from the merely subjective sequence of our perceptions. The distinction cannot lie in the actual order of our representations. For these are always successive, whether they deal with objective or subjective sequences. Yet there must be some distinction, for consciousness of objective sequence as distinguished from purely subjective

---

92 B 765 (592). Italics in the original.
sequence is a fact. On further study we find that whenever we regard two events, A and B, as objectively successive, the order in which we perceive A and B is irreversible. Whatever the subjective factors involved, our experience of A and B must have this order. Since A and B are nothing for us apart from our experience of them, this is the same as saying that A and B are connected by a necessary law of the mind such that under given conditions B can only succeed A and not vice versa.93

In what sense has Kant succeeded in proving causality? In answering this question, we must remember that Kant accepts much of Hume's criticism. The principle that every event must have an antecedent cause is, Kant concedes to Hume, neither intuitively certain nor demonstrable by reasoning from more ultimate truths. It cannot be accounted for by analytic thought. Like all synthetic judgments, it can only be proved by reference to the contingent fact of actual experience. Kant thus admitted that, since the causal connection is synthetic, we can have no a priori insight into the connection between particular causes and effects. But he differed vitally from Hume in that he claimed to prove the general principle of causality whereas Hume held such a proof to be impossible. Universality and necessity simply

93 A and B have a noumenal existence, Kant would say, but the nature of that existence is for us unknown and unknowable. For all practical purposes, then, A and B can be treated wholly from our knowledge of them as appearances, prescinding from their unknown nature as noumena.
could not be explained by experience, Hume had maintained. Kant tried to meet this criticism by showing that while particular experience could not form the basis of the proof of any strictly necessary principle, yet experience in general, i.e., experience considered under the important aspect of experience of an objective order in time, could do so. For what is implied in all our experience must be admitted to be necessary. Without it there could be no experience of the kind we know.

It can no longer be said, as the empiricist does say, that we cannot go beyond the general proposition, that all the events we have known were uniformly sequent; for as no sequence could have been known as uniform apart from the activity of intelligence, some can be known as uniform except in relation to the same activity. 94

Secondly, Kant never attempts to explain the nature and possibility of causal connection from the nature of the events themselves. For him no analysis of effects will show why they must be preceded by causes. 95

Thirdly, the principle of causality, as deduced by Kant and shown to be necessarily involved in all consciousness of necessary sequences, is the quite general principle that every event must have some cause in what precedes it. What the cause may be in each special case can only be discovered through

94 John Watson, Kant and His English Critics, Glasgow, 1881, 225. Italics in the original.

95 See Critique, A 207-B 252 (230). See also Chapter III for the role necessary connection plays in Kant's analysis of causality.
experience or study. These particular causal laws are discovered from experience not by means of the general principle but only in accordance with it. 96

Causality, as proved by Kant, has lost a good deal of the content which it has in ordinary usage. What Kant proves is simply that all succession is necessary—the cause of an event is that event or events on which it succeeds necessarily. He makes no attempt to prove causality in the sense of dynamic activity on the part of the cause or of intrinsic logical connection, but tends to relegate the intrinsic connection or dynamic activity to the noumenal sphere. Cause and ground are very sharply distinguished; the ultimate logical ground of a causal connection is for Kant to be found in the non-temporal. 97

Consideration of these and other points will take up our attention in the following chapter.

96 For difficulties regarding knowledge of particular causal laws in Kant's system, see Chapter III.

97 Ewing, Kant's Treatment of Causality, 102. Smith, Commentary, 374, suggests the so-called phenomenalist view of Kantian causality. According to this view, causality is not a mere analogy of logical relation of ground and consequent. It is the representation of genuinely dynamical activities in the objects apprehended. These objects are part of an independent order which, in the form known to us is a phenomenalist transcript of the deeper reality of the unknown and unknowable thing in itself. But just what it means to have a world which is made up only of appearances that somehow display real efficacy or dynamical causality is hard to see. Smith himself admits—and the concession is generally interpreted as weakening his theory (see Ewing, ibid., 173; Paton, Kant's Metaphysic of Experience, II, 282)—that the view of causality outlined above is only a possible development of Kant's philosophy which receives no quite definite formulation in the Critique.
CHAPTER III

CRITIQUE OF THE KANTIAN DOCTRINE
OF PHYSICAL CAUSALITY

"Contrariwise," continued Tweedleddee, "if it was so, it might be; and if it were so, it would be; but as it isn't, it ain't. That's logic."

Lewis Carroll, Through the Looking Glass

Tweedleddee's attitude toward logic may quite reasonably be one's first reaction to the preceding pages. Lumbering under the weight of its architectonic and the difficult problem with which it is struggling, the Kantian juggernaut presents an overwhelming spectacle. But the following pages will show that the Kantian argument for causality raises theoretical difficulties no less stubborn than those which it attempts to resolve. Perhaps not all involve contradictions. But they do point up inconsistencies or ambiguities which it is the duty of those who support Kant to resolve or to explain. These difficulties will be treated under two headings, Kant's subjectivism and Kant's phenomenalism.

A. KANT'S SUBJECTIVISM

Among the difficulties under which Kant's doctrine of
the causal concept and principle labors, one of the chief is its more than occasional subjectivism. This subjectivism plagues Kant even in the second edition of the Critique, written precisely to counter-attack the charges of idealism hurled against the first edition. This subjectivism caused Kant to develop a twofold view of that most paradoxical element in the Kantian system: the object of knowledge, i.e., the phenomenal object (appearances) present in consciousness. When the subjectivist tendency is in the ascendant, he regards all appearances, all empirical objects, as representations or modifications of the sensibility. These modifications are merely subjective. When, on the other hand, his thinking is dominated by the phenomenalist tendency, appearances seem to gain an existence independent of the individual mind.¹

The roots of Kant's subjectivism lay in certain unwarranted presuppositions which Kant borrowed from the age. First, there was his representationalism, according to which ideas and perceptions, not things, were held to be the immediate object of knowledge. Knowledge is viewed as a process entirely internal to the individual mind, and as carrying us further only in virtue of some additional supervening process, inferential, conjectural,

¹ See Smith, Commentary, 83. Paton, Kant's Metaphysic of Experience, I, 583, prefers to call the two tendencies "transcendental idealism" and "empirical realism."
or instinctive. From the subjectivist, representationalist point of view, the various synthetic activities described in the preceding pages often seem to be nothing less than the cognitive processes of the individual mind. The given manifold consists of the sensations aroused by material bodies acting upon the special senses. Part and parcel, of course, of this denial of the mind's intentionality is the Lockeian presupposition of the unintelligibility of real substance. This, again, was due to the presupposition of sensism, namely, that everything had to be known formally by the senses. A fourth presupposition was the atomic theory of sensation (in contrast to the Gestalt theory or the scholastic theory of forms). According to this theory, objects are to be viewed as compounds of succeeding representations, each of which has its place in a temporal sequence. The spatial world which we come to know consists in a multiplicity of related elements. The isolated data of sensation consequently have to be combined somehow and unified, if we are to know the world.

Owing to these presuppositions, Kant got on the subjectivist tack that so imperils his causal doctrine. In his doctrine of inner sense, for example, Kant-formulates his position


3 This doctrine plays an important role in Kant's causal doctrine since it involves the schema of necessary succession
from the extreme subjectivist point of view. He does not draw any distinction between representation and its object, between inner states of the self, and appearances in space. All representations without exception, he says, are states of the inner sense, modifications of the mind. Some exist only in time, some exist both in space and in time. But all alike are modes of the identical self, mere representations (blosse Vorstellungen).

Though appearances may exist outside one another in space, space itself exists only as representation "in us." But if space is in us and if appearances are in space, then appearances must also be in us. Previously, in treating space, Kant said that "what we call outer objects are nothing but mere representations of our sensibility, the form of which is space."^5

In an interesting and important section on "Appearance and Illusion" (Erscheinung and Schein)^6 difficulties rise once again from Kant's subjectivism. "It would be my own fault, if out of that which I ought to reckon as appearance, I made mere illusion."^7 Well and good. But how distinguish the two? What we predicate of appearances, Kant answers, can be ascribed to the object itself. Thus when we say that a rose is red, we ascribe

---

4 A 128-129 (148-149).
5 A 30 (73).
6 B 69-70 (88-89).
7 B 69 (89).
What is illusory can never be ascribed as predicate to an object for the sufficient reason that we then attribute to the object, taken by itself, what belongs to it only in relation to the senses, or in general to the subject, for instance the two handles which were formerly ascribed to Saturn.

While redness, then, can be ascribed to the rose and is a genuine appearance, the two handles which Galileo attributed to Saturn, or the roundness of a distant tower, the curve on a straight stick in water are mere illusions. Yet is it not true that in a certain position Saturn necessarily appears as possessing two handles? A square tower viewed from afar must look round. A stick in water cannot but appear bent. If Kant still insists that these are not appearances, then his only distinction between appearances and illusion seems to be relative to the varying nature of the conditions under which observation takes place. If the stick, for example, is removed from the water, the empirical object will appear more in harmony with experience. If the mode of observation is all that distinguishes illusions and appearances, then Kant hardly answers the criticisms he here professes to meet.

8 B 69 (89), note.

9 But if such is the case, a science like astronomy or chemistry deals only with illusions. For the telescope in the one and the microscope in the other certainly modify the ordinary perceptions of the senses.

10 His critics objected that if bodies in space are representations existing only within us, as Kant so often asserts, their appearing to exist outside us is a complete illusion.
In the very heart of the Critique, the "Transcendental Deduction of the Categories," the argument is weakened by subjectivism. There is the passage:

When we consider that this nature is not a thing in itself but is merely an aggregate of appearances, so many representations of the mind, we shall not be surprised that we can discover it only in the radical faculty of all our knowledge, namely, in transcendental apperception, in that unity on account of which alone it can be entitled object of all possible experience, that is, nature.11

This subjectivism is not confined to the first edition of the Critique. No less a commentator than Smith admits this, though he minimizes its importance by insisting that "an alternative view more and more comes to the front in proportion as Kant gains mastery over the conflicting tendencies that go to constitute his new Critical teaching."12

And yet, even though the second edition was to have been a revision of certain idealistically tinged expressions in the first, the subjectivist tendency finds expression in very important sections. Thus in Section 16 of the "Transcendental Deduction,"13 a section which contains perhaps the most essential part of the Deduction, the word "representation" (Vorstellungen) occurs constantly, "object" (Object) never, Gegenstand only once.

11 A 114 (140). Italics not in the original. See also A 104 (134) and A 109 (137).

12 Commentary, 295.

13 B 132-136 (152-155).
and then only in the remark that combination (Verbindung) cannot be given in the objects (liegt nicht in den Gegenstanden) but must be contributed by the understanding.14

Smith attempts to minimize even more the subjectivist tendency by saying that Kant interpreted subjectivity in an entirely new way. Unlike Descartes and his followers, Kant did not oppose the subjective to the objective, but made it a subspecies within the objective. For subjectivity could be an object of knowledge (the data of inner sense, for example) and in this way it was "objective." Whereas Descartes had a dualism of objective and subjective, Kant has one of appearance (both subjective and objective, i.e., pertaining either to the empirical ego or to "nature") and reality.

All subjectivist modes of stating the problem of knowledge, such as we find in Hume and in Leibniz no less than in Descartes, Locke, and Berkeley, are, Kant finally concluded, illegitimate and question-begging. Our so-called subjective states, whether they be sensations, feelings, or desires, are objective in the sense that they are objects for consciousness.15

Smith believes this to be a striking element of Kant's revolution in the theory of knowledge.16

However, there are severe objections to the benign interpretation of Smith. Prichard maintains17 that Kant's

14 B 134 (153).
15 Commentary, xlvi. Italics in the original.
16 Ibid., 313.
17 Kant's Theory of Knowledge, 209, 233, 281-296.
subjectivism has led him to prove causality, not even of the appearances (phenomenal objects) of which he wished to prove it, but of representations solely. The same representations are related both as physical and as psychical events, i.e., as our representations or apprehensions and as parts of the objects represented.\textsuperscript{18}

Yet there may be a way of extricating Kant from this difficulty. If the phenomenal world is only an appearance to human minds, why should it be impossible that a succession of states in a phenomenal object should also be a succession of ideas in my mind? This would obviously be impossible in a philosophy which claimed to know things in themselves. But that is precisely what Kant disclaims. Then, too, a representation need not be considered as the act of apprehending. It may be that Kant is concerned only with the content of the representations. This interpretation would seem to fit in with Kant's insistence that he is primarily interested in the logical elements necessary for knowledge of objects, not the psychological process. According to this interpretation, a representation would be an event in the knower's mental history and an event in the world

\textsuperscript{18} "The appearances, in so far as they are objects of consciousness simply in virtue of being representations, are not in any way distinct from their apprehension." A 190-B 235 (219). See Paton, \textit{Kant's Metaphysic of Experience}, II, 266: "To some this may seem sufficient ground for rejecting his whole theory, but we must ask ourselves whether such a theory is self-contradictory or impossible."
known to him. Dreams, again, though their content would be part of a mental history, would be excluded from the world of appearances. For they would not fit into the necessary succession of contents which for us constitutes the objective world. But this interpretation is only an attempt to parry what seems to be a decisive thrust against Kant, at least against his subjectivist tendency.

Prichard aims another such thrust at the main principles of the "Transcendental Deduction." His criticisms are noteworthy, if limited to particular points of Kant's philosophy. But Prichard may well be neglecting certain features of knowledge rediscovered and emphasized by Kant in the uncongenial atmosphere of eighteenth century rationalism and empiricism. These features can be of great importance for modern epistemology. Thus in the next few pages we shall briefly present Prichard's views, then weigh them against those of Kant's profound scholastic interpreter, Joseph Marechal.

Analyzing the main principles of the "Transcendental Deduction," Prichard concludes that though Kant is attempting to formulate the nature of knowledge, what he describes is not knowledge. For knowledge, according to Kant, consists in an

---

20 *Kant's Theory of Knowledge*, 230.
activity of the mind whereby it combines the manifold of sense on certain principles and is to some extent aware that it does so. By these principles, the mind gives the manifold relation to an object. The two leading thoughts underlying the view are thus: first, knowledge is a process by which representations acquire relation to an object; and secondly, knowledge is a process of synthesis.

Now, says Prichard, to speak of a process by which representations acquire relation to an object has no meaning other than this that an apprehension becomes the apprehension of an object.21 But how can this be? Apprehension is essentially relative. From the very beginning it involves something which is apprehended. Thus an apprehension which is not an apprehension of something is no apprehension. Therefore, it is meaningless to speak of a process by which an apprehension becomes the apprehension of an object.22

21 Kant's Theory of Knowledge, 230.

22 Ibid. See also ibid., 231-233, for Prichard's criticism of the proposal that for Kant a representation is the representation of something only from the point of view of the thing in itself. Much of the criticism is based on Prichard's basic contention that appearances are nothing else than purely subjective states or mental modifications which Kant tries somehow to objectivate. See Paton, Kant's Metaphysics of Experience, II, 272, note 1: "This psychologism is the central matter on which my interpretation differs consistently from Professor Prichard's penetrating analysis in Kant's Theory of Knowledge. He interprets Kant as explaining how experience of the objective comes to be, and I entirely accept his criticism of the view he ascribes to Kant, but I do not believe that what he is here attacking is Kant's view."
As for knowledge regarded as a process of synthesis, Prichard continues, this only identifies knowing with making. Knowledge becomes the process of constructing the physical world out of the elements given in perception. Kant naturally rejoices, Prichard adds, in the manufacture because it is just this which makes the categories valid. For if knowing is really making, the principles of synthesis must apply to the "reality" known. It is by these very principles that the reality is made.

But knowing, argues Prichard, is not to be equated with making. The very nature of knowing presupposes that the thing known is already made, or, to speak more accurately, already exists. Even if the reality known happens to be something we make, e.g., a house, the knowing of the house is distinct from the making of it. Music and poetry are undoubtedly realities which are in some sense made or composed. But here also the apprehension of them is distinct from and presupposes the process by which they are composed.

23 Kant's Theory of Knowledge, 233.

24 True, its physical existence is already completed. But may there not be the construction of an intentional counterpart in cognition? See the following pages for Maréchal's views.

25 If knowing is so obviously different from making, why did Kant apparently feel no difficulty in reducing knowledge to making? Prichard, ibid., 238-242, gives as the reasons: 1) his belief that we do something when we think; 2) his position that we cannot know reality made him think that we can construct appearances of it; 3) Kant failed to distinguish knowing from the formation of the mental imagery which accompanies knowing.
At this point, Maréchal's interpretation of Kant may throw some light on the question at issue. Maréchal, though he admits Kant's subjectivist tendency, sees in the Kantian theory of knowledge an attempt to trace the immanent and objectivating activity of cognition. True, Kant fluctuated between ascribing this activity to sense intuition of the manifold (ultimately the thing in itself, that bête noire for Becker, Fichte, and others who dared go beyond the master) or to the intellectual spontaneity of the knower. Still, Maréchal believes, the attempt was there. He even finds parallels in the Thomistic theory of cognition.

According to Maréchal, the activity involved in cognition exercises itself through or upon the sensible representation and brings to it something not exclusively of the concrete sensible, something which enters into a synthesis with the purely sensible diversity. The product of this cooperation of sense and intellect is an immanent construction constructed from the sensible data by some original intellectual principle, call it an a priori form or a forma universalis. This immanent object, however, is not to be confused with the object known, or signified.

26 Point de Départ, IV, 106.
27 Ibid., IV, 101-112.
28 Ibid., V, 386-387, 479-487.
29 Ibid., V, 480.
The two are related but not convertible. 30

Maréchal then asks himself the obvious question. In this vital communion of subject and object, what is the object known, the id quod cognoscitur? His answer recalls the argument he used in a preceding chapter. 31 Let us say that by the object known we mean all the elements of objective cognition, implicit and explicit, which the knower can recall by or in the cognitive synthesis that takes place within him. In that case, the comprehension (l'ampleur) of the object known will reach out as far as the external singular object which originated the synthetic process and which became its first conscious term. But if we understand by the object known this first term itself (the object explicitly apprehended in the direct act of cognition), it is then necessary to say that the object known, the id quod, is nothing other than the concrete object offered by the sense. But

30 "Dans une intelligence discursive, l'objet immanent (le cognoscibile in actu) n'est formellement connu qu'à la reflexion; il est la condition prochaine (id quo), non l'objet primitif (id quod), de la connaissance. C'est l'objet immanent (et pas son id quod) qui est déclaré par Aristote et par S. Thomas, non moins que par Kant, synthétique, construit. Il appartient à la phase vitale, préconsciente, sensitivo-rationelle, assimilante, de l'intellection; et la vie d'une intelligence assimilatrice est nécessairement synthèse d'éléments acquis." Point de Départ, V, 461, Italics not in the original.

31 Ibid., V, 439-468.
this object has already been operated on by a higher element
(déjà saisi de plus haut). It has been posited objectively
and seen in the light of a universal (vu à travers un universel)
which cognition does not at first distinguish from the sensible
representation in which the universal is individualized.

Direct intellection thus furnishes the mind only with
a physical object, corresponding to the material content of the
immanent intelligible object. When reflection has begun, the
metaphysical object begins to take shape under the transcendent-
tal aspects of being, the true, and the good, then formally as
a universal in re.

For Maréchal, then, the intellectual construction of
the immanent object is a synthesis, and, be it noted, an a priori
synthesis. 32 Maréchal admits that he does not relish the term
"a priori synthesis." But he adds that it alone in modern
terminology connotes the logical and psychological process called
"abstractio totalis" by Thomists. 33

In justification of the a priori, he argues that if
the a priori signified an instinctive, arbitrary, or subjective
production of ideas, then perhaps the theoretical justification
of its objective validity would leave us perplexed. But the a
priori here signifies only the spontaneity of the subject in the

32 "La construction intellectuelle de l'objet immanent
est une synthèse . . . et est une synthèse a priori." Point de
Départ, V, 485.
33 Ibid.
experience of an external "given" which presents itself to him. Does Maréchal, then, admit Kant's synthetic a priori judgments? From the viewpoint of their validity, no. For Maréchal seeks to prove the metaphysical validity of every object of thought. The Kantian synthetic a priori, however, excludes God, the world, and the soul. From the viewpoint of their structure, then? In this case, says Maréchal, he does admit the psychological reality of a certain kind of synthetic a priori judgment, namely, one which is capable of objective justification because it pertains to the natural and preconscious construction of the immanent object of cognition of which it is the necessary constituent. But Maréchal places the ultimate principle of this synthesis not in the understanding alone, as does Kant, but in the human intellect regarded as tending toward an end.

In his booklet, Au Seuil de la Métaphysique: Abstraction ou Intuition, Maréchal presents in summary form the theory of objectivity which he expounds in greater detail in the last volume of his work.

34 "Le produit immanent de cette expérience participe à la fois aux propriétés du sujet et à celles de l'objet; objet et sujet y sont mieux que solidaires, ils sont complémentaires; connaître l'un modifié par l'autre, c'est connaître ce dernier affecté par le premier; l'à priori synthétique, essentiellement relatif à une matière extrinsèque, révèle l'objet, loin de masquer. On se souviendra, du reste, que nous avons expliqué cette relativité objectivante de l'à priori intellectuel par la finalité nécessaire d'un devenir assimilateur." Point de Départ, V, 487.

35 Ibid., V, 488-491. This is Maréchal's doctrine of the finalistic dynamism of the intellect.

36 Louvain, 1929.
of his **Point de Départ**. He argues that the characteristic quality of our knowledge, its objectivity,\(^{37}\) is due not to the species of the object alone but also to the dynamism of the knowing subject. He points out in the fifth volume of the **Point de Départ**, however, that this Kant-inspired position was invalidated for Kant himself because he held that the only content found in our thought is the phenomenal given. All the rest is purely functional and formal. Without the phenomenal given, the functional and formal is empty. Consequently, Kant fell back in his conclusion to the formalizing of Descartes and Wolff,\(^{38}\) even though he had glimpses of cognition as act.

We hesitate to criticize the thought of a man who is sometimes referred to as the most profound scholastic thinker of modern times. The consideration of his work rightly merits a study of its own. Apart, then, from Maréchal's probing insights into Kant, suffice it to say that he agrees with us as to Kant's subjectivism and its fatal effect on the Kantian argument:

---

37 Maréchal insisted that he was always a realist. In the late twenties of this century, he made a public statement to that effect, which surprised more than a few philosophers, among them Maritain, who suspected him of idealism.

38 "Aved une essence abstraite on ne fait pas de l'existence, ni avec du formel de l'actuel, ni avec du logique pur du réel; bref, qu'avec de la puissance on ne fait pas de l'acte." **Point de Départ**, V, 590.
Et voici maintenant la difficulté inextricable où s'embarrasse la philosophie kantienne ... il ne reste plus dans la conscience qu'une organisation synthétique de phénomènes, que rien ne rapporte à l'objet plutôt qu'au sujet.39

After the preceding pages, some sort of synthesis is necessary. The figure below may help to bring out the elusive nature of the Kantian object.

FIGURE 1

THE CRITICAL AND THE THOMISTIC THEORY OF THE OBJECT OF COGNITION

Since the appearance above is all that we know, and since we know it in representations, the representations are nothing apart from the appearance. They are the appearance.40 In view of the

39 Point de Départ, V, 591. Italics in the original.

40 See Paton, Kant's Metaphysic of Experience, II, 242: "If the event α and the event β were things-in-themselves, it is manifest that we could never pass from the common-sense assertion that, in perceiving the objective succession αβ, sense-perception
difficulties soon to be brought against the Kantian phenomenal object (appearances), the following comparison may be giving Kant more credit than he deserves. Let us suppose that some enterprising scholastic philosopher cuts off the cognitive process at the stage of the Verbum. 41 It now becomes a medium in quod. It is a synthesis of the content (Kant's manifold?) derived from reality (the noumenon) and the immanent (now, of course, no longer intentional) activity of the knower (agent intellect—possible intellect: Kant's categories and transcendental unity a must be followed by sense-perception b to the quite different assertion that the objective succession $\alpha \beta$ is itself causally determined. Kant appears to be arguing that since the event $\alpha$ and the event $\beta$ are, on Critical principles, only the content of sense-perceptions a and b, the attribution of necessary succession to a and b (on the ground of the objectivity of the succession $\alpha \beta$) is Ipso facto an attribution of necessary succession to $\alpha$ and $\beta$. . . This contention seems to me to be the crux of Kant's argument."

It is to be remembered that Kant starts with objects or objective sequences as already present to consciousness. Awareness, then, means for him, not awareness of representations except in the case of purely subjective states like dreams, illusions, and chimeras. It means the awareness of the object known in the representations. Only by philosophical study does he come to the conclusion that the object is a unity of representations made possible by the forms, categories, and the transcendental unity of apperception working upon the manifold of experience. To speak of consciousness of representations, then, in our immediate consciousness of the phenomenal object could only mean for Kant somehow going behind the object present in consciousness at the moment of consciousness itself. In the context of Thomism, it would be like saying that we can be just as conscious of the Verbum as of the object known in the Verbum.

41 The implication of time here is unfortunate, since the spiritual activity of thought is being considered. Think of the stage as a logical "moment."
of apperception). Thus cut short of reality, the Verbum (Kant's representations) gives us merely appearances (compare St. Thomas' term "species"). For us it would be the appearance of reality.

But how could Kant call such an appearance objective? Granted that it is an object for us, how can we distinguish it from dreams, illusions, etc., which also are objects for us in a way? Kant would answer that since the objective is that which necessitates us to know it in a certain way, and since necessity can in no way come from experience, the only explanation for the objective is that there exist certain apriori forms which render possible the necessity implied in objectivity. Yet one wonders whether Kant does not fall into a pre-established harmony here whereby the forms relate the elements given us in the manifold. It seems also, if utter idealism is to be avoided, that the unknown and unknowable noumenon plays a more important role than Kant gives it credit for. Then, too, if appearances are only unconsciousness, just what sort of existence do they have? Kant's appearances would seem to be an elaborated version of Berkeley's esse est percipi. True, the noumenal Mount Everest

---

42 He takes for granted the validity of the distinction between the objective and the subjective. That we do distinguish them is a fact. Kant's problem is how can we distinguish them. In answering the "how," he also answers the "why."

43 This presupposition is probably Kant's "mortal sin" in philosophy.
existed even when Hillary and Tenzing were not present to see it. But it was an appearance for them all the while they fought to reach its summit. Kant's world is the Critical version of Plato's cave in which the imprisoned men are surrounded by reality even though they are aware only of its shadows. Plato, however, allows some of the men to come up to the sunlight. For the theoretical reason of Kantian man, this is an idle dream.

At this point in our criticism, Norman Kemp Smith's remark is apropos:

Finding subjectivism to be emphatically and unambiguously inculcated in all the main sections of the Critique, and the phenomenalist views, on the other hand, to be stated in a much less definite and somewhat elusive manner, commentators have impoverished the Critical teaching by suppression of many of its most subtle and progressive doctrines.44

Accordingly, lest we also be guilty of thus "impoverishing the Critical teaching," we shall consider Kant's causal doctrine in the light of his phenomenalism.

But here, too, loom difficulties.

B. KANT'S PHENOMENALISM

First of all, the phenomenalist analysis of causality adulterates the meaning of causality. Kant never proves the necessary connection or intrinsic dependence of the very being of an effect upon its cause. In fact, we shall soon see that

44 Commentary, 321.
he invalidly presupposes it. He can validly state at most that causality involves a necessary succession of appearances. 45

Thus in the changing positions of a ship moving downstream, positions A and B cannot be reversed. The irreversible successive representations of these two positions in consciousness thus parallel—or better, since we are dealing only with appearances in consciousness—are those two positions. The representations are the objective sequence present to consciousness. Kant's philosophical analysis tries to show that the objectivity of the sequence, and so our distinction of it from the purely subjective, is possible only by reason of a rule which necessitates us to connect A and B in one specific way. B must be apprehended as following necessarily upon A in time.

45 "Kant only proves causality in the sense of necessary succession . . . As meaning necessary succession in time, it is undoubtedly regarded by Kant as the temporal schema of the logical category of ground and consequence, but that there is any connection of the logical sort between particular causes and effects as phenomena such that the one could ever be deduced from the other a priori, he not only never attempts to prove, but emphatically repudiates." Ewing, Kant's Treatment of Causality, 169. Such an interpretation of necessary connection in which a particular effect is claimed to be deduced a priori from its cause can rightly be repudiated. But there is another meaning of necessary connection, one which involves the spontaneous assent of human reason when its meaning is understood, namely, that a contingent being demands a cause for its existence. It is this necessary connection which hovers over the Kantian argument, as will be brought out in the text. This may be part of the "dogmatism" (remnants of a natural realistic outlook), which Watson attributes to Kant. See Kant and His English Critics, 338.
And since necessary succession in time is the schema of the category of causality, A and B are causally connected. Not that A is here and now the cause of B, Kant might add to avoid such an obvious difficulty as the day-night sequence, but that here and now the objective sequence AB, if it is to be known at all, must have B following A.

Granting now that in his Critical system Kant has shown that objective sequences are necessary and so causally connected, is necessary succession all that his causal doctrine lays claim to? By no means. For after analyzing objective, or causally categorized sequence in the "Second Analogy," Kant says:

In the first place, I cannot reverse the series, placing that which happens prior to that upon which it follows. And secondly, if the state which preceded is posited, this determinate event follows inevitably and necessarily.16

Causality, then, for Kant means two things: first, that the succeeding event follows upon the preceding event in accordance with a rule of necessary succession; secondly, that the succeeding event has its ground in the preceding event.

The first part has already been discussed in some detail. Now the second part of Kant's statement, "If the state which preceded is posited, this determinate event follows inevitably and necessarily," is one to which Kant has no valid claim. For it makes causality necessary connection. Paton's comment is in

16 'A 199-B 244 (225). Italics not in the original.
Kant claims to have proved that there is more than necessary, or unvarying, succession in accordance with a rule. He claims to have proved that in such a necessary succession what precedes is the ground of what succeeds.\textsuperscript{47}

The repetition of the phrase "claims to have proved" seems to reflect some doubt in Paton's mind as to whether Kant actually did prove the validity of applying the ground-consequent relation and the necessary connection it implies—to appearances.\textsuperscript{48} It is quite true that "the plain man, and for this purpose Kant is a plain man, believes that the effect is really grounded in the cause, so that such a modification of the Kantian doctrine limitation to necessary succession would mean for him a definite loss."\textsuperscript{49}

But what claim has Kant to apply the ground-consequent relation to appearances? His philosophy, as we noted in our closing remarks on Marechal, is not an existential philosophy which emphasizes the distinction between contingent and necessary being. In keeping with the formalism of his rationalistic

\textsuperscript{47} \textit{In Defence of Reason}, 40.

\textsuperscript{48} Ewing, \textit{Kant's Treatment of Causality}, 170 and 171, argues that Kant ascribes this connection "not to the causally connected appearances themselves but to their noumenal conditions . . . It sometimes seems as though far from real causality being excluded from the noumenal sphere, it is only found there and not in phenomena at all." For the difficulties inherent in this interpretation, see page 113 of this thesis.

\textsuperscript{49} Paton, \textit{Kant's Metaphysic of Experience}, II, 70. Italics in the original.
background, Kant's only claim to the ground-consequent relation is his exceedingly formalistic view of judgment. Perhaps critics are too caustic when they point out the extreme artificiality of Kant's method in the "Metaphysical Deduction." There he allegedly discovers the twelve--no more, no less--categories by a review of the twelve possible kinds of judgment. There the category of ground and consequent is said to be based on the hypothetical judgment. But even Paton, who certainly cannot be accused of being unfair to Kant, cannot wholly accept this. "To accept the forms of judgment in Formal Logic as giving us an infallible clue to these definite kinds of synthesis is certainly a trifle ingenuous." One wonders whether the dispassionate logician

50 "When the whole task of philosophy is summed up in a demonstration of the dependence of the objective world upon the forms of intelligence, the connection of the various elements which go to form knowable objects cannot be represented otherwise than as external or superficial. Kant accordingly neglects what may, after Comte, be called the dynamical aspect of the world." Watson, Kant and His English Critics, 342. Kant's formalism thus seems to have little to offer the dynamical theories of modern physics.

51 See Paton, In Defence of Reason, 45, where he defends Kant's discovery of a clue to the categories, principles of synthesis, in the forms of analytic judgment. He recommends at least a reconsideration of Kant's argument.

52 See page 65, note 43, of this thesis.

53 Kant's Metaphysic of Experience, II, 75. See also ibid., I, 188: "To Kant's misfortune the doctrine of the categories is largely based on the logic of his time, which since then has suffered serious, and perhaps shattering blows."
of Königsberg was not really falling back on a common sense attitude toward causality which colored his view of the judgments in formal logic.

Prescinding from his formalism, was Kant at all justified in speaking of grounds and consequents among appearances? Grounds and consequents involve intrinsic, necessary connection and it seems impossible for appearances to be so connected. For intrinsic, necessary connection indicates some characteristic in the things connected, a characteristic existing independently of the knower. But appearances of their very nature depend on, are relative to, a knower.

In an effort to save Kant, one might argue that all that appearances demand is the appearance of necessary connection. But what is this "appearance of necessary connection"? It can mean that appearances seem to--appear to--be connected but are not really so. Or it can mean that necessary connection is itself an appearance. The first solution is merely verbal and actually denies necessary connection between appearances. As for the second, necessary connection is not an empirical object of consciousness like trees, birds, or dogs. Involving as it

54 Perhaps Paton has something similar in mind when he says: "The fact that the world is only an appearance to human minds is no reason why it should not appear to human minds as made up of substances and displaying real efficacy or dynamical causality." Kant's Metaphysics of Experience, II, 282.
does implication, necessary connection is something intelligible, not sensible. For Kant's theoretical reason, then, it is unknown and unknowable. We shall soon study the position of one Kantian commentator who does in fact interpret Kant as relegating this necessary connection to things in themselves.55 There necessary connection can inspire our faith but never increase our knowledge.

Even if for the sake of argument we supposed that necessary connection could be involved in the sequence of appearances, we would have difficulty in explaining it. Thus the intrinsic or necessary connection between A and B might be supposed to lie in the application of the causal category, the indispensable formal element of the causally connected appearances of A and B. But why should the intrinsic connection of A and B lie wholly in the mental form as applied to the empirical manifold? Whence this special prerogative of the category, which Kant says is only an external form of unity imposed by our understanding on a heterogeneous and unconnected diversity? What justifies a concept that is empty of itself suddenly to dictate so tyrannically to experience when applied to experience? Is there voluntarism here? Does the understanding, led on by the will, attribute intrinsic causality without sufficient reason? Or is it a question of chance? Of instinct? Is the category an elaborate

55 See also page 103, note 48, of this thesis.
innate idea which introduces connection into the appearances of A and B by some sort of pre-established harmony with the empirical manifold of A and B, or with noumena themselves? All this is a far cry from the intrinsic connection of A and B.

If the solution does not lie in the formal element of appearances can it lie in the material element, the empirical manifold? If the intrinsic, necessary connection lies in this, two objections to Kant follow. First, the empirical manifold is not as brute and unconnected as Kant says it is. Though it is the material element of the appearances which are present in consciousness, it must have some determinateness about it if the forms and categories, empty in themselves, are to bring about definite appearances in conjunction with it. How else explain that we see this object or know this particular causal sequence rather than another? And why is it that certain kinds of causes have certain kinds of effects? Water can extinguish fire but not cause it. The second objection is that this determinateness already present in the empirical manifold tells us something


57 "Did not sense itself offer material irreversible sequences, the category of cause and effect would be null and void; it would never be called into play at all." James Hutchison Stirling, "Professor Caird on Kant," Journal of Speculative Philosophy, New York, XIV, 78.
about the supposedly unknown and unknowable noumenon. If the
difference between the appearances that are known to us as water
and as fire are to be traced back to the empirical manifold, and
if the manifold itself is grounded in the noumenon, then water-
in-itself and fire-in-itself are not enigmas to us, at least not
as enigmatic as Kant claims they are.58

But perhaps appearances and their necessary succession
in time are only the phenomenal correlate of the ground-consequent
relation in logic. As Paton says:

58 "No doubt it must be due to something in things-in-themselves that we see one table as round and another as square." "This view of Kant's doctrine is commonly denied, but it seems to me the only view which can make his theory intelligible." Paton, Kant's Metaphysic of Experience, I, 134, and note. Coming from the leading Kantian commentator today, one who is generally sympathetic to Kant, the comment is all the more significant.

Stirling, again, argues that the empirical manifold
must somehow contain noumenal characteristics within itself, "must, as it were, blow its own prompter's whistle" so that the correct categories are applied." Text-Book to Kant, Edinburgh, 1881, 100-101. But he seems to imply that this organized manifold exists apart from and prior to the forms and categories.

Boutroux is more true to Kant (see A 137-B 136) when he insists that there is neither an organized manifold nor mental forms but the union of both, namely, the phenomenal object. This is what we can call organized, not the empirical manifold. See his La Philosophie de Kant, 191-195.

Yet Stirling is right in pointing out that as regards the determination of the phenomenal object (e.g., as tree rather than as dog) the empirical manifold must be, to use a scholastic term, natura prius.
We manifestly do not apprehend grounds and consequents by sense; but Kant believes we can find something corresponding to ground and consequent in the objects of our experience, if we consider that all objects must be combined in one time. What he finds is necessary succession; that is, invariable succession in accordance with a rule—such that if A is given in time, B must follow.59

Paton's interpretation is questionable. The phenomenal correlate of the ground-consequent relation is much more than necessary succession. It is necessary connection.60 Though Kant's world of appearances has no claim whatsoever to necessary connection, as was shown a short while before, it hovers in the background of all Kant's examples and arguments. For why should the phenomenal consequent B "inevitably and necessarily" follow its ground A, unless there were some necessary connection between B and A?

Kant, then, after speaking of causality as necessary succession, almost instinctively—"plain man" that he was—draws

59 Kant's Metaphysic of Experience, II, 18.

60 Can this be what Paton understands by necessary succession? Note that he equates it with invariable succession. But why invariable unless there be necessary connection? Later on Paton says: "Whether rightly or wrongly, Kant always assumes that causality implies regular succession; and what I call 'necessary succession' is to be taken as meaning regular succession." Ibid., II, 54. Italics not in the original.

61 A 199-B 244 (225).
on the ground-consequent relation. This latter we have now found to be the unjustified addition of necessary connection to his doctrine of causality, unjustified because presupposed for a world of appearances in which it can have no part.

Kant cannot be saved by being interpreted as saying that some event must follow the posited antecedent. In that case, B (e.g., a loud noise) would follow A (the lighting of a cigarette), but C (smoke) would be the real consequent of A. Or, reversing the situation, we can suppose A as preceding B, but not necessarily as its phenomenal ground. This, however, seems to violate the ground-consequent relation in logic, of which necessary succession in appearances was supposed to be the phenomenal correlate. The hypothetical judgment, "If A, then B," excludes C. If C is substituted in place of B, then B should not have been mentioned at all. C was really B all the while.

62 Watson makes much of the remnants of "dogmatism" in Kant, by which "even to the end the world loomed up before him as a thing apart, which by some means got transferred to human intelligence." Kant and His English Critics, 338. "In regard to Kant's final position, as revealed in the Opus Postumum, whatever else be doubtful, two points at least are abundantly clear: first, that he definitely commits himself to a realist view of the physical system in space and time and of the manner in which we acquire knowledge of it; and secondly, that he is willing to go to almost any lengths in the way of speculating hypotheses regarding the noumenal conditions of our sense-experience, if only thereby the difficulties which stand in the way of this empirical realism can be successfully dealt with." Smith, Commentary, 618.
Furthermore, Kant does not say "some" event, but "this determinate" event. But why does he say "this determinate" event unless it be necessarily connected with the preceding event? The following comment of Paton is no help here. "I take it that it [the event] must necessarily be followed by an effect which, if we knew what to look for, we could actually perceive."63 For B, whether we know where to look for it or not, is still necessarily connected with A.

The invalid presupposition of necessary connection between appearances is again brought out in the following passage:

Were it not so, were I to posit the antecedent and the event not to follow necessarily thereupon, I should have to regard the succession as a merely subjective play of my fancy; and if I still represented it to myself as something objective, I should have to call it a mere dream.64

Thus the action of striking a match may precede thunder in a given sequence. But Kant would say that the fact that when a match is struck again, thunder does not follow shows that the succession must be regarded as objective. But why can A be posited and why does not B follow necessarily? The reason is that they are not necessarily connected.

63 Kant's Metaphysic of Experience, II, 244.
64 A 201-202, B 247 (227).
The invalid presupposition of necessary connection between appearances is fairly obvious in Kant's treatment of particular causes. He admits that particular causes must be discovered through experience. This seems to be an implicit admission that causality is necessary connection, even though Kant himself is entitled only to necessary succession. Let us suppose for the time being that particular things and particular causallaws can be known without intrinsic contradiction to the Kantian system.65 Must not the particular phenomenal characteristics of the objects be taken into account? Any reason for the sequence of A and B (fire and heat) must include a reason, derived from the particular qualities of B, why it, rather than any other particular, is associated with A. Ewing observes:

Even in modern physical science, we have the principle that the effect must be "contained in the cause," and that any process must be "continuous," i.e., that there must be no breaks in it of such a character that there is at any point of it a hopeless disparity between cause and effect.66

But granted that necessary connection in appearances has been shown to be an invalid presupposition for Kant, may not the Kantian analysis involve something else, namely, noumena? As Ewing says: "Can we really maintain at once that causality involves necessity and that it is merely an external relation?"67

65 See pages 122-125 of the present study.
66 *Kant's Treatment of Causality*, 178.
When we say that B must follow A, do we have here a brute, unintelligible fact? But "mustness" or necessity is not a brute fact. It involves implication, a relation between facts.68

"We thus seem to have some ground for admitting that causality (necessary succession) involves intrinsic connection."69

Where is this intrinsic connection? We have shown it cannot be in appearances. According to Ewing, Kant too insists that necessary connection cannot be found by analysis of the causally connected appearances. He then supposes the real ground of this necessary connection to lie in the noumenal sphere.

There can be no doubt that he regards noumena as the ground of phenomena generally, and the differing content of particular causal laws as due to noumenal characteristics; and, as "ground" for him certainly means "logical ground," this is equivalent to placing the intrinsic, intelligible connection behind causality in the noumenal world.70

But as Ewing himself admits, this recourse to noumena involves faith on Kant's part, not philosophic knowledge. "He declares 'dogmatically' for the existence of a something, humanly unknowable, other than phenomena, but its ultimate intelligibility, as opposed to mere existence, is for him a matter of faith,

68 See D.J.B. Hawkins, Causality and Implication, London, 1937, 47.
69 Ewing, Kant's Treatment of Causality, 180.
70 Ibid. See the Critique, A 494-B 522 (441); and Critique of Judgment, in Selections from Kant, translated by John Watson, Glasgow, 1927, 320.
Kant, then, has not proved causality as necessary connection, whether it be grounded in noumena, as Ewing suggests, or in appearances. Any attempt to interpret his doctrine along such lines only leads to serious difficulties. If necessary connection somehow plays a role in Kant's argument, it is only because he has illegitimately introduced it.

But the rejection of necessary connection need not involve all of Kant's causal theory. If we disregard the difficulties centering around the phenomenal object, causality as necessary succession is quite valid within the system. True, the schematized category, now deprived of the ground-consequent relation, is impoverished. In fact, all that remains is the transcendental schema. Perhaps some other pure category of cause may be conceived which, added to the transcendental schema, will put the new schematized category on its feet.

---

71 Kant's Treatment of Causality, 180.

72 See pages 117-122 of this thesis. These difficulties involve the problem of how we know when to apply the categories.

73 "Kant's doctrine rests upon two main foundations, firstly, the forms of judgment, and secondly, the transcendental synthesis of space and time. It is possible that the second may stand, even if the first has been undermined." Paton, Kant's Metaphysics of Experience, II, 77.

74 What that pure category of cause would be is not our task to decide. It should have some relation to necessary succession, the transcendental schema of causality. "We can still approach Kant's Principles in the hope of discovering a proof of the necessity of certain categorial characteristics; for his proofs rest, not upon the forms of judgment, but upon the
At this point we may ask what does causality as necessary succession of appearances mean in the concrete? I strike a match. A flame appears. For Kant, the occurrence means this. One appearance, that of the flame, has followed objectively, therefore necessarily, therefore causally, i.e., by the application of the causal category, the appearances that constitute my striking a match. Only if we presuppose the necessary connection of the being of the flame with the action of striking the match is there question here of anything more than necessary succession.

Causality is intrinsic to the situation only in the sense that the appearances constituting the match-flame sequence can be an object in consciousness only through the application of the category of cause, through the proper schema, to the spatially and temporally conditioned manifold. The necessity of the causal relation is not the absolute necessity involved in the intrinsic dependence of a contingent being on its cause. For Kant, the necessity of the causal relation is relative and extrinsic.

The necessity is relative because it holds only of human consciousness. A non-human consciousness which operates through no categories or through different ones need not conceive the match-flame situation as causal. At least, Kant gives no

unity of time." Paton, Kant's Metaphysics of Experience, II, 78. For the meaning of schematized category, pure category, etc., see page 53, note 35 of this thesis.

75 See the Critique, A 258-2 314 (27).
conclusive reason why it should—and he is humble enough to admit his qualification to speak only of human experience! Watson points out the sceptical conclusion to which this relative knowledge of Kantian man can lead. If the world we actually know exists only in relation to human intelligence, we cannot be said to have real knowledge, but only knowledge true for us as men. But relative knowledge is not knowledge at all, in any proper sense, though it may be all the knowledge we are capable of having.

If the observations peculiar to men as individuals are unworthy of the name of knowledge, the observations common to all men, which they vainly suppose to be knowledge, must likewise be counted unworthy of it. If all men were madmen, it would matter little to them that there was a method in their madness. If the best of knowledge is only that which we cannot help having, but which with different faculties we should not have, why should we pin our faith to it?76

The necessity of the causal relation is extrinsic because it is limited to human consciousness. Human consciousness of objects is itself confined to sensory experience. Thus the necessity of the causal relation can be postulated only if, and so long as, actual or at least possible occurrence of sense experience is assumed. If at a given moment all sense experi-

76 Kant and His English Critics, 337. The same author makes another statement fatal to the Kantian position: "Unless there were in us a capacity for apprehending that which truly is, we could not know that what we do apprehend is only relative to our intelligence as men." Ibid.
ence were to cease for us, we could not say that there was objectively valid causality in our world. We might analyze the category or concept of cause. But since the category by itself is empty, our analysis of it would be a mental exercise with no objective validity. And if we somehow knew that contingent spiritual beings existed, we could not apply the category to them and say that they have a cause.

Here again, Maritain's comment is to the point that with Descartes began the philosophical retreat in which human reason gradually lost its grasp on Being. With the loss of absolute reality, absolute truth, and absolute value, arose the relativism that characterizes much of modern thought. Causality is no longer an absolute principle rooted in the very nature of contingent being, whatever, wherever, and whenever its inferiors may be. It is wholly dependent on and relative to the human consciousness from which it derives its supposed reality, truth, and value.

How does this relative, extrinsic nature of Kantian causality affect Kant's relation to Hume? Has Kant decisively answered Hume? Is causality considered as necessary succession the final refutation of Hume's probing analysis of causality?

At first sight, it would seem so. For what does any

77 The Range of Reason, 186.
point out difficulties under which necessary succession itself labors.

The big problem is how the mind can know when to apply the category, a problem unjustly belittled as artificial. And yet, if among appearances causality can mean only necessary sequence, how explain—without presupposing necessary connection—the fact that some necessary sequences appear to consciousness as causal and others do not? I strike a match. A flame appears. At the same moment, a peal of thunder rolls across the building in which I am. The match-thunder sequence is just as objective, and therefore on Kant's principles (objectivity implies necessity) just as necessary as the match-flame sequence. Yet we regard only the latter as a causal sequence. Why? Watson's comment, "Philosophy, as I understand it, does not seek to originate facts, but only to give a self-consistent explanation of them," is precisely the point at issue. The match-flame and match-thunder

78 'This difficulty arises from failure to appreciate the central thesis upon which Kant's proof of the principle of causality ultimately rests . . . that the category is a necessary and invariable factor in all consciousness.' Smith, Commentary, 377.

It is true that for Kant, the category has already been applied when an object is thought by us. That is why Kant says we "find" the causal connection and do not falsely suppose it. Yet why is the category applied in some cases, not in others?

79 Kant and His English Critics, 235.
sequences are both objective and so necessary at the moment of consciousness of them. Yet one is presented to consciousness as causal; the other is not. Where is the consistency? Once again, is there mere voluntarism here, or chance, or instinct, or some sort of pre-established harmony? Or does the mind know more about reality than Kant would admit? The man on the street, confronted with the match-thunder sequence, would reply equivalently that the

80 Perhaps Watson would agree with the following comment of Caird and thus deny the objectivity of the match-thunder sequence. "In so far as we do not refer a succession in our perceptions to an event or change in the previous time as its necessary correlate, we do not regard it as itself representing an objective succession or event. In this latter case, the 'coming to be' of the new perception for me is not regarded as the objective 'coming to be' of the state of a substance which it represents; i.e., I regard the sequence as merely subjective, or as not representing an objective sequence, though the synthesis of phenomena or sequents in my perception may represent some other objective relation." Critical Philosophy of Kant, I, 518. The situation, argues Caird, may call forth some other category for another type of objectivity, e.g., substance, but not the causal category for the objectivity required by a causal sequence.

But must an objective sequence always be a causal one? And are not all the categories supposed to be present in our knowledge of objects. Smith, Commentary, 369, admits the possibility of objective yet non-causal sequences.

81 Another inconsistency: I see smoke, then fire. Despite the present objective and necessary sequence, I say fire causes smoke, not vice versa. Also, the causal category has already been applied when an object is first known intellectually. 1) How does the category determine what thing is to be the cause of another? 2) How does it so act that the same cause is the cause of the same effect at widely separated intervals, and constantly over many years? 3) Why does the same appearance "cause" the same effect for all men?
effect was not proportioned to the cause. Such an argument implies, first, the intrinsic connection (or lack of it in this instance) between the disputed cause and effect; and secondly, some knowledge, at least, of match-in-itself and thunder-in-itself. Kant, we have seen, has no right to either of these statements.

Or take the sequence of night and day. Why, given Kant's analysis of causality, should not night cause day? Watson's rebuttal falls short of the mark. "That supposition is at once nullified by the fact that if night follows day, so also day follows night whereas in every causal succession, event A must go first and event B come second."82 But Watson is dealing here with day and night in the abstract. Actually, we have an irreversible series of different nights and days, e.g., Sunday night, November 17; Monday, November 18; Monday night, November 18; Tuesday, November 19, etc.83

---

82 Kant and His English Critics, 233-234.

83 Watson has no trouble accepting Kant's example of a ship floating downstream as a case of objective, causally categorized sequence. Ibid., 227. But there seems to be little or no difference in the sequence of the ship's positions and the sequence of day and night. In both cases our representations are forced to follow a definite order. Monday night follows Monday as irreversibly as position B follows position A. If the one sequence is admittedly objective, why should not the other be? If the first is causally categorized, why should not the other be so also? In a realist analysis, both cases are examples of extrinsic principles. There is no question of a cause-effect or ground-consequent relation between the elements of either the day-night or the ship sequence.
But perhaps the succession of night and day implies only this: there is a causal sequence somewhere, but it is not such that night is the cause of day.84 Once again, the reason for objecting to the statement that night causes day is the implicit assumption that causality means necessary connection and there is evidently no necessary connection in the series of appearances under discussion.85

Moreover, to insist that the causal sequence may lie somewhere beyond the sequence immediately present to consciousness presupposes the knowledge of particular causal laws. But is Kant entitled to such knowledge? Deny it. Admit it. In either case, there are difficulties.

84 Watson, Kant and His English Critics, 233.

85 "Such a sequence as day and night is not a real change in the sense that we suppose the one to follow from the other." Ibid.

86 This objection can be carried to such extremes that the knowledge of particular causes might well become impossible. "Suppose I shoot a bird and it falls to the ground. The falling to the ground may obviously be regarded as an effect, but where are we to look for the cause? In spite of Kant's argument to the contrary... most men would say that it was my having previously pulled the trigger of my gun... Yet this is an obvious oversimplification of the situation... That the shot found its mark when I aimed in this particular direction was perhaps because a depression which had been centered over Iceland three days ago had moved eastward and caused strong south-east winds; this was because there had been a hurricane in the West Indies a week before; and so on ad infinitum. Any effect is seen to be connected to previous events by an endless succession of strings of events all of which meet in the effect." James Jeans, Physics and Philosophy, New York, 1943, 103. Yet the influence of the whole universe on any given event is so small that it can be disregarded even for science. Then, too, in speaking of causes we are interested in immediate ones.
is not formally identified with the necessity of having a cause. Man is a rational animal. But it is also true that if man is a something-that-comes-to-be, his essence connotes, that is, has as a logical property, the need of a cause. Thus the mind can, by a knowledge of the meaning of "something-that-comes-to-be" and "necessity of a cause" see of itself the necessary nexus between the two, a nexus which can never be given by experience. True, the mind learns from experience about things that come into being and things that cause the coming into being. But this experiential knowledge, once it is acquired, frees the mind from any further dependence on experience to see that a thing that comes to be as such demands a cause.

Kant, then, was unjustified in setting up the causal principle as synthetic a priori. He was equally unjustified in presupposing with Hume that experience can in no way be the ground for necessity. This assumption is an echo of the Platonic Ideas. Plato postulated the eternal immutable Ideas to explain

93 For an account of the psychological origin of the notion of cause, see A. Michotte, La Perception de la Causalité, Louvain-Paris, 1946. For the metaphysical account of the notion of cause, see Théodore de Regnon, Métaphysique des Causes, Paris, 1886. See also articles mentioned in the bibliography.

94 Kant's presupposition of the existence of the synthetic a priori in mathematics and science also seems unjustified. Paton, who generally tries to justify Kant, admits: "It may be maintained that all mathematical judgments are analytic. This view is the predominant view of mathematical logicians at the present time; and if it is true, it cuts the ground from under Kant's feet." Kant's Metaphysic of Experience, I, 89.
necessary and universal truths in contingent experience. But as Aristotle pointed out, these Platonic Ideas are really in a world apart and logically can have nothing to do with the world of human experience. Thus they had to be brought down somehow into the world of experience. Aristotle showed how, from a study of the operation of things, one can rise to a knowledge of natures or principles of operation. Conceived by the abstractive intellect of man, these natures or essences are stripped, as it were, of their individuating notes. The result is a universal concept or idea, e.g., man, which can be predicated univocally, that is, equally and individually, of all its inferiors, Peter, Paul, John, etc. The universal exists formally only in the intellect. But in so far as it is derived ultimately by a consideration of the characteristic notes of individual natures, it has a foundation in reality.

Its concepts thus rooted in reality, the human intellect can grasp being or the real. Knowing being, the intellect can also come to know its properties and the principles that govern being. Among these principles are those of contradiction, sufficient reason, and causality. These principles are universally valid and necessary precisely because they apply to being as such. Kant, because he turned his back on being and objective reality in its ordinary non-Kantian sense, ensnared himself in the Scylla of subjectivism on the one hand and the Charybdis of phenomenalism on the other.
After the arguments of the preceding pages, one wonders how Ewing can prove that starting from Kant's argument in the "Second Analogy," an argument which will establish causality for an independent physical world as well as for our experiences of perceptions may easily be developed. Ewing's argument, following that of Kant, centers on the point that an object can be conceived only as a necessarily connected system. This, he adds, can easily be turned into an argument for causality, since necessary connection between different stages in a process of change is for Kant identical with causality.

Whatever else the being of a physical object may involve, it involves this at any rate, a necessary connection between its different qualities or states. A state of an object unconnected with the other states of the same object could not rightly be called a state of that object at all, and connection of different qualities or states as qualities or states of one object without mutual dependence and so implication, i.e., necessary connection, seems impossible. And for any object which changes in time, this necessary connection must obviously involve causality. This seems to be an argument that will hold good both from a realist and from an idealist point of view.

Ewing's analysis seems to labor under some of the very presuppositions which vitiated Kant's analysis. He says that an object can be conceived only as a necessarily connected system. This seems to be nothing other than the two-fold doctrine of

95 Kant's Treatment of Causality, 91.

96 Ibid., 98-99. Ewing's generous inclusion in his theory of both idealism and realism reminds one of the fable of the grain, the goose, and the fox.
representationism and the atomic theory of perception. Our knowledge begins with isolated perceptions which we somehow combine into objects. But once the representationalist theory is adopted, it is hard to see how the incarcerated mind can achieve anything but appearances, i.e., its own representations. Any claim to reality is a gratuitous assumption.97

Ewing is correct, and Kant is correct, in emphasizing the role of change in causality. But the final analysis of the meaning and nature of that change must lie elsewhere. It must lie in a philosophy that can attain being or the real; that can grasp the inner significance, the essence, of the real, discovering there the intrinsic dependence of a contingently existing being upon its cause.98

97 "The most tempting of all the false first principles is: that thought, not being, is involved in all my representations. Here lies the initial option between idealism and realism, which will settle once and for all the future course of our philosophy, and make it a failure or a success. Are we to encompass being with thought, or thought with being." Etienne Gilson, Unity of Philosophical Experience, New York, 1947, 316. Italics in the original.

98 Cf. Hawkins, Causality and Implication, 38: "Dr. A.C. Ewing has argued in his book on Kant's Treatment of Causality that, even if the subjectivist view is rejected, a proof that without causality knowledge would be impossible is still of value. Perhaps so . . . but [his protest] shows that there is a problem to be solved; it does not yield the solution of the problem. If the objectivity of causality is to be vindicated adequately against Hume, it must be shown how the notion is to be analyzed from the given of experience."
presuppositions, Kant could not help turning off on the detour that led him farther and farther away from the true solution.

Presuppose, for example, that all the mind knows is its contents. The fact that the concepts obtained from the real are intentional is immediately disregarded and the result is idealism or some form of phenomenalism.

Presuppose an atomic view of sensation. The problem of knowledge as a synthesis of the discrete particulars of experience at once arises.

Further presuppose such a relation between the faculties of sensibility and understanding that what is in the latter must have been formally in the former, even if under a different type of synthesis.

To the postulate of sensism, add the absence of any idea of an abstractive intellect which, though intrinsically independent of matter, coordinates its operations with those of the phantasy.

Presuppose with a number of philosophers as far back as Ockham the conceptual knowledge of the singular. The problem of universality from singular experience is immediately highlighted.

Presuppose, in fact, that universality and necessity from experience is not merely a problem, but an impossibility. Some a priori principle of the mind looms on the horizon.

Presuppose that analytic propositions must necessarily
Negatively, Kant's philosophy is invaluable on at least three counts. First, it is another historical witness to the impotence of a non-existential philosophy. Kant's system is one of those philosophical corpses which, as Gilson puts it, strew the path to the Sphinx because they have failed to answer its riddle. The answer is: Being. Secondly, Kant's system shows the fatal weakness of a philosophy which looks askance on metaphysics, that fails to go μετὰ τὰ φυσικά. For by his very nature man is a metaphysical animal. Thirdly, Kant's system is one of the best answers, even if negative, to the question: how do we know that we know reality? Kant's whole system, built on the conviction that we do not know reality, failed utterly on certain most essential points, as our study of Kantian physical causality has shown.

In conclusion, the philosopher of Koenigsberg certainly has more to offer the world than mental gymnastics. But as regards his argument for the objective validity of the causal principle, we must state once again: Kant did not answer Hume.

---
8 Unity of Philosophical Experience, 312.
9 "It is an objective fact that men have been aiming at metaphysical knowledge for more than twenty five centuries... A law of the human mind that rests on an experience of twenty five centuries is at least as safely guaranteed as any empirically established law." Ibid., 307.
FIGURE 2
Diagram of the Logical Elements Involved in the Knowledge of Phenomenal Objects**

A. Sense or Sensibility

B. Imagination

C. Understanding

D. Transcendental Unity of Apperception

Matter

Empirical Manifold

Space

Time

Schemata

Categories

Appearances

Things as Known

The "I"

Forms

Noumenal Things in Themselves

Notes for the numbers and letters are on following pages.
Notes on the Diagram

General Note: Kant professed not to be very much interested in bringing out the psychological faculties and acts involved in knowing phenomenal objects or appearances. He would in fact have great difficulty in doing so. He was professedly interested in the logical elements necessary for an act of pure knowledge, elements that can be discovered only by philosophical reflection on a possible object of consciousness. This emphasis on pure thought determining its own nature and limits is Kant's heritage from the formalism of Descartes, Leibniz, and Wolff. It is therefore very important to consider the elements given on the diagram as presented at one and the same time with the object. For without each and every one of them, the object would simply not be an object, i.e., would not be present to consciousness. Thus, the position on the diagram of the empirical manifold, for example, is not meant to indicate logical priority to space and time, since one cannot speak of the empirical manifold at all except in so far as it is under space and time.

1 Noumena: the objects unknown in themselves from which come the manifold of experience; highly controversial element of Kantianism; springboard for Fichte and Hegel.

2 Empirical manifold: material element of knowledge presented in fleeting, subjective representations that are united by the various forms of the knower into the object known in consciousness.

3 Space: a priori form of sensibility by which all objects are perceived as being in the same space (thus making juxtaposition possible).

4 Time: other a priori form of sensibility by which all objects are perceived as being in the same time (thus making permanence, succession, and co-existence possible). Time is the universal form of sensibility because all objects are in time but not all objects are in space.

5 Schemata: transcendental functions of time produced by the imagination, which bridge the gap between sensibility and understanding. Through them the categories are applied to perceptions, i.e., the sense-conditioned manifold.

6 Categories: twelve a priori forms of the understanding corresponding to the twelve logical functions in all possible judgments by which the sense-conditioned manifold is brought under universal and necessary rules.
7 The "I" is not the empirical ego nor the noumenal ego; but the purely a priori logical form of the unity of the ego which is required for the unity of experience. Like the other forms it must be considered as given as soon as the object is present in consciousness. Its last place on the diagram does not therefore signify temporal sequence. It shows the supreme role of the "I" as the form that accompanies the representations of the manifold and shows them to be all part of one and the same consciousness. The object is an object for me. Consciousness of objects, then, connoting as it does one and the same subject, is impossible without self-consciousness (i.e., unity or identity of consciousness). Conversely, self-consciousness is impossible without consciousness of objects. Cogito, ergo sum.

The cube on the diagram represents this mutual implication of the "I" and appearances. The two arrows indicate the opposition of subject and object right within consciousness or experience.

8 Appearances: phenomenal objects, or things as known; sum of empirical manifold and the conditioning forms of the knower.

A. Sense or Sensibility: purely receptive faculty; intuits the manifold in perception; unites the diversity of the manifold in the forms of space and time.

B. Imagination: faculty of determining the material element of knowledge intuited in sense to certain general relations of time. It is at once universal and particular. It universalizes by drawing a sort of general outline or sketch (the schema; see note 5) of a thing which applies to all objects of the same species. (Thus the notion of a triangle might be called a schema with regard to the different types of triangles: isosceles, right, etc.) It particularizes because it enables the knower to apply the categories to an individual thing. The imagination is closely allied with the understanding; it may even be the understanding in a passive mode. Cf. Critique, B 162, note b (171): "It is one and the same spontaneity which in the one case under the title of imagination, and in the other case, under the title of understanding, brings combination into the manifold of intuition."

C. Understanding: seat of the twelve categories; through the schema it applies the categories to the spatially and temporally conditioned manifold.

D. Transcendental Unity of Apperception: purely logical form of the unity of the ego required for unity of experience. "Apperception" is a term Leibniz used to designate consciousness of objects and concomitant self-consciousness.
BIBLIOGRAPHY

I. PRIMARY SOURCES


Leibniz, Gottfried Wilhelm, Leibniz, the Monadology, and Other Philosophical Writings, translated by Robert Latta, Oxford, 1925.

II. SECONDARY SOURCES

A. BOOKS


Adamson, Robert, Philosophy of Kant, Edinburgh, 1879.


Benda, Julien, Kant, New York, 1940.

Boutroux, Émile, La Philosophie de Kant, Paris, 1926.


Daval, Roger, La Métaphysique de Kant, Paris, 1951.

Droge, P., Der Analytische Charakter des Kausalprinzips, Bonn, 1930.

Ehrlich, Walter, Kant und Husserl, Halle, 1923.


Ewing, Alfred Cyril, A Short Commentary on Kant's Critique of Pure Reason, Chicago, 1950.


Gilson, Étienne, The Unity of Philosophical Experience, New York, 1947.
Guzzo, Augusto, Kant Precritico, Turin, 1924.


Jeans, James, Physics and Philosophy, Cambridge, 1943.


Michotte, A., La Perception de la Causalité, Paris, 1946.


Regnon, Théodore de, La Métaphysique des Causes, Paris, 1886.
B. ARTICLES


THE THESIS SUBMITTED BY Mr. Walter J. Bado, S.J., has been read and approved by three members of the Department of Philosophy.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

Aug 16, 1955
Date

MURIEL R. Vogel, S.J.
Signature of Adviser