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TRUTH AND CERTAINTY IN HISTORY:
AN ANALYSIS OF THE CONCEPTS "MAKER'S KNOWLEDGE" AND "TELEOLOGY" IN THE PHILOSOPHIES OF HISTORY OF GIAMBATTISTA VICO AND IMMANUEL KANT

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TRUTH AND CERTAINTY IN HISTORY:

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IN THE PHILOSOPHIES OF HISTORY OF GIAMBATTISTA VICO

AND IMMANUEL KANT

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To Gene Dyche

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But because being here amounts to so much, because all
this Here and Now, so fleeting, seems to require us and strangely
concerns us. Us the most fleeting of all. Just once,
everything, only for once. Once and no more. And we, too,
once. And never again. But this
having been once, though only once,
having been once on earth--can it ever be cancelled?

Rainer Maria Rilke

INTRODUCTION

The objective of this study is to provide an understanding of the philosophies of history of Giambattista Vico and Kant from the point of view of their respective epistemologies. In order to achieve this end, I propose to draw an historical comparison of two basic epistemological concepts used by Vico and Kant in their respective philosophies of history.

There has been very little philosophical literature written in English comparing anything of Vico's with anything of Kant's. This is especially true in the philosophy of history.[1] Rarely are these two men mentioned in the same breath in philosophical discussions. Why is this?

One might cite several *prima facie* reasons for this. On the one hand there is the difference in time. Vico was born in 1668, approximately sixty years prior to Kant. When he died in 1744, Kant was but a young man of twenty. Hence, the time difference alone might account for why these two thinkers have seldom been compared. There is also the problem of language. Although Vico was fluent in Greek and Latin (Latin being the language of the learned in his day), he chose, nevertheless, to write his mature work, *The New Science*, in his native Italian. Kant, on the other hand, wrote his famous *Critiques*, along with his other works, in German. There is absolutely no evidence to indicate that Kant was or could have been familiar with any of Vico's work.

However, more important than both of these points are the historical backgrounds of each philosopher; that is to say, one might readily point to each of these backgrounds as a reason for the *distinct* philosophical interests of each philosopher. On the one hand, there is Kant, whose personal heritage stems from German Pietism. He was nurtured in his philosophical development on the rationalistic systems of Wolff and Leibniz. Although his chief interests in philosophical matters seem to have been in moral philosophy, much of his task was concerned with providing a philosophical justification for the *natural* sciences. There is a tendency, therefore, to think of Kant as still another champion of the Enlightenment.

On the other hand, we have the case of Vico. Fundamentally, Vico was a poet first and a philosopher second. He was largely self-taught in philology, classics, and law. While teaching rhetoric at the university in Naples, he also diligently studied history, philosophy, and literature. We think of Vico primarily as a representative of Classical Italian Humanism and thus as an advocate of the priority of the *human* sciences over the natural ones. In fact, his work in the philosophy of history can be viewed as an explicit indictment of the rationalistic philosophical systems that ruled the day, specifically the system of Descartes.

Therefore, it might be argued, Vico and Kant have not been compared for the simple reason that they actually have nothing in common. Their backgrounds and goals are different and both thinkers seem, in some cases, to be working at cross purposes.

There is one final reason that we might cite to explain the lack of philosophical interest in comparing Vico's and Kant's philosophies of history.

The philosophy of history has, in our day, been divided (by quite a number of philosophers) into two distinct projects. On the one hand, there is the inquiry referred to as "speculative philosophy of history" and, on the other hand, there is "critical philosophy of history."[2] Modern-day philosophers usually mean by "speculative philosophy of history" that area of inquiry which concerns itself primarily with answering the following kinds of philosophical questions: (1) What is the actual course or pattern of historical events? (2) What is the meaning and purpose of past human activity? and (3) What are those principles by which various historical successions are, in the words of Karl Löwith ". . . unified and directed toward an ultimate meaning."?

"Critical philosophy of history," on the other hand, is said to concern itself with issues such as the nature of "historical fact," the uniqueness of "historical explanation" (as compared to other forms of inquiry, e.g., explanation in the natural sciences), and the various connected problems of "historical truth," "objectivity," and "reconstruction." Critical philosophy of history is said by some to resemble philosophy of science in that its chief concern is with specific epistemological issues regarding such things as justification and explanation. Thus, it is opposed to the more general, metaphysical inquiry that constitutes the substance of speculative philosophy of history.

To return to the thread at last, most philosophers today would place Vico and Kant in the "speculative" rather than the "critical" philosophy of history project. That is to say, most contemporary philosophers (if asked) would point out that, while it is true that Vico and Kant were concerned with the philosophy of history, they were only concerned with

questions about the *meaning of history* or *its pattern* (i.e., merely "speculative" and not "critical" philosophy of history).[3] Further, they would argue, since philosophy of history today *is* concerned with the "critical" questions, it would seem that there is really very little to be gained from consulting Vico and Kant on these matters.[4] Hence, not only is it the case that Vico and Kant are separated by barriers of time, language, and historical background (suggesting that there are simply too many natural barriers to be overcome for any informative comparison to be made), but also, and more importantly, their substantive philosophies of history actually have nothing to say to our own philosophical concerns.

It is at this point that I should like to propose that we take a second closer look at Vico's and Kant's philosophies, specifically their epistemologies, and more specifically still, their respective criteria of truth. It is my view that upon examining their criteria, we shall find some rather striking informative parallels. We shall find, for example, that *both* Vico and Kant epistemologically justify their respective claims to knowledge by making use of what I, following J. Hintikka, refer to as a "maker's-knowledge criterion" of truth.[5] That is to say, *both* argue that one can have genuine knowledge of something, e.g., in geometry or physics, *only* if one has, in some sense, "made" the object of knowledge in question.

Further, *both* Vico and Kant use this "maker's-knowledge criterion" along with a concept of "teleological" explanation to justify their particular *philosophies of history*. This is of special interest because (contrary to the popular view) it indicates that the so-called "speculative" claims made by Vico and Kant in their particular philosophies of history

are actually *justified* by prior epistemological, e.g., "critical," claims. This is to say that unless their prior *critical* claims can be made good (concerning the appropriate criterion of truth and the appropriateness of teleological method of explanation), their *speculative* claims concerning the pattern or meaning of history *cannot* be made good. It is also to say that Vico and Kant were aware (to some degree) of this relationship between their (so-called) "critical" and "speculative" claims.[6]

If this is the case (as it is), then at least three important points seem to result from it. First, we find that Vico's and Kant's philosophies of history contain important "critical" as well as "speculative" argumentation. Second, after seeing how much argumentation supports their speculative claims, we are in a much better position to *judge* their speculative claims. Third, from seeing how these epistemic concepts "work" in both thinkers' philosophies of history (regardless of the truth of their speculative claims), we find ourselves in a better position to answer the following question: Is there indeed *a parallel* development in Vico's and Kant's philosophies of history even though each philosopher, in other respects, has distinct philosophical views and goals? In effect, this is to ask, "Will their respective philosophies of history come to any fundamentally similar conclusions *because of* a commitment made by each philosopher to similar basic epistemological concepts?"

One of the conclusions of this study is that the above question is answered affirmatively. That is to say, because of their similar epistemological commitments, Vico's and Kant's philosophies of history do in fact share similar conclusions. One such conclusion is that history is seen as the story of man's own "self-making," i.e., his

"self-development." Insofar as history is viewed in this way, a further commitment to a humanistic view of man is also shared by both philosophers.

Therefore, there *is* an important sense in which it *is* surprising that there exists this lacuna in the philosophical literature. This is to say, it is surprising that Vico's and Kant's philosophies of history have not yet been investigated in relation to each other since the primary epistemic concepts used *by both* to justify their respective philosophies of history are the *same* concepts. Our "problem," therefore, is clear-cut. In order to gain a more comprehensive understanding of Vico's and Kant's philosophies of history, we must examine their respective uses of these two key epistemic concepts.

Our claim is a strong one: An understanding of Vico's and Kant's philosophies of history requires that we first understand the epistemological grounds for their respective theories. Part of our problem, therefore, is to show exactly in what manner these two concepts are "epistemologically basic" to their theories.

Specifically, to this end I proceed with an historical, exegetical, and systematic analysis of the use made of these two concepts (i.e., "maker's-knowledge criterion" and "teleology") by each philosopher in his respective philosophy of history. This is to say that I *interpret* certain key passages, I *trace out* the development of certain ideas (those directly related to the concepts in question), and finally, I show *the relationship* of these ideas to each other in Vico's and Kant's philosophies of history. The writings that are primarily investigated in Kant are his writings on history and those on teleological judgment, specifically the third *Critique*. I also give a cursory explanation of Kant's use of

"maker's-knowledge" in the first half of *The Critique of Pure Reason*, specifically in connection with geometry and physics. The writings that are primarily investigated in Vico are *De Antiquissima*, *The Autobiography*, and *The New Science*.

General Outline of Each Chapter

In Chapter I, I examine the origin of Vico's "maker's-knowledge criterion" as found in his early work *De Antiquissima*. I then show how his theory is contrasted (by him) to the Cartesian theory of truth. Next, I examine how Vico's theory is applied to the sciences of geometry and physics in order to show how it is epistemologically "basic" to those sciences. Finally, I offer an interpretation of Vico's early ideas concerning the relationship of truth to certainty (specifically their possible synthesis). This interpretation, I believe, allows Vico's early work to be viewed as developmentally consistent with *The New Science*.

In Chapter II, I show how Vico's "maker's-knowledge criterion" and his concept of "teleological explanation" are applied to history. I raise a problem here, namely the problem of [real] truth in history. After examining and rejecting two distinct possible solutions to the problem, I propose a third solution. I then show how these concepts, i.e., the criterion of truth and teleological explanation "work" in the following contexts: (1) the "new art," (2) philology-philosophy, (3) the ideal-eternal history, and (4) Divine Providence. Finally, I end the chapter by examining the relationships of the notions "making," "remaking," and "self-making" to each other in the context of Vico's historicism.

In Chapter III, I examine Kant's use of his "maker's-knowledge criterion" in relation to the possibility of geometry and physics. I do this in order to show (as I did with Vico in Chapter I) that Kant's "maker's-knowledge criterion" is also epistemologically "basic" to his philosophy of these sciences. I then examine Kant's notion of "teleological" (i.e., reflective) judgment, specifically as it is related to his idea of "explanation" in *The Critique of Judgement*.

In Chapter IV, I examine Kant's use of the "maker's-knowledge criterion" and "teleological explanation" in his philosophy of history. First, I trace out the manner in which nature, after having been "made," is "made" teleological. I then, following Kant, distinguish between *moral* and *physical* teleology and argue that Kant relies upon a "moral reflective (i.e., teleological) judgment" in order to unify his theory of history. I then pose the question, *not* posed by Kant: "How is history as a science possible?" I offer an answer to this question based on Kantian principles. Finally, I end the chapter by examining the relationships of the concepts "maker's-knowledge," "self-making," and "self-knowledge" to each other in the context of Kant's theory of history.

In Chapter V, I compare and contrast Vico's and Kant's philosophies of history. I do so in the context of commenting on two papers by contemporary philosophers who have themselves compared Vico and Kant. I begin by examining and commenting upon several points made by Eugene T. Gadol in his paper "The Idealistic Foundations of Cultural Anthropology: Vico, Kant, and Cassirer." I then turn to Nathan Rotenstreich to comment on his paper "Vico and Kant." I conclude the chapter by first pointing out where these contemporary authors are right and where they are wrong in their

respective comparisons. I end the chapter with a comment on Vico's and Kant's respective notions of teleological explanation.

In Chapter VI, I conclude my study by pointing out *the* basic difference and *a* basic similarity in Vico's and Kant's philosophies of history. The difference, I argue, is that while Kant could see how his "maker's-knowledge criterion" could be *directly* applied to nature, he could *not* see how it was directly applicable to history. The *direct* applicability of the criterion to history *was* seen later by Dilthey. Vico, on the other hand, saw exactly how the criterion could be applied *directly* to history. He failed, however, to see its *direct* applicability to nature. The point of difference, therefore, is that in the case of Kant there is a lack of an *explicit* epistemology of history. In the case of Vico, there is not. The point *shared* by Vico and Kant is their unyielding commitment to humanism. I argue that Vico's and Kant's respective notions of humanism develop out of their respective "maker's-knowledge criteria" when they are applied to history. I conclude the chapter with the suggestion that there exist good reasons for us today to consult Vico's and Kant's criteria in [the area of] philosophy of history.

The value of this study I take to be the raising of two questions: First, since we are attempting to contribute to a better understanding of Vico's and Kant's philosophies of history by examining them from an epistemological point of view, the question arises concerning the relationship of these two epistemic concepts to *the philosophy of history in general*. Second, there is the question as to whether or not a commitment to certain epistemological concepts, like a "maker's-knowledge criterion," in the area of philosophy of history will result in a commitment to a humanistic view of man.

This is, in effect, to ask if some epistemological commitments in the philosophy of history are compatible with humanism and others not. I have not offered an adequate answer to either of these questions, primarily because an adequate answer would entail the [worthwhile] investigation of (1) the concepts in question in relation to the history of the philosophy of history itself; and (2) the history of the humanists' critique of "scholastic" science. Nevertheless, we could not ask for a better place to begin such an inquiry than the first thinker who explicitly formulated the "maker's-knowledge criterion," namely Giambattista Vico.

FOOTNOTES AND REFERENCES

INTRODUCTION

[1]I know of only two papers (in English) that compare Vico and Kant. One is Eugene T. Gadol's paper "The Idealistic Foundations of Cultural Anthropology: Vico, Kant, and Cassirer," *Journal of the History of Philosophy* 12 (1974):207-225. The other is Nathan Rotenstreich's paper "Vico and Kant," in *Giambattista Vico's Science of Humanity*, ed. Giorgio Tagliacozzo and Donald Phillip Verene (Baltimore, Maryland: Johns Hopkins University Press, 1976), pp. 221-240. I comment on both of these papers in Chapter V.

[2]I am relying here on the distinction drawn specifically by Alan and Barbara Donagan in their book *Philosophy of History* (New York: Macmillan Series, 1965). Other philosophers who accept this same kind of distinction are W. H. Walsh in his *Philosophy of History: An Introduction* (New York: Harper Torchbooks, 1960), pp. 14-16; Patrick Gardner in his *Theories of History* (Glencoe, Illinois: The Free Press, 1960), pp. 7-8; and his *The Nature of Historical Explanation* (London: Oxford University Press, 1961). Also there is W. B. Gallie in his *Philosophy and the Historical Understanding* (New York: Schocken Books, 1968), pp. 11-13; and Arthur C. Danto in his *Analytical Philosophy of History* (Cambridge: Cambridge University Press, 1965), pp. 1-3.

[3]For example, P. Gardner in his *Theories of History* (an anthology of philosophers of history) places Vico and Kant under the heading "The Interpretation of the Historical Process." He then places other thinkers under such headings as "The Nature of Historical Knowledge" and "Explanation and Laws."

[4]For example, Arthur Danto in his rather provincial *Analytical Philosophy of History* tells us:

> Analytical philosophy of history, on the other hand, is not merely connected with philosophy: it *is* philosophy, but philosophy applied to the special conceptual problems which arise out of the practice of history as well as out of substantive philosophy of history is not really connected with philosophy at all. . . . The first thing I shall analyse is what substantive philosophy of history pretends to do in addition to giving an account of the past (p. 1).

[5]See Hintikka's "Transcendental Arguments: Genuine and Spurious," *Nous* 6 (1972 September):274. Also see *Practical Reason*, ed. Stephan Körner (Oxford: Basil Blackwell, 1974). There Hintikka also has an article, "Practical Vs. Theoretical Reason: An Ambiguous Legacy", where he speaks of *both* Vico and Kant as espousing the "maker's-knowledge criterion." Concerning Vico he says:

> For Vico, the scope of epistemologically relevant maker's knowledge is not restricted to human thoughts, plans, decisions, intentions, hopes, and wishes but comprises also their concerte manifestations and results in the realm of culture and society (pp. 88-89).

And concerning Kant he says:

> One of the most interesting variants of the tradition of "maker's knowledge" in effect suggests that we can have *a priori* knowledge of things only through imposing this kind of anticipatory framework on them. "Reason has insight only into that which it produces after a plan of its own," says Kant (*Critique of Pure Reason*, vxiii, trans. by Kemp Smith) (p. 93).

[6]I do not mean to suggest by my use of these words "critical" and "speculative" that I approve of the distinction that these words are supposed to signify. The distinction is a bit too tidy and "neat" for my own thinking on the matter. My point is simply that even if we suppose the distinction, somehow or another, to hold good, we still must provide argument to show that (1) Vico and Kand did not "do" critical philosophy of history, and that (2) their speculative claims are false. These arguments and the evidence that would help to substantiate them have been missing from modern scholarship in the philosophy of history.

CHAPTER I

VICO'S CRITERION IN GEOMETRY AND PHYSICS

In his early work *De Antiquissima italorum sapienta ex linguae originibus eruenda*[1] Giambattista Vico tells us ". . . the criterion of truth, the rule by which we may certainly know it, is to have made it."[2] Twenty years later, in his major work, *The New Science,*[3] he tells us:

> . . . the world of civil society has certainly been made by men, and . . . its principles are therefore to be found within the modifications of our own human mind.[4]

We can note from these quotations the following important points: first, in *De Antiquissima* Vico has laid down a general criterion of truth. Second, the criterion suggests that knowledge is intimately related to our "making" and further, that *because* of this relationship we can have access to knowledge. Finally, there is the important point that the criterion, first announced in the early *De Antiquissima*, is carried over to and remains operative in the later work *The New Science*. Vico's criterion in both works may be generally formulated as follows: "One can have knowledge of something *if* one has made it."

We have stated in the Introduction that our objective in this study, in part, is to understand exactly how Vico's criterion of truth (along with his concept of teleology) functions epistemologically, in his philosophy of history, *The New Science*. Although in *De Antiquissima* the formulation and use made of Vico's "maker's-knowledge criterion"[5] has no

particular reference to the philosophy of history (being concerned instead with the sciences of mathematics and physics), it is our judgment that we shall have a better perspective and, therefore, a better understanding of how his criterion operates in his philosophy of history if we *first see* how it operates in the sciences of mathematics (specifically geometry) and physics. We hope this will become more evident as we trace out the career of Vico's criterion.

In this first chapter, therefore, we shall examine Vico's criterion of truth in *De Antiquissima* in its relation to the sciences of mathematics and physics. To further this end, we shall look at the origin of Vico's criterion, the manner in which it is developed in response to scepticism and Cartesianism, and finally, the manner in which it is used to *ground* the sciences of mathematics and physics. We shall then, in Chapter II, examine Vico's use of the criterion in his philosophy of history, *The New Science*.

Let us begin by sketching an answer to the following two questions: first, from where does Vico derive his theory of truth? and second, why is he so bothered about putting forth a "new" criterion of truth in the first place?

Concerning the first question, various commentators, e.g., B. Croce, I. Berlin, and A. Funkenstein,[6] have pointed out that the *general* "verum-factum principle" did not, in fact, originate with Vico, but instead has a rather long history dating back at least to the time of Aquinas. (For a detailed account of the history of verum-factum see "The Source of Vico's Theory of Knowledge" in *The Philosophy of Giambattista Vico* by B. Croce, trans. R. G. Collingwood (London: Howard Latimer, Limited, 1910), Appendix iii.)

Further, it is known that Vico was familiar with the work of the English philosopher Thomas Hobbes, who had declared rather brazenly as early as 1662 in his *Philosophical Problems* that:

> Of arts, some are demonstrable, others indemonstrable; and demonstrable are those the construction of the subject whereof is in the power of the artist himself . . . the science of every subject is derived from a precognition of the causes, generation, and construction of the same; and consequently where the causes are known, there is place for demonstration, but not where the causes are to seek for. Geometry therefore is demonstrable, for the lines and figures from which we reason are drawn and described by ourselves; and civil philosophy is demonstrable, because we make the commonwealth ourselves. But because of natural bodies we know not the construction, but seek if from the effects, there lies no demonstration of what the causes be we seek for, but only of what they may be.[7]

When we compare the above with Vico's remarks concerning the "maker's-knowledge criterion" vis à vis geometry, physics, and "civil philosophy," we come to see many prima facie similarities between Vico and Hobbes. In fact, it sounds very much as if Vico holds *identically* the same views as those of Hobbes. Vico tells us "We are able to demonstrate geometrical propositions because we create them."[8] Concerning physics he says ". . . . were it possible for us to supply demonstrations of propositions of physics we would be capable of creating them *ex nihilo* as well."[9] And finally, concerning the "civil world" he tells us:

> And history which includes the civil world cannot be more certain than when he who creates the things also narrates them.[10]

> . . . this world of nations has certainly been made by men and its guise must therefore be found within the modifications of our own human mind.[11]

The similarities between Hobbes' and Vico's criteria of knowledge exist. Nevertheless, while it is undeniable that Vico was influenced by other thinkers (specifically, Hobbes, Grotius, Tacitus, Spinoza, and Plato), Vico himself tells us that the origin of his

"maker's-knowledge criterion" is to be found in the ancient wisdom of the Italians, specifically in their use of the Latin language. In *De Antiquissima* he says that "the truth is simply that which is made," *because* in ancient Latin the words "verum" and "factum," as the Schoolmen put it, convert.[12] Vico's idea here is that the origin of his maker's-knowledge criterion is to be found by tracing the *etymology* of the Latin words "verum" and "factum" within a traditional "philosophical" doctrine, namely the scholastic doctrine of the transcendentals.

Although not much can be made out of his rather questionable etymological analysis, the theme of the transcendentals plays quite an explicit role in his "maker's-knowledge criterion." The scholastics had argued that because of the transcendentality of being, truth, unity, and goodness, being is convertible with truth, unity, and goodness (verum-unum-bonum).[13] Since the transcendentals are then *themselves* convertible with each other and since all being (except God) is "made," it follows that truth which is convertible with being is also "made." Therefore, argues Vico, verum-factum, i.e., truth, is that which is made.[14]

Now, although it is beyond the scope of this present study to trace out all of the particular influences on Vico's theory or to attempt an end to the debate concerning the "real" origin of his "maker's-knowledge criterion," there are two things (which are undoubtedly true) concerning Vico's distinctive criterion that should be kept in mind. First, Vico holds, following Aristotle, that knowledge is and can only be knowledge of causes (". . . la scienza è la conoscenza delle cause da cui nasce la cosa."[15]) Second, he himself tells us in *De Antiquissima* that the origin of his criterion is to be found in the Latin language. ("In Latino Verum

e Factum hanno relazione reciproca, avvero, nel linguaggio corrente delle Scuole, si convertono."[16]) Since these two points are clearly Vichian (i.e., unborrowed) and, therefore, undebatable concerning the origin of his criterion, we shall take his word as an answer to our first question. Keeping this in mind, let us now proceed to answer the second.

Why, then, is Vico so concerned about putting forth a "new" criterion of truth in the first place? The answer is straightforward. Vico believes that it is necessary to offer a new criterion of truth in order to have a defensible alternative to the views of the sceptics and to that of Descartes (both of whom he found unacceptable). This is to say that Vico believes the sceptics, on the one hand, *must* be adequately answered (if science is to have a secure foundation) and, on the other hand, that Descartes has failed to provide such an answer.

Disagreement with Descartes

The first four chapters of *De Antiquissima* are explicitly formulated by Vico with the following idea in mind: he must offer an alternative theory of truth to the Cartesian theory (an alternative that could then be used to stand up to the critical attacks of scepticism) [and] which could also supply an adequate (philosophical) ground for the sciences of mathematics and physics.[17]

Descartes' famous "Cogito" had declared to one and all that a firm foundation had at last been achieved whereby science could forever remain secure from doubt and the persistent threat of scepticism. In fact, Descartes argued that it was through the method of sceptical doubt itself, i.e., by pushing doubt as far as it could intelligibly be pushed,

that we would arrive at the one indubitable truth, namely that one cannot rationally doubt one's own existence. It was upon this truth, perceived so clearly and distinctly (in conjunction with the method of arriving at it, i.e., "methodological doubt,"[18] that a secure foundation for science was to be laid.

Vico claims in *De Antiquissima* that Descartes' attempt was a failure. It will benefit us at this point to examine closely Vico's criticism of Descartes because much of Vico's theory is clarified in his polemical reaction to the Cartesian theory as put forth in *De Antiquissima*. Vico, while *assuming his own criterion of truth*, criticizes Descartes' theory on two basic points: first, Vico says that Descartes does not address himself to the sceptic's question, and second, Descartes confuses certainty with truth.[19] Concerning the first point, Vico argues that the sceptics' claim is that reality is unknowable. He says that since knowledge ". . . means knowing the causes from which a thing originates,"[20] the sceptic can readily admit the Cartesian claim that he cannot doubt he exists *while he thinks*, but this (i.e., the sceptic's) certainty in no way results in any *knowledge* of reality. Descartes' indubitable truth, insists Vico, is actually a claim of mere awareness. Awareness of one's existence, while thinking of it [no doubt], produces certainty, but it does not follow *from that certainty* that one has knowledge.[21]

It becomes evident that what Vico is actually doing in claiming that Descartes does not answer the sceptic's question is *denying* Descartes' criterion of truth. Let us here review Descartes' criterion so that we may better see Vico's point. Descartes had told us that when one arrives at a clear and distinct idea, one is at the same time arriving at

certainty. "For what can give it certainty, if what guides it had not been clearly perceived."[22] Further, if one arrives at certainty (for Descartes), one is then guaranteed of the possession of truth.

> To begin with, directly we think that we rightly perceive something, we spontaneously persuade ourselves that it is true. Further, if this conviction is so strong that we have no reason to doubt concerning that of the truth of which we have persuaded ourselves, there is nothing more to enquire about; we have here all the certainty that can reasonably be desired . . . we have assumed a conviction so strong that nothing can remove it, and this persuasion is clearly the same as perfect certitude.[23]

From this reasoning, Descartes evolves a *general rule* which instructs us to seek certainty (and therefore truth) by perceiving clearly and distinctly.

> . . . there is nothing that assures me of its truth, excepting the clear and distinct perception of that which I state, which would not indeed suffice to assure me that what I say is true, if it could ever happen that a thing which I conceived so clearly and distinctly could be false; and accordingly it seems to me that already I can establish as a *general rule* [my emphasis] that all things which I perceive clearly and very distinctly are true.[24]

Vico holds that Descartes has here confused certainty with truth by erroneously making certainty the criterion of truth. He insists, therefore, that Descartes' criterion must be replaced by an alternative and avoids this error. The alternative is Vico's own. The true, says Vico, is that which is the object of Science (scienza), while the certain is that which is the object of consciousness (coscienza). (". . . la sua certezza di pensare e la coscienza, non scienza,[25] . . . la scienza e la conoscenza delle cause da cui nasce la cosa."[26]

As we have seen above, the sceptic, according to Vico, is in agreement with Descartes in not doubting that which is *certain*. He will quite readily agree that he thinks and that he exists,[27] but his claim is that from his *certainty, knowledge* does not necessarily follow.

Vico maintains that the "Cogito" does not give us the *cause* of our existence but only the *awareness* of it, i.e., "coscienza." In other words thinking is not the cause (and therefore, not the knowledge) of my being but only an awareness of my existence.

> A sceptic will deny that the knowledge of being can be obtained from the consciousness of thinking. For to know, he insists, is to be acquainted with the causes from which things are produced; but I who think am mind and body, and if thought were the cause why I am it would be the cause of body.[28]

Nor can thought be the cause of my being a mind (i.e., a "thinking thing") either:

> . . . for while the mind apprehends itself, it does not make itself, and because it does not make itself it is ignorant of the form or mode in which it apprehends itself.[29]

The gist of Vico's argument here is that Descartes has erroneously taken *certainty* to be the criterion of *truth*. This is a mistake. The Sceptic, says Vico, cannot be refuted by such a criterion for he does not even challenge it.

> There is no other way by which scepticism can be overthrown than by holding that the criterion of truth is to have made it. For the constant contention of sceptics is that things *seem* to them, but that they do not know what they really *are*. They confess effects, and consequently concede causes to them; but they deny they know these causes, because ignorant of the genera or forms according to which things are made.[30]

He concludes:

> From the whole of the preceding discussion, we may accordingly conclude that the criterion of truth, the rule by which we may certainly know it, is to have made it. Hence the clear and distinct idea of our mind not only cannot be the criterion of truth in general, but not even of that of the mind itself.[31]

It is Vico's view then that only a "maker's-knowledge criterion" of truth, i.e., only a criterion that argues that the mind can have knowledge *only* of what the mind has made, can overcome scepticism and thus

secure a foundation for scientific knowledge. It is here important to note that Vico also tells us in *De Antiquissima* that to ". . . know is to combine the elements of things."[32] He says that knowing is a process which consists of combining and composing, and it is upon completion of this process that one (man) arrives at the perfect idea of the thing whose elements were composed. This notion of composition (and division) is central to Vico's concept of science.

> . . . human truth is what man in knowing composes and makes. Thus science is the knowledge of the form of the mode in which a thing is produced, and by which the mind, because in knowing a thing it combines its elements, makes the thing.[33]

Vico's notion of human, i.e., man's, science complements his idea that a "maker's-knowledge criterion" is necessary in order to justify knowledge. That is to say, it seems clear that for Vico the mind *must* make the truths that the mind knows precisely because the necessary condition for there being any truth (of science) is that it be *composed*. This is because science is the knowledge of causes, i.e., the consciousness of the composition of the elements by which the mind "makes" the things and, therefore, the thing can only be an object of scientific knowledge *if* it is made.

Finally, because truth and fact (i.e., that which is made) are convertible,[34] knowledge of reality is seen as an activity which is the work of a "making mind." (This would seem to suggest that in order to understand the fundamental principles of any science we should first have to understand, in a genetic manner, the principles which make that science possible, i.e., the principles of the human mind. Vico will argue this very thesis twenty years later in his major work, *The New Science*.[35])

We should here pause and note that the gist of Vico's argument so far seems to suggest that the notions "truth" and "certainty" are

mutually exclusive. That is to say that because Vico's "maker's-knowledge criterion" is put forth *against* Descartes's certainty criterion, there is the suggestion that Vico's criterion *must necessarily exclude* any notion of certainty. As I shall later argue in this chapter, this interpretation, i.e., that Vico's criterion necessarily makes truth and certainty incompatible notions, is *mistaken*. The notions "truth" and "certainty" are incompatible as *sufficient* criteria of truth. However, as I shall later argue, Vico's doctrine in *De Antiquissima* should in fact be viewed such that the "maker's-knowledge criterion" of truth can be seen to be synthesizable with the notion of certainty (i.e., coscienza) resulting in an adequate idea of "genuine scientific truth."

An Important Analogy

Having criticized Descartes' criterion of truth and having offered his own "maker's-knowledge criterion" in its place, Vico now sets out to show how *his* criterion can serve as a justifiable ground for the sciences of geometry and physics. To accomplish this end, he makes use of two other particular "philosophical" arguments. The first we shall hereby christen the "God-man maker's-knowledge analogy" argument. (Our choice of this particular name shall, we hope, become clearer as we explain the argument.) This analogical argument buttresses a second philosophical argument also used by Vico to ground the sciences, which he refers to as a "useful hypothesis of 'metaphysical points'." Let us begin with the first, i.e., the important analogy.

Vico proceeds to distinguish two different kinds of knowing which correspond to two different kinds of mind. On the one hand, there is the "knowing" which results from "maker's-knowledge" in its relation to God,

whose mind is infinite. On the other hand, there is the "knowing" which results from "maker's-knowledge" in its relation to man, whose mind is finite. Man's knowing or knowledge is discursive and is, therefore, achieved by abstraction. God's knowing or knowledge is intuitive, and therefore:

> God knows all things, because He contains in Himself the elements of which He composes all things; but man, on [the other hand] in endeavouring to know things, *must have recourse to* dividing them. Therefore, human science is a kind of anatomy of the works of nature.[36]

This is in effect to say two things: (1) that since God has absolute creative power, his knowledge is perfect, whereas ". . . human science is born of a defect of the mind--namely of its extreme littleness . . . ."[37] And (2) in God's knowledge ". . . truth is *identical with* the comprehension of all the elements which compose the universe."[38] [my emphasis] That is to say that ". . . God, in his purest intelligence, knows things, and, *by knowing them creates them*."[38] [my emphasis] This distinction between God's knowledge and man's is epistemologically important because, as we shall later see, it can be used by Vico as a device by which he can show how his "maker's-knowledge criterion" operates in its *most* "ideal" case.

Once again, Vico's claim here is that God knows all things because God's mind contains the elements of all things. This means that God has made all things and can, therefore, have knowledge of them. Further, this "ideal" kind of knowledge has an added feature, namely that the *things* themselves will be produced in *the very act of their being known*. This is to say that in the "ideal" case of knowing, making and knowing will be [thought of as] identical. In Kantian language we should say that God has intellectual intuition.[40]

Man, on the other hand, has no such intellectual intuition and is, therefore, limited in the manner of knowing and in the completeness of his knowledge. Man's mind is simply ". . . external to all things, contains nothing of what it desires to know, and so cannot produce the truth which it seeks to ascertain."[41] The only truths which man can produce are those which contain the causes of things that are not outside man's mind. These, it turns out, are only abstractions.

It is evident here that in *De Antiquissima* Vico's "maker's-knowledge criterion" is to be thought of as functioning in an *analogous* manner in man and God. (Hence, the title "God-man maker's-knowledge analogy.") The analogy, once again, is that man's knowledge is due to his making *just as* God's knowledge is due to his. The difference between the two (which accounts for the analogical character of the comparison) is that in man's making or knowing he never achieves that "ideal" intuitive kind of knowledge that God does. In the case of man there is merely discursive, abstract reasoning in knowing where the object of knowledge (specifically nature) must first be given and then analyzed through abstraction and then reconstructed so that it may be known.

God's knowledge, on the other hand, while due to his making, *is* the "ideal" kind whereby in merely thinking or knowing the object, he *creates* it. The importance of our stressing this distinction is that while this distinction holds good for Vico in *De Antiquissima*, it does not hold good later (regarding history) in *The New Science*. That is to say that Vico will later argue (in *The New Science*) that it is in precisely the science of history that those causes for which we search in order to explain the social world are located completely within the "modifications

of our own human mind."[42] What is more, concerning historical knowledge we are, in fact, just like God.

As we've seen above, Vico's project in *De Antiquissima* consisted of an attempt to (1) answer the sceptics; (2) replace Descartes' criterion of truth with his own "maker's-knowledge criterion"; and (3) provide a "philosophical" justification for knowledge in the natural sciences, specifically geometry and physics. He believed that he could achieve these ends if he could show how, metaphysically and epistemologically, his own criterion could adequately ground scientific knowledge. He attempted, in other words, to show exactly how knowledge in geometry and physics is *possible* metaphysically and epistemologically. Let us, therefore, now turn to his attempt at grounding each of these sciences beginning with geometry. It is precisely here, i.e., in his explanation of the possibility of geometry, that we shall encounter the *second important argument* we spoke of earlier, i.e., the argument for the "metaphysical points."

Vico has told us that man's mind (as opposed to God's) can contain only the causes of abstractions,[43] i.e., those things that are internal to his mind and which are not, therefore, external realities. He believes that the two primary examples of such abstractions are those demonstrations found in the worlds of mathematics and physics. Man can have a science of these two worlds precisely because he has made them. In fact, concerning mathematical making, Vico claims that man is *almost* like God in that:

> Arithmetic and geometry . . . demonstrate by causes because the human mind contains, and hence can order and arrange the elements of the truths; and from these ordered and composed things arise the truths which they demonstrate, so that demonstration is identical with the operation (operatio) and the true with the made.[44]

Man is *unlike* God, however, in that in God's making the product is the "real" world, i.e., corporeal nature itself. In *De Antiquissima* Vico makes it quite clear that there is no sense in which man's making can actually produce the "real." The best man can achieve is abstractions of it. But at this point the question naturally arises: If physics and mathematics (geometry) are only abstractions of the real world, how is it that man's sciences *of that world* are to be secured on a firm foundation from sceptical doubts?

The problem, in other words, is how can Vico explain, in using a "maker's-knowledge criterion" that man secures certain knowledge for these two sciences if these sciences are not somehow *about* the "real" world? That is, if these sciences are merely abstractions, how then do they justify our knowledge claims concerning "real" nature? Vico's attempted solution to this problem is to ground man's sciences (i.e., man's makings) in God's making, and it is here, i.e., in his attempt to explain *this grounding*, that he turns to a discussion of the relation of geometry to what he calls a "metaphysical hypothesis,"[45] i.e., his doctrine of "metaphysical points." (It is also here that he discusses the relation of physics to the "experimental method" of Bacon.[46])

Geometry and "Metaphysical Points"

In the case of geometry, the question Vico addresses is this: Precisely how are we to understand man's mathematical abstractions as being grounded in the real world? That is, if we cannot somehow relate mathematics to real nature, what right do we have to think of it as a "science" of the real world? Although we are anticipating our third chapter, it is here worth noting that Kant, while also making use of a

"maker's-knowledge criterion," bothered his head over this very problem. He tells us in the first *Critique* that "Mathematical concepts are not, therefore, by themselves knowledge, except on the supposition that there are things which allow of being presented to us."[47]

Vico's answer relies quite heavily on his "God-man maker's-knowledge analogy" (discussed above). He believes that it is due to the different but analogous functions of the "maker's-knowledge criterion" in God and man that man can be said to be "God-like" in creating things whose truth he can then know. Because of his ability to know truths in a manner that is *analogous with* God's knowing, Vico thinks he can show that man's making will correspond to, and be grounded in, God's. That is to say that man's scientific makings or products will correspond with God's,which are, in turn, the real objects that make up the real world.

Vico next tells us that geometry is the science in which man has completely certain knowledge because in this area he has completely produced the elements of the science (i.e., the geometrical figures) out of his own created abstractions (i.e., the "geometrical points"). Hence, it is in geometry that man is most "God-like" because it is in this science that man's ". . . demonstrations are identical with his [intellectual] operations and [therefore] the true is [identical] with the fact."[48]

Vico's suggestion is that if the "God-man maker's-knowledge analogy" holds good, i.e., if God's making and man's making actually are similar, we should then be able to infer from the analogy the following as a "metaphysical hypothesis" (". . . ipotesi sul punto metafisico"[49]): Just as man has made the world of geometrical objects out of so many basic elements, i.e., *geometrical points*, so too God must have made the world

of natural objects out of so many basic elements, i.e., *metaphysical points*. As Professor Max Fisch cogently explains:

> On the hypothesis that our making in mathematics is as near as we can come to God's making, but that what we make are fictions and what God makes are realities, we reach the hypothesis that the elements made by God, out of which He makes the world of extension and motion, are metaphysical points. As in geometry we construct the extended line, plane, surface, and figure from the unextended geometrical point by postulation or hypothesis, and, as in rational mechanics we construct motion in the same way, so, in metaphysics, our hypothesis must be, first, that God produces extended bodies from points that are unextended and undivisible but endowed with infinite power of extension, and, second, that the conatus or power of motion ascribed by physicists to bodies must be ascribed instead to these metaphysical points.[50]

For Vico, therefore, our geometry (which is an abstracted making, i.e., a kind of theoretical model of objects conceived spatially) can be seen as, on this hypothesis, corresponding to God's makings of the "real" objects in space. This is so insofar as our geometry is thought of as a mathematical description of nature.

Armed with this "hypothesis," Vico believes that he can *explain* how man's science of geometry, while being an abstraction, is nevertheless grounded in God's making (i.e., the "real" world) and thereby *explain* how geometry as a science is possible. Both God and man have knowledge in an analogous way; that is to say that the maker's-knowledge criterion (which is the only criterion that allows us to answer the sceptic) applies to both divine and human knowledge. To say man's *knowledge* is analogous with God's is, in effect, to say that man's *creations* (i.e., his makings) are analogous to God's. This, in turn, is to say that the "basic elements" out of which man constructs his geometrical objects must have analogous "counterparts" which serve as the "basic elements" out of which God constructs his natural objects. The "basic elements" in the case of God must be

similar then to a geometrical point and yet different enough that it can "account for" (i.e., metaphysically explain) matter and extension. Hence, the hypothesis of "metaphysical points."[51]

Vico believes that his hypothesis surpasses Descartes' attempt to explain matter and its extension because, as we saw earlier, Descartes' clear and distinct ideas only render an awareness of things (e.g., matter and extension); they do not explain their causes (i.e., they do not produce "knowledge"). For Descartes, *knowledge* of matter in the real world ultimately depends on God's veracity. Knowledge, for Descartes, is an act of faith which, is finally to say, matter and extension are simply *given*, not accounted for.[52] It is precisely here that Vico and Descartes disagree. "Give me extension and motion," said Descartes, "and I will construct the universe." "Neither can be given," replied Vico, "for both need to be themselves explained."[53]

Vico thinks his theory can give a rational account of matter and extension in the real world. As Fisch puts it, Vico believes that with his hypothesis

> We can descend from metaphysics to physics, that is from God and from the true Forms of things so they are in God, to the physical world (163, 259, 261); we escape dualism by taking the substance of bodies to be incorporeal, the causes of motion to be motionless; and thus, instead of taking the physical world as brute fact we *explain* its existence. (Fisch, *Vico Symposium*, p. 410)[54]

Descartes' theory, i.e., his "clear and distinct ideas" of matter (which he thought of as being identical with existence) and motion (as a mode of extension) really, for Vico, amounts to no *explanation* (i.e., a demonstration of the causes) of matter and extension at all. Instead, Descartes merely takes matter and extension for granted and thereby ". . . exalts

or substitutes [in an absolute manner] physics for metaphysics."
". . . Renato che innalzo addirittura la fisica all metafisica . . ."[55]

There is also another danger, which Vico thinks his theory avoids, and it is the opposite extreme of Descartes' error; namely, that of turning physics into "nothing but" metaphysics. This Vico believed to be Aristotle's error. (". . . Non la vide Aristotele, che introdusse direttamente la metafisica nella fisica . . ."[56]) Now, although the hypothesis of "metaphysical points" is used by Vico to metaphysically ground our knowledge of the physical world, it *cannot* legitimately be used to explain anything about *particular* bodies or motions. For these *particular* explanations, we must rely upon an "experimental" physics. (". . . la diretta dimostrazione sperimentale . . . In questo modo la fisica puo progredire."[57])

Before turning to an examination of Vico's notion of physics, let us here pause and quickly review his reasoning up to this point. Vico began by arguing that any rational account of knowledge must be prepared to answer the questions of the sceptic. He found that the only satisfactory answer is the one which states that "since we have composed all of the elements of the object we can thereby know the causes of it and therefore have knowledge of it." *Ideally*, the very best kind of knowledge would be that in which the *actual composition* of the object would take place in the very *act of my thinking it*. This is to say that *knowing the object would be identical with making it*.

Next, Vico argues that this, in fact, occurs in the science of geometry. However, our product is merely an abstraction. Man cannot make the "real" world, i.e., corporeal nature, only God can. Since man is limited in this way, we must be able to give an account of how our

geometrical science, being only an abstraction, is nevertheless grounded in the real world. In giving this account, we shall take the "maker's-knowledge criterion" of truth and conjoin it with an analogical argument to substantiate a *useful metaphysical hypothesis*. This "hypothesis" will show first what elements the world is ultimately composed of and secondly, their cause. Third (and perhaps most importantly), it will show how it is that our science gains access to the "real" world. The hypothesis argues that the world is composed of "metaphysical points" which are caused by *God* and that we pass (by analogy) from these points created by the divine mind to man's science of them.

The end result of Vico's rather elaborate argumentation is that it claims to have justified the science of geometry and given a metaphysical basis for physics. Geometry allows us a kind of knowledge of the real world in that it is *indirectly grounded* in the real world. Nevertheless, because we have not created the real (i.e., corporeal) world of nature ourselves, there is a strong sense in which geometry, although completely certain, can never give us absolute *real* truth. Let us now turn to Vico's treatment of the question of the possibility of "real" truth. This question in *De Antiquissima* is seen to be the same question as that of the possibility of *physics*. We shall, therefore, here examine Vico's treatment of physics in relation to the "maker's-knowledge criterion."

Maker's-knowledge and Physics

Vico has made it quite clear that human knowledge can ultimately be justified only if it can be shown that it is analogous to God's knowledge. This amounts, as we've seen, to showing that human knowledge can be rationally justified only if it can be *critically* grounded in human

maker's-knowledge which is itself *metaphysically* grounded in the divine maker's-knowledge.[58] Man is "God-like" par excellence in the science of mathematics, i.e., in geometry, because man knows all of the causes of the figures he produces. In fact, in his demonstration of his geometrical knowledge, he thereby produces the cause *ex nihilo*. This is because geometry's elements are completely contained within the mind of man. "We are able to demonstrate geometrical propositions because we create them."[59]

However, the rest of the sciences are not in the same, seemingly privileged position. For example, Vico tells us "Were it possible for us to supply demonstrations of propositions of physics, we would be capable of creating them *ex nihilo* as well."[60]

The fact is that although we have a useful hypothesis which metaphysically explains the existence of matter and motion, we are *not* capable of demonstrating the particular propositions of physics by causes (in any absolute sense), for we are not capable of producing the elements of the "real" world out of nothing. If we could demonstrate the propositions of physics in the same way that we demonstrate the propositions of geometry, then the causes of the elements of the "real" world would be completely contained within our mind.

For Vico (as we will find it is not the case for Kant), this is absurd, for it results in our being able to *completely produce nature*. To claim that the causes, i.e., the explanation, and therefore the possibility of nature is mind is for Vico simply [too] extravagant. (Actually, it is also [too] extravagant for Kant when he thinks of nature as Vico does, i.e., as a thing in itself.) Yet it is not extravagance alone which keeps Vico from following the totally subjectivists' route.

His reasons seem to be rather realist in nature, i.e., quasi-Platonic. He says:

> Since human science owes its existence to abstraction, the more sciences are immersed in corporeal matter the less certainty have they. Thus mechanics is less certain than geometry and arithmetic, because it treats of motion, and of motion effectuated in and through machines. Physics is less certain than mechanics, because it treats of the internal motion of centres, while mechanics treats of the external motion of circumferences. And morals is still less certain than physics, because while the latter considers the internal motion of bodies, which belong to nature which is fixed and definite, the former investigates the motions of souls--motions the most abstruse, and which have their source largely in wilfulness which is unlimited. Besides, the things which are proved in physics are those to which we can perform something similar, and the views as to natural things which are universally received with the greatest admiration and approval are those to the support of which we can bring experiments by which we so far imitate nature.[61]

In any science other than mathematics, it is because of the adulteration of the ideas of the subject matter of that science with something corporeal that renders the causes of that subject matter incapable of being contained within our mind. Only God's mind could completely contain the causes of the subject matter of a science that invokes corporeality. Unlike man, God has created the corporeal elements, and therefore, his mind is not limited by them. God's mind, being infinite, contains all; man's mind, being finite, contains only fictions.

Yet, it is interesting to note that Vico sees these very limitations of man's mind as having the following positive result. Knowledge will have degrees of certainty and truth. The status of the various sciences will form a hierarchy according to a descending order of certainty and an ascending order of truth, and physics will be justified philosophically only if it is an "experimental" science.

According to Vico, the various sciences will contain various "mixtures" of truth and certainty. It is because of these various mixtures

of truth and certainty that Vico sees his "maker's-knowledge criterion" producing a *positive* result for physics. Physics, in the end, must be seen as an "experimental" science. Why is this? In order to understand how Vico arrived at this idea, we must here examine more closely his notions of *truth* and *certainty*.

Certainty, for Vico, is seen as the object of simple consciousness, i.e., conscious awareness (coscienza). We can have complete awareness, i.e., certainty, of those things that we can demonstrate completely. *Truth*, on the other hand, is seen as the object of science (Scienza). We can only achieve truth if we have composed the elements of the object in question. Truth *without corporeality*, such as in geometry, is *abstract* Truth *with corporeality*, i.e., the truth of the natural world, is *real*. It goes without saying that both truth and certainty are necessary ideals for any science which claims to provide us with knowledge.

Now geometry, whose elements are completely made by us and is, therefore, totally demonstrable, will rank highest of the sciences in certainty. The assumption here is that we can be most certain about those things that are made by us completely. However, since the ideas of geometry are completely unadulterated with corporeality, geometry's figures cannot be thought of as *real* "trues" of this world. (In *De Antiquissima* Vico means by "verum" "the true" as in the transcendentals, that is to say that being, goodness, and beauty are all "true," i.e., they are all *intelligible*. This is opposed to "truth." Science's objective in *De Antiquissima* is, therefore, the true or plural, vera, the trues.) They are, rather, *abstract* trues, i.e., fictions (fittizie).[62] Further, since all of the corporeal elements of the other traditional sciences are made

by God, these elements are external to the mind of man. That is to say, they cannot be absolutely demonstrated, and therefore, they cannot be absolutely known by man, which is to say that they cannot be known in the same manner that geometry can. Nevertheless, there is, as the last paragraph in the above quotation indicates, *knowledge* in physics because there is something *like* demonstration involved in physics. Max Fisch describes Vico's account of this in the following manner:

> . . . he [Vico] finds something in physics that answers to demonstration in mathematics, namely experiment. What is wanted in physics . . . is not the deductive geometric method of Descartes but demonstration itself, which is inductive and which consists in "explaining particular effects in nature by particular experiments which are particular works of geometry." (184)[63]

To say that we explain by experiments which "are particular works of geometry" is *not* to say that geometry is also an experimental science. It is instead to say that geometry lends certainty to experiment. In modern terms we should describe this procedure as attempting to mathematize our hypothesis into precise, manageable, formulae. Fisch interprets these thoughts of Vico pragmatically:

> . . . to explain variations in natural phenomena, we vary our hypothesis and the experiments that are guided by them until we succeed in producing variations similar to those we are trying to explain. Just as that which has the force of demonstration in mathematics is operation and construction, so, that which has the force of demonstration in physics is experiment, and what mathematics contributes to experiment, by way of mechanics, is definiteness of hypothesis and of experimental design and contrivance.[64]

The degree of certainty that man gets from an experimental science like physics is not as high as that of geometry. This does not mean, however, that physics does not produce proofs, demonstrations, and knowledge. Vico is saying, in effect, that we are still *making* but:

> In physics those theories (ea meditato) are proven which allow us successfully to operate something *similar* to them: and the clearest and most commonly accept-d reasoning about natural things are supported by *experiments* in which we *create* imitations of nature [my emphasis].[65]

Vico is fully aware that his "maker's-knowledge criterion" (and therefore, demonstrability itself) does not hold good in the same total way in physics as it does in geometry. In the case of geometry, the causes are completely contained in our mind. Since knowledge is the composition of those causes, we are, in geometry, like God. Our knowing is equal to our making. Since the "trues" of geometry are absolutely created by us, we can have absolute direct simple awareness, i.e., certainty, of them. But, it should be remembered, the abstract "trues" of geometry are not the real "trues" of the world of nature. The ideas of the science of geometry, since they are fictions, contain no trace of corporeality. They are, rather, "trues" which, by metaphysical hypothesis, are grounded in the real, corporeal world. One might think of them as real trues *only of* the "mathematical world," while they are abstract trues of the natural world. On the other hand, the knowledge of the world of nature that we gain from physics is possible because man, in his experiments, *makes models* of how he thinks nature behaves. In geometry the triangle, for example, is not seen as a *model* of some member of the real "mathematical world." Rather, the triangle *is* the member of the real "mathematical world." In mathematics the so-called model *is* the thing and to create the model *is* to create and thereby know the thing in the real "world of mathematics."

In physics, on the other hand, there *are* "genuine" models. This is to say that the model that is created in physics, i.e., our "experimental hypothesis," is not a member of the real world of nature. It is,

rather, a model of how some member or members of nature operate(s). In physics we get at the real truth (trues) of nature by experimentally demonstrating causes while relying on models. In physics, therefore, knowing is *not* the same as making. What we make is only a model of nature whose elements, we hope, operate *like* our model. We must think of the world "as if" it were like our created model. By thinking of our models as being representative of nature, we can then demonstrate by causes and, therefore, have access to knowledge of nature.

However, because of the use of models, the knowledge that is gained in physics is partial only, i.e., it is not identical with "making" as was the case in geometry. Therefore, knowledge in physics is *not totally certain*. We are, for the most part, at the mercy of nature. As Fisch puts it:

> That is, such quasi-truth or intelligibility as nature in part has for us, in spite of its being none of our making, lies in the control it exerts over our conjectures about it, as we assimilate our makings to it in successive approximations, and the tools of this assimilation are mathematics and experiment.[66]

It is precisely because of this difference between geometry and physics that Vico saw his "maker's-knowledge criterion" providing the important *positive justification* for the respective strong points of these two sciences. Both geometry and physics must be justified by the "maker's-knowledge criterion." In neither case can we have justifiable access to knowledge *unless we can demonstrate by causes*, i.e., in some sense, *make* the elements of the subject matter of that science. Further, it should not be thought that because physics and the rest of the traditional sciences are only partially demonstrable (when compared to geometry) that they are, therefore, not truly sciences. Nor should it be thought that

they somehow fail to give us knowledge. Vico's claim is just the opposite. That is to say that the knowledge we have in physics, for example, we have precisely because we have *not* totally created corporeal nature but have instead created experiments. In physics we know because we make and since what we make are experiments, our physics will be experimental. (This point will be important to keep in mind, especially in Chapter V, where we answer some critics' objections concerning Vico's scepticism in his knowledge of nature.) While geometry's strong point is its certainty, the strong point of physics and the traditional sciences is that they deal with *real* as opposed to *abstract* truth (trues). The *real* truth of the natural world can only be arrived at for man by the experimental method. "Let us conclude finally that it is not the geometric method that should be used in physics, but [experimental] demonstration itself."[67]

There is, however, a price to be paid (when physics is justified by Vico's "maker's-knowledge criterion") for *experimental* physics. The price is that we gain access to real truth while, at the same time, forfeiting the degree of certainty that we had obtained in geometry. However, Vico believes [that] this handicap, i.e., the loss of certainty, is really an asset. Certainty can only be achieved in those cases where the "maker's-knowledge criterion" functions in a "God-like" fashion. In man's sciences this means that certainty can only be achieved *at the expense of* real truth, i.e., knowledge of the particulars of nature. Therefore, Vico reasoned, since it is the job of physics to provide us with particular knowledge of nature, physics must strive to be *unlike* the mathematical sciences and *experimental*. Experiment does not totally deny our making,

for it still remains true that we can only justify our [experimental] knowledge in physics because we have "made" the experiments which, in turn, provide us with the causes of that knowledge. It becomes clear that it is precisely in this give-and-take manner (i.e., giving up real truth and taking certainty and vice versa) in which Vico's "maker's-knowledge criterion" operates in relation to mathematics and physics that the positive justification for the sciences is demonstrated. The sciences will then line up in a descending order of *certainty* and an ascending order of real *truth*. One of the results of Vico's application of his criterion to physics is that only "experimental" physics (Vico clearly has Bacon in mind) is justified philosophically.

Truth and Certainty in *De Antiquissima* and *The New Science*

It has been pointed out by many commentators that Vico's notions of truth and certainty (especially as they are found in *De Antiquissima*) are not without ambiguity. They seem particularly confusing when placed alongside his treatment of them in his mature work *The New Science*. Because of this troublesome unclarity, various commentators have tried various ways of interpreting Vico in hopes of clarifying his meaning. For example, in order to avoid this ambiguity Benedetto Croce has separated Vico's theory of knowledge into two distinct phases, that of *De Ratione Studiorum* and *De Antiquissima* and then that of *The New Science*.[68] In a similar vein Leon Pompa when speaking of *De Antiquissima* and *The New Science* argues quite forcefully that the ". . . kind of taxonomic scheme which arises from the theories contained in the two works is entirely different."[69] And therefore, at very important points ". . . the theory of knowledge of the *Scienza Nuova* departs from the purely conventional

theory of the *De Antiquissima*."[70] Finally, Robert Flint in his early work on Vico has stated that in *The New Science* "Vico could not fail to perceive that there was thus another way of distinguishing truth from certainty than that which he adopted in the Metaphysics."[71]

For the most part I am in agreement with the various points made by these commentators concerning the differences between Vico's early and mature theories of knowledge. One obvious reason that the notions of truth and certainty in these two works are particularly troublesome is that Vico himself never bothered to render them [particularly] clear. Nevertheless, what is clear is that the early *De Antiquissima* plays a *foundational* role for *The New Science*.[72] All three of the above commentators agree that the ground for Vico's "maker's-knowledge criterion" in *The New Science* is to be found in *De Antiquissima*.[73] However, in their pointing out the differences in these works (i.e., differences of epistemological concern), the suggestion is that the foundation for Vico's ideas, specifically concerning truth and certainty in *The New Science*, is *not* to be found in *De Antiquissima*.[74] It is with this point that I take issue.

What I should now like to argue is that the theory of knowledge in *De Antiquissima* can be plausibly interpreted to show that it already contained the seeds for the explicit synthesis of truth with certainty found in *The New Science*. That is of some import, for as we shall show in Chapter II, the synthesis of the concepts of truth and certainty is as fundamental to Vico's historicity thesis (i.e., the thesis that man's nature is somehow historical) in *The New Science* as is his "maker's-knowledge criterion." In fact, the synthesis of these concepts simply makes up the other side of that epistemological coin.

Because of this relationship (i.e., it making up the other side of that epistemological coin), it would seem that the truth-certainty synthesis should have its beginnings in precisely the same place that the "maker's-knowledge criterion" does, namely in *De Antiquissima*. I should like, therefore, to suggest an interpretation of *De Antiquissima* which consists of relating and *perhaps developing* Vico's concept of certainty in conjunction with his concept of truth. I wish, therefore, to *propose* the following way of looking at Vico's early work: Let us assume that for Vico any genuine science (e.g., geometry, mechanics, physics, etc.) will contain the three following concepts: (1) the concept of a "maker's-knowledge criterion" of truth; (2) the concept of certainty; and (3) the concept of corporeality. (There is a sense in which even geometry will *indirectly* contain the concept of corporeality in that for geometry to be a "science" of the real world, it will need to make use of the "metaphysical points hypothesis" even though its primary elements are fictions and, as a result, it is [even if by analogy] related to the corporeal.) This is to say (1) that science must have a criterion by which it can secure itself from scepticism, (2) that it (science) must be more or less certain, and (3) that it must, in some way, relate to the natural corporeal world if it is to legitimize its claim to be "science."

In *De Antiquissima* we saw that Vico's criticism of Descartes rested to a large extent on the accusation that Descartes had erroneously accepted certainty as the criterion of [scientific] truth. Vico's view seemed to be that certainty is one thing, the true is another. He argued (rather polemically) that certainty could not possibly be the criterion of [scientific] truth because among other things although I am *certain* of my existence, it is obvious that I did not *make* my existence.

On the other hand, as I pointed out earlier, it would surely be a mistaken interpretation to take Vico as saying that truth and certainty are actually *mutually exclusive*! Surely we should be able to say that *we can be certain about things that are true*! In fact, as we shall see later in Chapter II, Vico himself points out in *The New Science* that because the common language of mankind in its entire history has always suggested such a relationship (i.e., of being certain of what is true), it would benefit philosophers in their pursuit of truth to make use of philology, which is the study of the certain.[75] However, that claim is made twenty years later, and our problem presently is *De Antiquissima*.

It is my view that it would be a mistake to interpret Vico as saying (in *De Antiquissima*) that whenever one has truth one does not *therefore* have *any* certainty, just as it would be a mistake to read him as saying that whenever one has certainty, one *therefore* has truth. Vico's claim is simply this: the mind can have truth when the mind has made truth. The mind cannot have truth when the mind has not made it. The mind has certainty, on the other hand, only when it has a *direct, simple awareness* of its activity. This certainty, however, is not science (scienza) but is instead conscious awareness (coscienza). Certainty is a fact of coscienza, and coscienza (unlike scienza) is *not* capable of demonstration by causes.[76]

If we keep this (the above) in mind, we shall have no difficulty in thinking of the truth (i.e., the trues) of science and the certainty of consciousness as mutually compatible. That is to say, there is nothing contradictory in our being directly aware (i.e., having coscienza) of something that we have made, for example, having Scienza.

The rather modest point that I am trying to make is that Vico's notions of truth and certainty in *De Antiquissima* can be plausibly interpreted (without distorting anything that he explicitly says there) to show that when one has scientific truth *one can also have certainty*. Therefore, it is my view that *De Antiquissima can* be plausibly viewed as the *source* of the idea (later explicitly stated in *The New Science*) that [in history] there is a necessary unity (i.e., a synthesis) of truth and certainty.

Let us here pause and review the problem which gives rise to my interpretation. It (the problem) most sharply presents itself when we try to understand the relation of truth to certainty (in *De Antiquissima*) vis à vis the various sciences. For example, in our examination of physics, it did seem to be the case that Vico was arguing the following: if we have any knowledge of *real* truth, then we cannot be absolutely certain about that truth. His reasoning I took to be this: certainty, i.e., direct simple awareness (coscienza) can only be *absolutely attained* in those cases where we have completely, in some sense, made the thing. In physics, because of the necessary role played by corporeality, we only make models of the thing, *not* the thing itself. In physics, therefore, we do not have *absolute* certainty of the things themselves. Yet we do have *some certainty* to the degree that our models have been composed with the aid of that science of which we are absolutely certain (i.e., in the case where we have completely made, in some sense, the thing), namely mathematics.

On the other hand, when we take mathematics as our example science, we find that although we have *absolute certainty* (for here our

composition *is* the thing itself), we *therefore* do not have any *real* truth. We merely, instead, have *abstract* truth. In mathematics it is precisely because of the necessary absence of corporeality (directly) that we can have absolute certainty.

It is at this point that the problem becomes acute. Earlier, we had said that for Vico the aim of a "genuine" science is to know truth *with* certainty. At the same time, however, we see that this notion of a "genuine" science is not guaranteed in the two-paragon examples of physics and geometry. Further, it seemed clear that Vico's criticism of Descartes had traded on the very notion that when one has certainty, one does not thereby have truth. Hence, given what *we have maintained* was Vico's implicit notion of a "genuine" science, it seems (at the very least) that he must show that although the true and the certain are not to be identified, there must nevertheless exist a necessary unity between them.

The *problem*, therefore, is this: can we plausibly justify the claim that *De Antiquissima* can be *viewed as the source* of the idea that there is a necessary unity of truth with certainty in spite of their having been *radically* distinguished there? In other words, can Vico be read (in *De Antiquissima*) as saying that although certainty is one thing and (contra Descartes) truth another, truth and certainty are, nevertheless, necessarily unitable?

We cannot turn to *De Antiquissima* for an answer to this difficulty, for Vico nowhere there addresses himself to it. Twenty years later in the second edition of his major work, *The New Science*, he will claim to have solved this problem by having synthesized truth with certainty.

He says in that work that he ". . . reduces to certainty human choice which by its nature is most uncertain--which is as much to say it reduces philology to the form of a science."[77]

Further (and this is quite important for our interpretation), in his Autobiography written twenty-one years after *De Antiquissima* in the third person, Vico does suggest that he was thinking of the synthesis of truth with certainty in *De Antiquissima*. He tells us, in the *Autobiography*, while speaking of this very problem:

> By this insight Vico's mind arrived at a clear conception of what it had been vaguely seeking in the first inaugural orations and had sketched somewhat clumsily in the dissertation *On The Method of the Studies of Our Time* and a little more distinctly in the *Metaphysics* [*De Antiquissima*].[78]

It seems clear from this statement that Vico thought of his ideas concerning this problem as having a *developmental character*. By the time *The New Science* was written the problem was solved. However, in *that solution* the polemic against Descartes is missing and a "new" subject matter, namely history, is introduced, bringing along with it a modification of the old criterion of certainty. (The new criterion for certainty is the common sense of the human race, see N.S. #348.)

On the other hand, in *De Antiquissima* the problem had only just arisen. It came about because Descartes' theory of truth, which was based on the certainty of consciousness, had to be refuted, while geometry, the paradigm of sciences, demanded that whatever the criterion of truth, certainty must somehow be included.

Once again, our *specific* difficulty is this: Can we view the relation of truth to certainty within the context of *De Antiquissima* as

one which is able to provide a consistent ground for the explicit synthesis of these concepts in *The New Science*? This is *not* to say that truth and certainty *must* be seen in *De Antiquissima* as explicitly synthesized or even that the concept of certainty *must* retain *totally* the same meaning in the two works. All that is required is to show that the synthesis of these concepts in *The New Science* can be viewed in such a way as to suggest the *developmental character* of the concepts developing *from* an earlier use made of them (or aspects of them) in *De Antiquissima*, without contradiction.

Robert Flint in his book on Vico suggests that this cannot be done. Flint says that Vico in restricting:

> . . . the sphere of truth . . . widens that of certainty, and to the sphere of certainty he relegates all truths which he deems incapable of demonstrative proof, but which he believes are to be accepted on the authority of the individual or the common consciousness of divine or human testimony . . . His certainties are therefore, from one point of view, just truths to which he calls the criterion of truth does not apply, and for which he finds other criteria in consciousness and common sense.[79]

Although Flint's account of the relation of truth to certainty is designed to argue *for* the conflict of the theory of *De Antiquissima* with that of *The New Science*, I believe that the solution to our difficulty is to be found within his basic insight.

The solution is simply this: we should view Vico's notion of certainty (i.e., Flint's "truths" of coscienza) in *De Antiquissima* as a necessary element of "genuine" scientific truth. This is to say that I propose that we think of the notion of a "genuine" scientific truth (which I earlier attributed to Vico) as being incomplete if it does not contain any "truths" of coscienza. Once again, this is *not* to say that if one has coscienza of something that one *therefore* will have scientific truth. It

is rather to say that if one has scientific truth, one will *therefore* have *some degree* of certainty (coscienza).

If we view the relation of truth to certainty in this way, we shall also avoid the problem pointed out by Flint that Vico's ". . . certainties are therefore . . . just truths to which what he calls the criterion of truth does not apply . . ."[80] For what we are suggesting is that in *De Antiquissima* (although he nowhere explicitly says this) Vico's criterion of truth is *by itself* simply incomplete. Our interpretation argues that the "maker's-knowledge criterion" *alone* cannot produce "genuine" scientific truth. It must, therefore, be aided by Flint's so-called "truths" of consciousness, i.e., certainty (coscienza). It should be noted that Flint's choice of the word "truth" here is unhappy, for these so-called "truths" of consciousness cannot by themselves (given Vico's criterion) possibly constitute knowledge. This is because they do not allow us any information concerning the particular subject matter's genesis, i.e., its causes. Hence, Flint's use of this word "truth" is at best misleading. (The criterion for something being certain is merely its accessibility to the common consciousness of our individual affirmation, nothing more.[81] In this definition of certainty there is no mention of "truths" of any kind.)

The certain, which is an awareness of those things *not* demonstrated by causes, can nevertheless be viewed as a necessary feature of scientific truth. It is necessary because it helps us decide whether or not to accept something *as* a scientific truth. That is to say, if I *necessarily* could *not* be certain of a proposed truth of science, surely that would be good reason to suspect it as a candidate.

Another way of making our point is to say that in *De Antiquissima* the "maker's-knowledge criterion" *could* have, and perhaps *should* have, been synthesized with the criterion of certainty (i.e., the appeal to consciousness) in order that "scientific truth" might have been adequately grounded. No such synthesis ever took place. However, our claim is that it *would not have been inconsistent if it had*. In other words, our claim is that Vico says nothing in *De Antiquissima* that explicitly contradicts his argument in *The New Science*. In *De Antiquissima* Vico only tells us that to have truth we must make the object and that certainty does not guarantee the possession of knowledge of the object. This is because certainty is only conscious awareness.[82]

Now R. Flint has viewed these early claims of Vico as *inconsistent* with those of *The New Science*. Flint sees the theory of knowledge of *De Antiquissima* to be in conflict with the thesis of *The New Science* and that, therefore, Vico had to rework the notions of truth and certainty to achieve consistency. "Vico could not fail to perceive that there was thus another way of distinguishing truth from certainty then that which he adopted in the Metaphysics."[83] It is Flint's contention that Vico

> . . . By brooding over the comingled truths and errors which have been indicated . . . brought forth the idea of a general development of human thought from consciousness to science, from authority to reason [in *The New Science*].[84]

We have argued, contrary to Flint, that Vico's early work can be seen to form *part* of one consistent theory in its relation to *The New Science*. This is not to say that there isn't a *prima facie* conflict. It is to say rather that the conflict arises only if we assume that the earlier theory was *fully and completely* developed. We have argued that it was not. The result is that we had to attribute to Vico an *implicit*

notion of "genuine" scientific truth. With this notion we could then show that the theory of *De Antiquissima* can be viewed as consistent with the synthesis of truth with certainty twenty years later in *The New Science*. Finally, I should argue that this is a desirable way to interpret Vico for two reasons. *First*, Vico himself makes no reference to this (i.e., Flint's alleged *conflict* of the two works, but instead tells us that his ". . . mind arrived at a clear conception of what it had . . . sketched . . . in the Metaphysics."[85] *Secondly*, this interpretation preserves the force of Vico's criticism against Descartes (i.e., that certainty is not the criterion for truth) while it (at the same time) argues for the developmentally consistent nature of Vico's theory of knowledge. (Flint's interpretation, e.g., preserves the arguments against Descartes but argues that Vico's thought in *De Antiquissima* is inconsistent with that of *The New Science*.)

The result is the following: "genuine" scientific truth must be made and must be more or less certain, i.e., it *must* have *some degree* of certainty. (It also must be related, somehow, to the "real" world, either directly or indirectly.) These truths, therefore, will be capable of being affirmed by our individual common consciousness. This is to say (in Flint's language) that the so-called "truths" of conscienza must help to make up the truths of scienza. Without the truths of coscienza, the truths of scienza will be incapable of commanding assent. On the other hand, without the truths of scienza the truths of coscienza will be merely subjective certainties based on our individual consciousness, producing no knowledge whatsoever.[86]

Twenty years later in *The New Science* Vico will *explicitly* argue that the idea of a "genuine" science (whose idea itself we can know because

we have made it) can only be that which synthesizes truth with certainty.[87] It is our belief that the seeds of this synthesis were already sown in *De Antiquissima*.

With this interpretation in mind we are now in a better position to understand the full meaning of Vico's "maker's-knowledge criterion" in its relation to the sciences of geometry, physics, and morals. We said earlier that the ranking of the various sciences follows a *descending* order of certainty and (concerning geometry and physics) an ascending order of "real" truth. The ideal of knowledge is to have *complete* certainty necessarily united with *complete* real truth. But (in *De Antiquissima* only God has this. Man comes closest to this ideal in his mathematical sciences in which he has complete certainty and complete *abstract* truth. This is because man can be consciously aware of completely making the elements of the mathematical world.

When we come to physics, however, we find that the truth and certainty arrangement of mathematics changes in opposite degrees. In physics we move from abstract to *real* truth. However, since we did not make the *real* elements of nature but only models of them, our certainty will correspondingly change. It cannot now be as great when our concern is the *real* elements of the physical world. This is to say that in physics we are *more or less* certain of what nature is "like."

Thus, two things seem clear in Vico's early theory of knowledge: first, the "maker's-knowledge criterion" is directly responsible for the truth status and indirectly responsible for the certainty status of the various sciences. It is directly responsible for truth in that only by making can we have access to truth. (Therefore, concerning truth Descartes

is wrong.) It is indirectly responsible for certainty, on the other hand, in that we are *more* certain to the degree that we have done *more* of the making and likewise *less* certain where there has been *less* making on our part.[88] Nevertheless, in our interpretation *both* truth *and* certainty are needed for what we have called "genuine" scientific truth. Secondly, the "maker's-knowledge criterion" will be seen as justifying the Baconian inductive method over the Cartesian deductive method as the correct procedure for the natural sciences to follow.[89] It follows as a necessary result of the use of this so-called inductive method that none of the traditional sciences, although attaining *some* certainty, will be able to produce absolute certainty (as in geometry) *in conjunction with* real truth. This is because complete or absolute certainty is seen to be incompatible with induction, and induction provides real truth. (Vico claims here to be following Bacon's method which deals with probabilities.) Nevertheless, the knowledge that we do attain will be justified by the "maker's-knowledge criterion."

As we pointed out above, Vico viewed the traditional sciences as forming a hierarchy of certainty. First came mathematics in which we are completely aware of *all* of our making; next mechanics where we are less aware, then physics, and finally the least certain of all (because of its individuality and inability to be formalized) morals. The place in the hierarchy obtained by morals (which includes the historiographical sciences) was at the very bottom because science (so it was believed at the time and perhaps still is) is concerned with only that which is universal.[90] History, therefore, could not be a science, for the very nature of the enterprise is to investigate only the particular (i.e., the particular

deeds of particular men). In *De Antiquissima*, therefore, Vico joins voices with a long tradition of thinkers who had held that history could not properly be considered a science.[91]

In the next twenty years, Vico's views on this subject go through a fundamental change. The change reaches fruition in his major work *The New Science*. In this work because of his discovery of a "new world" which he had not thought of in *De Antiquissima*, Vico now divorces himself from the tradition. He tells us

> But in the night of thick darkness enveloping the earliest antiquity so remote from ourselves, there shines the eternal and never failing light of a truth beyond all question: that the world of civil society has certainly been made by men . . . and . . . the world of nations, a civil world, which, since men made it, men could come to know.[92]

Now, in addition to the "world" of mathematics and the "world" of nature found in *De Antiquissima*, we have in *The New Science* a third "world," namely the civil "world" of men. Now, Vico wishes to add to the science of mathematics and the science of physics a "new science of humanity which will be able to produce *both* absolute certain and real knowledge. Vico wishes in this new work to do what he (and the tradition had considered impossible), i.e., to show that history, the story of the particular, can in fact be a science.

To this end he will make us of a new "metaphysical art" of criticism which will methodologically involve the use of Topics instead of (the Cartesian use of) Critics. The criterion of certainty used in the "new art" will be the ". . . common sense of the human race determined by the necessary harmony of human institutions, . . ."[93] The criterion of truth will remain, as it was in *De Antiquissima*, the "maker's-knowledge criterion." We shall see that in his new work Vico is still formally

dealing with the same kinds of problems that he was in *De Antiquissima*. That is, in *The New Science* he again attempts to show how it is that the "maker's-knowledge criterion" functions in relation to certainty and truth. Although the application of the "maker's-knowledge criterion" to the civil "world" produces qualitatively different results (i.e., from those of geometry or physics), the *formal* character of the epistemological problems involved remains the same.[94]

The main qualitative differences (arising from the application of the "maker's-knowledge criterion" to human affairs) are twofold. First, in *The New Science* man will be able to achieve *complete* "God-like" knowledge. That is to say that in his knowledge of the historical world man will be able to acquire *both* absolute certainty *and* real truth. Second, the "maker's-knowledge criterion" (when applied to the moral-historical world) will now result in a demonstration of man's own teleological *self-development*. This is to say that by gaining "genuine" scientific knowledge of human history, man becomes aware of the various modes in and through which he has made himself human. Therefore, historical knowledge necessarily becomes self-knowledge. In order to understand these epistemic notions of "maker's-knowledge" and teleology in Vico's new science, we shall now trace out these (above) different results.

FOOTNOTES AND REFERENCES

CHAPTER I

[1]*On the Most Ancient Wisdom of the Italians Recoverable from the Origins of the Latin language* [*De antiquissima italorum sapienta ex linguae latinae originibus eruenda*], in Vico, Giambattista, *Opere Filosofiche* (Firenze: Sansoni S.P.A., 1971). This work was to be composed of three parts, *Metaphysics*, *Physics*, and *Morals*. However, only Part 1, *Metaphysics*, was ever completed and published. Although this work has not been published in English, some commentators have translated many of the important passages of *De Antiquissima* in their particular works on Vico. Whenever possible, therefore, I have used an existing English translation of the particular passage in question if I thought it adequate. If not, I have supplied my own translation alongside the original Italian. I shall hereafter refer to the work as *De Antiquissima*.

[2]*De Antiquissima*, p. 68, ". . . il criterio e la regola del vero consiste nell' averlo fatto." Here I have made use of Robert Flint's translation of the above sentence. I shall continue to do so for the most part when it is available. Robert Flint, *Vico* (Edinburgh: Blackwood, 1884), p. 90.

[3]Once again, for the most part I shall refer to the translation of T. G. Bergin and M. H. Fisch, *The New Science of Giambattista Vico*, revised edition (Ithaca: Cornell University Press, 1968). Hereafter cited as *The New Science*.

[4]*The New Science*, paragraph 331.

[5]See footnote 5 in the footnotes to the Introduction.

[6]Croce, Benedetto, "The Sources of Vico's Theory of Knowledge," in *The Philosoppy of Giambattista Vico*, trans. Robin G. Collingwood (London: Howard Latimer, 1913; Reprinted New York: Russell and Russell, 1964), Appendix iii, pp. 279-301.

Berlin, Isaiah, *Vico and Herder: Two Studies in the History of Ideas* (New York: Vintage Books, 1977), p. 14.

Funkenstein, Amos, "Natural Science and Social Theory: Hobbes, Spinoza, and Vico," *Giambattista Vico's Science of Humanity*, ed. Giorgio Tagliacozzo and Donald Phillip Verene (Baltimore, Maryland: The Johns Hopkins University Press, 1976), pp. 187-212.

[7]Molesworth, Sir William, Bart., ed., *The English Works of Thomas Hobbes of Malmesbury* (London: Longman, Brown, Green, and Longmans, MDCCCXLV), Vol. VII, pp. 183-184.

[8]*De Nostri temporis studiorum ratione*, trans. and published in English by Elio Gianturco as *On the Study Methods of our Time* (Library of Liberal Arts, 1965). The citation is from p. 23. Hereafter referred to as *Study Methods*.

[9]*Study Methods*, p. 23.

[10]*The New Science*, paragraph 349.

[11]Ibid.

[12]Vico's actual words are "In Latino *Verum* e *Factum* hanno relazione reciproca, avvero, nel linguaggio corrente delle Scuole, si convertono." *De Antiquissima*, p. 62.

[13]Max Fisch has succinctly stated this argument in his essay "Vico and Pragmatism," *Giambattista Vico: An International Symposium* (Baltimore, Maryland: Johns Hopkins University Press, 1969), p. 407.

[14]*De Antiquissima*, p. 68.

[15]*De Antiquissima*, pp. 72-74.

[16]*De Antiquissima*, p. 62.

[17]The entire essay is anti-Cartesian in tone as was most of Vico's early work. See *Study Methods*.

[18]Descartes, for example, tells us: "That is why I consider that I shall not be acting amiss, if, taking the set purpose a contrary belief, I allow myself to be deceived, and for a certain time pretend that all these opinions are entirely false and imaginary . . ." Haldane and Ross, *The Philosophical Works of Descartes* (London: Cambridge University Press, 1972), Vol. I, p. 148.

[19]Of course, it is irrelevant whether Descartes *actually* ignored the sceptics' questions or if he *actually* confused certainty with truth. What is at issue for us is what Vico *took* to be Descartes' errors.

[20]". . . la scienza e la conoscenza delle cause da cui nasce la cosa." *De Antiquissima*, pp. 72-74.

[21]As Vico puts it:

> But the sceptic does not doubt that he thinks; indeed, he professes himself as sure of it as if he were [literally] seeing it . . . nor does he doubt that he exists . . . However, he maintains that his certainty is not knowledge but consciousness, a common

> cognition found even in the unlearned . . . not a rare and exquisite truth such as to require for its discovery a meditation by such a great philosopher [as Descartes]. For to know means to possess the genus or form by which the thing is made: but consciousness is of those things of which we are notable to demonstrate the genus or form."

De Antiquissima, p. 72. Here I have used the translation of Leon Pompa, *Vico: A Study of the "New Science,"* (London: Cambridge University Press, 1975), footnote, p. 78. Vico's idea is that knowledge (i.e., *scienza*) is consciousness (i.e., *conoscenza*) of the genus or form or mode by which it was made, i.e., its cause. However, one can be conscious of something *without* being conscious of its genus, or form, or mode, i.e., the cause by which it was made. In this latter case one does not have *scienza*, only *conoscenza*.

[22]Haldane and Ross, *The Philosophical Works of Descartes*, Vol. II, p. 43.

[23]Ibid., p. 41.

[24]Ibid., Vol. I, p. 158.

[25]*De Antiquissima*, p. 72.

[26]*De Antiquissima*, p. 74.

[27]Ibid., p. 72. "Ma lo scettico non dubita di pensare . . . non dubita di essere . . ." etc.

[28]Flint, *Vico*, p. 92. *De Antiquissima*, pp. 72-74.

[29]Flint, p. 90. Also see in the same passage:

> That I think is not the cause but the sign of my being a mind, and a sign is not a cause. A sceptic of sense and discretion will not deny the certainty of signs, but he will deny the certainty of causes.

[30]Flint, p. 106 (*De Antiquissima*, p. 74).

[31]Flint, p. 90 (*De Antiquissima*, p. 68).

[32]". . . a conoscere quel modo in cui compone gli elementi, fa la cosa." *De Antiquissima*, p. 62.

[33]Flint, p. 87 (*De Antiquissima*, p. 62).

[34]*De Antiquissima*, p. 62 (see footnote 12 above).

[35]This notion becomes clarified later in *The New Science* (see paragraph #331, N.S.). ". . . principles are therefore to be found within the modifications of our own human mind."

[36]Flint, p. 88 (*De Antiquissima*, pp. 64-66):

> Thus to illustrate this by examples it has dissected man into body and soul, and soul into intellect and will; and it has selected, or, as it is termed, abstracted from the body figure and movement, and from these as from all other things, it has drawn being and unity.

[37]Flint, p. 87.

[38]". . . the wisdom of God, in which are contained the ideas of all things, and therefore the elements of all ideas, the *Word*; seeing that in it truth is identical with the comprehension of all the elements which compose the universe." Flint, p. 87 (*De Antiquissima*, p. 64).

[39]*The New Science*, paragraph 376.

[40]". . . in thinking an object [God], who not only can never be an object of intuitions to us but cannot be an object of sensible intuition even to himself, we are careful to remove the conditions of time and space from his intuition--for all his knowledge must be intuition, and not thought, which always involves limitations." B71, *Critique of Pure Reason*.

[41]Flint, p. 87 (*De Antiquissima*, p. 68).

[42]*The New Science*, paragraph 331

[43]". . . human science owes its existence to abstraction." Flint, p. 90 (*De Antiquissima*, p. 68).

[44]Pompa, Leon, *Vico*, p. 79 (*De Antiquissima*, p. 68).

[45]*De Antiquissima*, Chapter IV, part 2, pp. 84-94, ". . . per ipotesi sul punto metafisico," titled *I Punti Metafisic E I Conati*.

[46]See, for example, *The New Science*, paragraphs 163, 359, and 499. See also Leon Pompa's translation: "In physics those theories (ea meditata are proven which allow us successfully to operate something similar to them: and the clearest and most commonly accepted reasonings about natural things are those supported by experiments in which we create imitations of nature." (*Vico*, p. 80 footnote, and *De Antiquissima*, p. 68).

[47]B147, *Critique of Pure Reason*. We later learn that for Kant the status of those things that make up the world of nature are governed by necessary laws of combination which prescribe ". . . laws to nature, and even of making nature possible (B160). The difference between Kant and Vico is that, for Kant, since the world of nature is also made by man (i.e., "However exaggerated and absurd it may sound, to say that the understanding is itself the source of the laws of nature, and so of its formal unity, such an assertion is nonetheless correct. . ." A127), he does not have Vico's

immediate problem of grounding human maker's knowledge in the real world. He must simply relate one's "making" (i.e., mathematics) to another (physics). In the first *Critique* man's abstractions are the world, in Kant's special sense of "world," namely the world of appearance. The "real" world, i.e., things in themselves, need only be "negatively" acknowledged in order for us to be "affected" and thereby "presented" with something.

By applying the "maker's-knowledge criterion" even to the world of nature (i.e., appearance), Kant has seemingly bridged the gulf between man's abstractions and reality. However, the cost of this bridge is paid for in transcendental idealist coin; i.e., nature, although empirically real, is transcendentally ideal. *This* notion is foreign to the thinking of Vico.

In the third *Critique* and in the *Prolegomena* Kant finally attempts to ground man's maker's knowledge (of nature) in the real (i.e., noumenal) world. He does so by using a "God/man maker's-knowledge analogy" argument, as did Vico. That is, Kant argues that there is a supreme understanding who has "made" the world of noumena *just as* our understanding has "made" the world of phenomena. God's understanding "makes" intuitively while ours "makes" discursively. Our phenomena will correspond to the noumena, although with merely this "metaphysical assumption" (i.e., the "God/man maker's-knowledge analogy"), we may never have "theoretical" knowledge of such a correspondence. (See, for example, the passages A251/A252 and B308/B309, *Critique of Pure Reason*.)

[48]". . . La dimostrazione si identifica cosi con l'operazione e il vero col fatto." (My translation, *De Antiquissima*, p. 82.)

[49]*De Antiquissima*, p. 84.

[50]Fisch, Max, "Vico and Pragmatism," in *Giambattista Vico: An International Symposium*, ed. Giorgio Tagliacozzo and Hayden V. White (Baltimore, Maryland: The Johns Hopkins University Press, 1969), p. 410.

[51]This Vichian point is parallel to a Kantian one, namely that geometrical figures and physical objects share the same mathematical space, i.e., the space of Euclidian geometry. In Kant's case, the mathematical objects are constructed by us as are, to a large extent, the "physical" objects. For Vico, the physical objects, in a sense, construct themselves. God creates his metaphysical points with a "built-in" drive, i.e., conatus, for developing themselves into objects. ". . . the point which is not extended gives birth to extension" (Flint, p. 120). Also, see all of Part 2, Chapter IV of *De Antiquissima*, pp. 84-94. It is clear that Vico's doctrine of "metaphysical points" works hand and glove with his "maker's-knowledge criterion." The conatus which underlies the metaphysical points is actually God's thought. That is to say that it is God's thought that actually sustains matter. Since God's thought creates and sustains the natural world, he knows it.

[52]"Descartes, che alla maniera degli analitici concepisce la materia come creata e la divide, non si accorge di questa verita," (*De Antiquissima*, p. 92).

[53]Flint, p. 118.

[54]Fisch, "Vico and Pragmatism," p. 411.

[55]*De Antiquissima*, p. 92 (my translation).

[56]Ibid.

[57]*De Antiquissima*, p. 124.

[58]The parallels between Vico's and Kant's doctrines are quite remarkable. For example, not only do both Vico and Kant use the "maker's-knowledge criterion" to ground their respective "new sciences," but they also do so in very similar ways. In both philosophers there is an "intelligible world" that is made by a God who knows it through intellectual intuition, and a corresponding world which is made by man who can, therefore, know it by discursive reasoning. Vico's claim is that there is an intelligible world, i.e., the metaphysically "real" which is made and, therefore, known by God, and which corresponds to the world known by man, i.e., the world that man's mathematical and physical sciences are demonstrations of. (An important difference between Vico and Kant is that Vico does not claim that we "make" nature *per se*.) For example, Vico says "Geometry takes from metaphysics the virtue of extension, which, because the virtue of extension is prior to extension, and is consequently unextended. In like manner, arithmetic takes from metaphysics the virtue of number, namely the unit, which being virtue of number is not a number." Flint, p. 120 (*De Antiquissima*, p. 86). Also see Kant, *Critique of Pure Reason* "Doubtless, indeed, there are intelligible entities corresponding to the sensible entities." (B309).

[59]*Study Methods*, p. 23 (*De nostri*, p. 803 ". . . dimostriamo le cose geometriche perche le facciamo.").

[60]*Study Methods*, p. 23 (*De nostri*, p. 802)

[61]Flint, p. 90 (*De Antiquissima*, pp. 66-68). Kant in the *Dissertation of 1770* had a similar notion of "abstraction," see, for example, paragraph 6 of the *Dissertation*.

[62]"Therefore, when man starts inquiring into the nature of things, he becomes aware that it is uterly impossible for him to attain it. This impossibility id due to the fact that he does not possess in his mind the elements of which things are made, and, furthermore, to the fact that the powers of his intellect are limited. The totality of objects is external to his senses. Nevertheless, *man succeeds in turning a shortcoming of his mind into an advantage*. By means of that operation which goes by the name of *abstraction*, he *fashions* two terms: the point, which can be noted, and the unit, which is susceptible to multiplication. *Both are*

fictitious entities, figments. If you note down the point, it is no longer a point, if you multiply the unit, it is no longer a unity. Furthermore, man took it upon himself to proceed from these two principles ad infinitum, so as to prolong the line unlimitedly and so as to repeat the unit innumerable times. And in this fashion (hos pacto) he was able to construct a *certain* world of his own, such a world as he was able to contain, in its entirety, within himself. Thus, by prolonging, shortening, or combining lines, by adding up or substracting or calculating numbers, man was able to accomplish countless operations. It is evident that he had cognizance, within himself, of infinite truths." *De Antiquissima*, p. 66. Translated by Antonio Corsano in "Vico and Mathematics," *Vico Symposium*, 1969, p. 433 footnote. [my emphasis]

[63]Fisch, "Vico and Pragmatism," *Symposium*, p. 409.

[64]Ibid.

[65]Pompa, Leon, *Vico*, p. 80 (*De Antiquissima*, p. 68). Here again man's model-making is thought of as analogous to God's in that "The archetypal forms, the ideal patterns of reality exist in God alone. The physical nature of things, the phenomenal world, is modeled after those archetypes." *Study Methods*, p. 23 (*De Nostri*, p. 802). It seems clear that Vico sees the world of nature as a kind of mediation point between the mind of man and the Divine mind.

[66]Fisch, *Symposium*, p. 409.

[67]Pompa, p. 80 (*De Antiquissima*, p. 124).

[68]Croce, Benedetto, *The Philosophy of Giambattista Vico*, tran. R. G. Collingwood (London: Howard Latimer, Ltd.), Chapters I and II.

[69]Pompa, p. 81 (see also pp. 82-83).

[70]Ibid., p. 157, footnote 2.

[71]Flint, p. 96.

[72]Some authors, e.g., Guido Fasso, have argued that the *actual* synthesis of the "true" with the "certain" first explicitly appears in Vico's *Dritto Universale, Vico's Science of Humanity*, ed. Tagliacozze and Verene, p. 8. The entire essay is very informative. However, I am only concerned with showing that the synthesis of the "true" with the "certain" can be seen to have had its *foundation* in the essay written ten years earlier, i.e., *De Antiquissima*.

[73]For example, see Croce, pp. 28-29; and Flint, pp. 96-97; and Pompa, pp. 72-75.

[74]Croce, pp. 22-24; Flint, pp. 99-101; and Pompa, pp. 81-85.

[75]*The New Science*, paragraphs 138, 139, and 140.

[76]"In fact, having a *science* of something signifies that one can, in principle, possess the -enus or form by which the thing was made; on the other hand, to have consciousness of a thing only, refers to precisely those things whose genus or form we cannot demonstrate." "Infatti avere *scienza* significa possedere il genere, o forma del farsi della cosa; invece l'avere *coscienza* si riferisce a quelle cose di cui non possiamo dimostrare il genere o forma." (My translation, *Di Antiquissima*, p. 72)

[77]*The New Science*, paragraph 390.

[78]*The Autobiography of Giambattista Vico*, tran. Max Harold Fisch and Thomas Goddard Bergin (Ithaca: Cornell University Press, 1963), p. 156.

[79]Flint, p. 95.

[80]Ibid.

[81]". . . coscienza, una cognizione comune, accessibile, . . . cosi, ci accade spesso nella vita practica di chiamare la coscienza a testimonio di affermazione." ". . . the certain, i.e., consciousness is a common thinking, something ascertainable in everyday life, known, i.e. called to mind, through individual witnessing or testimony." (My non-literal translation, *De Antiquissima*, p. 72). See also *The New Science*, paragraph 145.

[82]". . . certezza di pensare e coscienza, non scienza, . . ." (*De Antiquissima*, p. 72).

[83]Flint, p. 96.

[84]Ibid., p. 97.

[85]*Autobiography*, p. 156.

[86]Once again Vico's "maker's-knowledge criterion" leads him t. make distinctions which parallel distinctions found inKant. Kant tells us there are, on the one hand, judgments of experience (the truths of science in Vico), and, on the other, judgments of perception (Vico's truths of coscienza). Kant tells us "The latter require no pure concept of the understanding." *Prolegomena*, p. 55-56.

[87]See "Seven Principal Aspects" of *The New Science*, p. 121. Especially note the Second Principal Aspect, "Philosophy of Authority." (paragraph 386).

[88]"E cosi la scienza e la conoscenza del genere o modo in cui la cosa fa; per mezza di essa la mente, *al tempo stesso in cui viene a conoscere quel modo in cui compone gli elementi, fa la cosa.*" ". . . *at the same time in which the mind comes to know the mode of the thing it composes the elements and makes the thing.*" (My translation and emphasis, *De Antiquissima*, p. 62)

[89]"Concludiamo infine osservando che non si deve introdurre nella fisica il metodo geometrico, ma la diretta dimostrazione sperimentale." (*De Antiquissima*, p. 124)

[90]Morals, for Vico, was that area of study that was concerned with human choice. The people who study the institutions that depend on human choice are philologists (which includes the historians). See paragraphs 7 and 139 of *The New Science*. That which makes Morals so uncertain is the unlawlike behaviour of a being, i.e., a human, which has *free will*. Actions coming from a being with free will are too individual to be made universal and demonstrable.

"And morals is still less certain than physics, because while the latter considers the internal motions of bodies, which belong to nature which is fixed and definite, the former investigates the motions of souls-motions the most abstruse, and which have their source largely in wilfulness, which is unlimited." (Flint, p. 90, *De Antiquissima*, p. 68)

[91]For example, Aristotle tells us when speaking of history and poetry respectively, ". . . the one describes the thing that has been, and the other a kind of thing that might be. Hence poetry is something more philosophic and of graver import than history, since its statements are of the nature rather of universals, whereas those of history are singulars." (*On Poetics*, Chapter IX, 1451b)

And Descartes says, ". . . even the most accurate of histories, if they do not exactly misrepresent or exaggerate the value of things in order to render them more worthy of being read, at least omit in them all the circumstances which are basest and least notable; and from this fact it follows that what is retained is not portrayed as it really is." (*Discourse on the Method*, p. 85, Haldane and Ross, Vol I)

And finally, Vico himself in his third *Inaugural Oration*, while still under the influence of the Cartesian philosophy, chides his fellow humanists by saying, "You boast, philologist, of knowing everything about the furniture and clothes of the Romans, of being more intimate with the streets, tribes, and quarters of Rome than with those of your own city; why this pride? You know no more than did a potter, a cook, a cobbler, a summoner, an auctioneer in Rome." Quoted from Isaiah Berlin's *Vico and Herder: Two Studies in the History of Ideas* (New York: Vintage Books, 1977), p. 18.

[92]*The New Science*, paragraph 331.

[93]Ibid., paragraph 348.

[94]For example, concerning the "maker's-knowledge criterion," Vico in *The New Science* says, "For the first indubitable principle posited above [331] is that this world of nations has certainly been made by men, and its guise must therefore be found within the modifications of our own human mind." (paragraph 349)

And concerning certainty he tells us his "new method," ". . . reduces to certainty human choice, which by its nature is most uncertain--which is as much as to say that it reduces philology to the form of a science." (paragraph 390)

Concerning "real" truth he says, "Now as geometry, when it constructs the world of quantity out of its elements, or contemplates that world, is creating it for itself, just so does our Science, but with a reality greater by just so much as the institutions having to do with human affairs are more real than points, lines, surfaces, and figures are." (paragraph 349)

And finally, concerning the distinction between God's maker's knowledge and man's, the same lines are again drawn in *The New Science*; however, the change in subject matter, i.e., from *geometry* to *history*, produces the following heretical claim: "Indeed, we make bold to affirm that he who meditates this Science narrates to himself this ideal eternal history so far as he himself makes it for himself, . . . And this very fact is an argument, O reader, that these proofs are a kind divine and should give thee a divine pleasure, since in God knowledge and creation are one and the same things." (paragraph 349)

CHAPTER II

VICO AND HISTORY

We have seen in Chapter I that Vico in *De Antiquissima* held that the only criterion of truth which could withstand the attacks of the sceptics was a "maker's-knowledge criterion." We saw also that truth was divided into two kinds, abstract and real. That which marked the real from the abstract was that element of corporeality which makes up the "world of nature." Vico had contrasted man's maker's knowledge to God's by showing that God could have absolute certainty *and* complete real truth, whereas man at best could have only absolute certainty *or* partial real truth.

Twenty years later in *The New Science* (Vico's mature work in the philosophy of history) we find that the criterion of truth is still the "maker's-knowledge criterion."[1] Truth is again divided into two kinds, namely abstract and real. Abstract truth continues to be thought of as the kind man makes completely, and it continues to remain a fiction, e.g., in the case of geometry.[2] However, we now notice a fundamental change in Vico's conception of "science"--a change which carries with it a corresponding change in his conception of "real truth."

In this new work Vico narrows his conception of science such that the only subjects capable of *absolute* scientific demonstration are those which can be known in the manner in which God is said to know. God's knowing requires that there be *complete* knowledge of all the causes of the

object in question. Further, God's knowing brings about the existence of the object *in the very act of knowing it*. Because of this new conception of *absolute demonstration*, the "world of nature" becomes (in *this* absolute sense only) "scientifically" unknowable to man. Now, in *The New Science* Vico laments the fact that in the past philosophers should have ". . . bent all of their energies to the study of the world of nature, which since God made it, He alone can have science of it."[3] (It is important here to note that Vico is *not* saying that nature simply cannot be known; he is instead saying that man cannot know nature *in the same manner as* God knows nature, i.e., absolutely.)

With the world of nature excluded, the only subjects left that may be worthy of the term "science" (in that they may be known in the same manner as God knows) are the worlds of mathematics and history. In fact it is just this feature (i.e., "God-like" knowing) that Vico points to as the unique similarity that allows these two subjects to be sciences. He says that his new science of history is like geometry in that just as geometry when ". . . it constructs the world of quantity out of its elements, or contemplates that world, is creating it for itself, just so does our Science create for itself the world of nations . . ."[4]

The principles of the new science will allow historians to recreate the elements of the civil world in such a way that the historical world is "created for itself" in the same manner that the geometrician creates the geometrical world for itself, i.e., completely. Yet there is one fundamental difference. Vico tells us that the creation of the historian, i.e., the history of the civil world, is one which is "more real" than the creation of the geometrician. The historian's civil world contains

". . . *a reality greater* [my emphasis] by just so much as the institutions having to do with human affairs are *more real than* [my emphasis] points, lines, surfaces, and figures are."[5]

Now in order for us to understand how Vico's "maker's-knowledge criterion" functions in *The New Science*, it will be necessary for us to understand precisely what is meant by the idea that the history of the civil world has a "greater reality" and is "more real" than the mathematical world. Undoubtedly, Vico wishes to point out, among other things, that the historian's science of the world of nations, in some sense, deals with "real truth," whereas the mathematician's science deals only with "abstract truth." Our problem, however, is to understand precisely what Vico has in mind by his use of the phrase "more real."

Since Vico nowhere explicitly addresses himself to this issue (i.e., what it means to say that "institutions having to do with human affairs are 'more real' than geometry."), we shall have to resort to interpretation. In the first part of this chapter, therefore, I shall sketch two distinct lines of interpretation that one might opt for and then assess the merits of each. I shall then offer a third line of interpretation which I think incorporates the best suggestions of the previous two while it excludes their particular deficiencies. These first two lines of thought I shall label *realist* and *idealist* versions respectively. It may be noted that I am not interested whether, in fact, any realist or idealist actually holds the views that I here put forward concerning Vico. My aim and, therefore, my only concern is to distinguish these two distinct interpretations from each other. I use these labels, therefore, for their suggestive value and as a matter of convenience for that purpose.

Let us begin with the realist version. The realist would argue that Vico's work, *The New Science*, is an historical account of human institutions. In it he gives us the principles, both philosophical and historical, of how a valid method of historical investigation (through which we are able to gain complete certain knowledge of human institutions) is to proceed. He tells us that we must "Compare the institutions with one another and observe the order by which those are now born in their proper time and places . . . ."[6] Thus, *The New Science* is in effect one sustained ". . . argument which embraces all human institutions . . ."[7] and which shows by certain proofs that institutions serve an overriding purpose or end, namely ". . . the preservation of the human race."[8] The project for the philosophical historian then

> . . . consists in comparing and reflecting whether our human mind, in the series of possibilities it is permitted to understand . . ., can conceive more or fewer different causes than those from which issue the effects of this civil world.[9]

We can see from the above that Vico is simply saying that the philosophical historian must look for causes. He looks for the causes of the development of institutions by examining the institutions in their developmental stages, i.e., genetically. The guidelines by which he shall proceed with his investigation are to be found in *The New Science*. Man's sciences will always divide man into two parts, namely mind and corporeality. (". . . la Scienza umana ha sezionato l'uomo in corpo e animo." *De Antiquissima*, p. 64)[10] The same is true concerning the science of human institutions. An institution like marriage, for example, while obviously being a spiritual institution (i.e., as defined by the various rituals accompanying the actual ceremony), nevertheless contains its corporeal elements. The parties involved, for example, have corporeal bodies, the ceremony may

take place in a particular ceremonial corporeal dwelling; *it may be essential for the use of particular ornaments*[11] such as rings or gifts, etc. The point is that all of these properties are of a corporeal nature. It is, therefore, the job of the philosopher-historian to trace out these observable elements that comprise the institution in question.

> The inseparable properties of institutions must be due to the modification or guise with which they are born. By these properties we may therefore verify that the nature or birth (*natura o nascimento*) was thus and not otherwise.[12]

> Vulgar traditions must have had public grounds of truth by virtue of which they came into being and were preserved by entire peoples over long periods of time.[13]

And finally:

> It will be another great labor of this Science to recover these grounds of truth--truth which, with the passage of years and the changes in languages and customs, has come down to us enveloped in falsehood.[14]

The elements of Vico's new science, therefore, while concerned with mind, are "more real" than the elements of geometry precisely because they are concerned with the *observable* properties which make up [the nature of] institutions. They are, in other words, the material causes of social institutions. The world of civil life is involved in a world of corporeal things. Therefore, that which makes the creation of the historian "more real" than the creation of the mathematician is the corporeal element in the institutions of the civil world.

There is further textual support [in *The New Science*] for this interpretation. The text shows beyond question that (at least in certain contexts) Vico meant by "real" the corporeal just as he did in his earlier work *De Antiquissima*. For example, in *The New Science* Vico argues that since the first gentile nations were mute in their beginnings they must

have expressed themselves by gestures or by using physical objects. He offers the following example as evidence to support his thesis: "Idanthyrsus, king of the Scythians . . ., used five *real words* to answer Darius the Great who had declared war on him. These were a frog, a mouse, a bird, a ploughshare, and a bow."[15] [my emphasis] Vico then contrasts these so-called "real" words with spoken and written words. He says ". . . real words (. . . as we shall later show, the first peoples must have used before they came to vocal words and finally to written ones.)"[16]

It seems obvious in this example that Vico is thinking that that which distinguishes the "real" words from the written and spoken ones is that the real words *are* simply the gross corporeal objects. Again in Book I, "Establishment of the Principles," while arguing that the first peoples were not sages or philosophers but poets, Vico tells us:

> . . . all the arts of the necessary, the useful, the convenient, and even in large part those of human pleasure, were invented in the poetic centuries before the philosophers came; for the arts are nothing but imitations of nature, and in a certain way "real" poems [made not of words but of things].[17]

Finally, in Book II, "Poetic Wisdom," he repeats another form of the above argument: ". . . poetry is nothing but imitation, and the arts are only imitations of nature and consequently in a certain sense real poetry."[18]

These examples indicate that here in his mature work Vico continues to accept the notion of the "real" as that which is in some sense corporeal nature. This seems to be the case in spite of his announcement that only God can have science of the corporeal. The meaning, therefore, of Vico's claim that his new science contains "greater reality" than geometry is that his new science concerns itself in part with corporeality

whereas geometry does not. This conclusion seems plausible for three reasons. First, the contexts wherein Vico talks about "real" things such as, e.g., Poetic Logic, indicate that he is thinking of these things as corporeal objects. Second, this interpretation remains consistent with and supports Vico's earlier thinking in *De Antiquissima*, i.e., that "real" truth deals with corporeality. And third, only if the real is the corporeal can the historian, through evidence, trace out those elements he must in order to have a science of human institutions.

Let us now turn to an assessment of this realist interpretation. The strong points of the interpretation is its textual evidence and its claim to establish a continuity between the earlier and later works. Nevertheless, as we shall soon see, the interpretation is unsatisfactory as it stands because it counts against Vico's major claim. That claim is that *only* his "new science," i.e., an "historical science," can give the kind of certain knowledge desired in the area of human affairs. We may state our objection in the following two ways: first, as we pointed out in the beginning of this chapter, Vico's conception of science in *The New Science* has narrowed from that of *De Antiquissima*. Although he is still working with the same analogy in *The New Science* that he was in *De Antiquissima* (namely the "God-man maker's-knowledge analogy"), his use of it is now restricted to only geometry and history. He now tells us, e.g., when speaking of nature that ". . . since God made it, He alone has science of it."[19] And when speaking of the "civil world," he says, "since men made it men could come to have science of it."[20]

Now if that which marks off the new science's creation as being "more real" than the creation of geometry is simply the element of

corporeality, then the "God-man analogy" quotation above would no longer hold good. It would no longer hold good precisely because man would then be able to have a science of corporeality, thus reducing the first part of the analogy to a falsehood. If the first part of the analogy is false, then the point of the analogy is lost. In other words, it is precisely because man has *not* made corporeal nature that the above analogy has any merit. This is to say that Vico's new science is unique only if man is *like* God in that man has made the world of nations completely [and *unlike* God concerning the world of nature] and, therefore, can have science of it. The new science is, therefore, to be seen as a kind of divine example, i.e., it allows knowledge [of history] through creation. The result of this creation, however, as opposed to that of geometry, is that it contains "real" truth. Vico tells us when speaking of the "proofs" for his thesis: ". . . these proofs are of a kind divine and should give thee a divine pleasure, since in God knowledge and creation are one and the same thing."[21] He further claims that the reader of *The New Science* himself, if he carefully studies the work, will also be recreating and, therefore, knowing in a God-like fashion the civil world. "Indeed, we make bold to affirm that he who meditates this Science narrates to himself this ideal eternal history so far as he himself makes it for himself . . ."[22]

If the realist version of "more reality than geometry" is correct, then the point of this "God-man" analogy (i.e., that man is perfectly "God-like" in his knowledge of history, where he wasn't in physics and geometry) is lost. It is lost because although man can (in a weak sense) demonstrate in physics, he cannot know in physics by absolute creation, i.e., he cannot create or re-create corporeality *per se*. Therefore, if the realist

is right, man could not use the "maker's-knowledge criterion" in a perfectly "God-like" fashion which is precisely how Vico claims that it is used in his new science of humanity.

Second, if that which is "more real" than geometry in the new science is the corporeal, then it would seem that Vico ought to explain why it is that this "real" could not be adequately dealt with by [the science] physics whose job it is to deal with corporeality. (". . . la fisica studia i moti interni dei corpi, pertinenti alla natura, . . ." *De Antiquissima*, p. 68.[23]) That is to say, if we were to grant the realist interpretation, why then if the "real" essentially consists of corporeality should human affairs not be the proper object of study of physics (or at least a science base on the same principles of physics as opposed to the principles of Vico's new science)?[24]

The answer is clear. Vico believed that his new science dealt with a "new" reality, i.e., a new world that *uniquely* fitted his "maker's-knowledge criterion." Physics is unable to deal with this new world because (epistemologically) the "maker's-knowledge criterion" functions differently with the world of nature than it does with the world of human affairs.

In physics man's maker's knowledge is always limited. It is true that Vico's "maker's-knowledge criterion" justifies the inductive method (see, e.g., *De Antiquissima*, p. 124) of investigating corporeality and thus gives us the best knowledge of the real truth of nature that we can hope to have. However, it is also true that we ourselves have not made corporeal nature, and therefore, our knowledge of it is seriously limited. This is to say that physics is not "Science" in the sense that Vico now thinks of the term in his "new science."

When Vico turns to the study of human affairs, i.e., to history, a new world emerges and along with it so too does a new "real." It is for this reason that he believed a "new" science was required, i.e., to make intelligible this "new real." Ths historical civil world had been ignored by philosophers in the past, e.g., Aristotle, Descartes, because of its particularity and, therefore, unscientizability. But now (due to its unique relation to Vico's "maker's-knowledge criterion") the historical world becomes the one subject that can result in absolutely certain and real "scientific" truth. Vico says:

> . . . there shines the eternal and never failing light of a truth beyond all question: that the world of civil society has certainly been made by men, and that its principles are therefore to be found within the modifications of our own human mind.[25]

When we ask how certainty is possible in the science of geometry (which is in essence to ask how geometry is possible), we find that it is due to the "maker's-knowledge criterion." At the same time, however, we see that geometry results in no real truth, only fictions. When we ask how knowledge of real truth is possible in physics (which is to ask how physics is possible), we also see that it is due to the "maker's-knowledge criterion" justifying induction. And if we then ask whether there is any subject with which the "maker's-knowledge criterion" works completely, i.e., where we may gain complete certainty *and* also real truth, Vico answers yes and proceeds to offer us an explanation of how history is possible.

However, while showing how history is possible as a science, Vico must also show that history is unique. He attempts to do this by arguing that its subject matter, i.e., human affairs, is qualitatively different from that of geometry or physics. While history shares the same

problematic as geometry and physics (i.e., the problem of a satisfactory account of the relationship of real truth to certainty), it is, he thinks, unique.[26] The epistemological proof of this uniqueness is simply the fact that history can be known in a "God-like" way (i.e., on the basis of the "maker's-knowledge criterion").

This is a second reason then why the realist version of "more real truth" must in the end fail. It fails because of its incompatibility with Vico's main aim in *The New Science*. That aim is to establish the civil world, i.e., the world of human affairs, as unique. The proof of this uniqueness is that man (because, epistemologically, of the total compatibility of the "maker's-knowledge criterion" with history) has direct and intimate access to the "real" truth *and* certainty of the historical civil world that he cannot have with the worlds of mathematics and physics.

The realist version would ultimately be committed to reducing history to physics and thereby *denying* the uniqueness of the civil world. However, it is clear that Vico thinks of his new science as one which deals with a different order of reality than corporeality when it investigates man. If we then ask what is this something else that cannot adequately be dealt with by physics but can be completely known by a science such as Vico's, he will tell us that the answer is *mind*. And if we further ask how is this intimate connection between man and history to be conceived, Vico will answer by offering an explanation in terms of his "maker's-knowledge criterion" and mind.

We must, therefore, now look at a second interpretation of the notion of "more real truth" in *The New Science*, namely the idealistic version. We have seen that one criticism of the realist interpretation was

that if "more real" simply means corporeality, then physics (or a discipline modeled on it) would be the appropriate science to investigate history. We have also seen that this line of thought is explicitly denied by Vico, and therefore, we need not examine it further. A more promising interpretation may be stated in the following idealist version.

The task of the new science is to understand man. To approach this task, Vico holds, we must study the nature of man's institutions for it is his institutions which reflect the "more real truth" with which *The New Science* is concerned. That real is mind. In Principle 14, B1. L, Vico tells us: "In search of these natures of human institutions our Science proceeds by a severe analysis of human thoughts about the human necessities or utilities of social life."[27] Also: "Our Science is therefore a history of human ideas on which it seems the metaphysics of the human mind must proceed."[28]

It is precisely because the "more real" that the New Science is concerned with is the reality of mind (which is noncorporeal) that physics cannot adequately investigage it. Mind, not bodies, is the real subject matter of history. What Vico uniquely contributes with his new science, therefore, is the principles of mind with which the historian can investigate mind's activity through time, i.e., history.[29] The result of the investigation, if done correctly (i.e., according to Vico's method and principles), will be an "ideal eternal history" traversed by all nations at all times. This "ideal history" includes both the formal, scientific conditions necessary for understanding the affairs of man and the substantial conditions that his institutions actually contribute to his own historical development.[30]

For example, the ideal eternal history is supposed to demonstrate how Providence has ordered human affiars through its institutions in such a way that human passions become moderated. Because of the institutionalizing effect of, say, an institution like marriage, man's behavior becomes that of a man of the "famuli" as opposed to an independent, totally self-interested individual. A historical result of this institutionalizing effect is that parents do not then:

> . . . separate at any time, the children, abandoned by both, . . . exposed to be devoured by dogs. It is also for this reason that the . . . world of nations, enriched and adorned by so many fine arts of humanity . . . does not . . . revert to the great ancient forest through which in their nefarious feral wanderings once roamed the foul beasts of Orpheus . . .[31]

The point is that these things *would* occur if it were not for a Providential mind. What's more, Vico believes that he has provided a means (namely the ideal eternal history) by which we may have scientific knowledge of the activity of this Providential mind.

In order to understand why the creation of the historian is "more real" than that of the geometrician, it is necessary to understand what a Providential mind is.[32] The only way, in turn, to understand a Providential mind is to understand how it functions in human institutions. Our task then is to get at the nature of human institutions.

It is Vico's belief that the nature of things can be seen only when the thing in question is studied *genetically*, which is to say *historically*. Vico makes it quite explicit that the important sense of "nature" in *The New Science* is genesis. Talking of institutions, he says:

> The nature of institutions is nothing but their coming into being (nascimento) at certain times and in certain guises. Whenever the time and guise are thus and so, such and not otherwise are the institutions that come into being.[33]

Further, as we've seen earlier, the nature/genesis of an institution will display certain "birth-right" properties which will indicate the "time-sect" or stage of development appropriate to that institution.

> The inseparable properties of institutions must be due to the modification or guise with which they are born. By these properties we may therefore verify that the nature or birth (natura o nascimento) was thus and not otherwise.[34]

Let us here sketch the various steps of (this idealistic interpretation of) Vico's argument. Men make the institutions that form their nation states or commonwealths. Civil commonwealths, like the men and institutions that compose them, are themselves composed of "mind and body."[35] History, the subject matter of the new science, is the story of the developmental stages of mind as seen in man's institutions and civil commonwealths. The new science, therefore, concerns itself with the developmental stages of languages, jurisprudence, authority, etc., in any and all commonwealths. These institutions will in turn correspond to different stages of rationality, i.e., mind (for example, "Divine reason," "Heroic reason," and "Natural reason"[36]). Next Vico tells us that "All of the aforesaid institutions have been practiced through three sects of time."[37] It is the job then of the philosopher-historian to match up these three repeatable "time-sects" (we shall examine these more closely later in the chapter) with the various civil institutions according to their appropriate developmental stage.

This matching process, however, can take place only because the subject matter that the historian is ultimately dealing with is mind. In other words it is the activity of mind, manifested through man's needs and utilities, which is investigated in the various "time-sects." Hence, in investigating, e.g., a religious time-sect we recreate a religious,

barbaric frame of mind and thereby discover that that particular time-sect had evolved a particular type of government and law peculiar to it. For example, "The guarding of the confines began to be observed with bloody religions under the divine governments, . . ."[38] Of course, these same kinds of relationships (i.e., the relationship between mind and , say, government) will develop in the time-sects and ages following. For example, Vico goes on to say in this same passage, "This guarding of the confines is naturally practiced in the aristocratic commonwealths . . . This and no other must be the reason why the Law of the Twelve Tables did not recognize simple possession . . ."

It is because Vico's new science gives us the principles by which we are able to understand the various stages of mind that we are able to understand the various stages of man's institutional development, which is to say his history. Finally, Vico explicitly says, when speaking of this Providential course that human institutions take in order to "preserve the human race," that what ". . . did all this was *mind*, for men did it with intelligence; it was not fate, for they did it by choice; not chance, for the results of their always so acting are perpetually the same."[39]

We may conclude, therefore, that that which makes the creation of the historian "more real" than the creation of the geometrician is the fact that the ultimate subject matter of the historian is *mind*. Also, we should here note that this conclusion is in keeping with the aim of Vico's new science in an important epistemological sense. That sense is that mind is the one phenomenon for Vico which, when studied historically, displays complete compatibility with the "maker's-knowledge criterion."

This is to say that there exists a relationship between the *historian* and the *historical agent* (whose activities make up the civil world of men) that is unique when compared to the relationship that exists between the geometrician or physicist and their respective subject matters. The historian's ultimate subject matter is mind. His investigations are (again ultimately) concerned with discovering the principles of mind as it (i.e., mind) manifests itself historically. Because the historian himself *is* a human mind, he shares a certain "identity-feature" with the historical agent.

It is this "identity-feature" (which the historian and the historical agent have and which the geometrician or physicist and their subject matters do *not* have, namely being human) that allows the "maker's-knowledge criterion" to produce the complete "God-like" knowledge for man in the case of history and not in the cases of geometry and physics. This is to say that since the historian is himself a mind, he has "an inside track" (so to speak) with his subject matter that the geometrician and physicist (as a matter of principle) could never have with theirs. The historian can, by the proper principles and appropriate *self-reflection*,[40] achieve complete scientific knowledge of history (i.e., knowledge in a "God-like" way) because the historian's knowledge of *his own humanness* allows him access to certain knowledge of the development of other human beings in the past. The historian, e.g., when asking "what would a *human being* in such and such a situation do?" or "how would such and such circumstances affect a *human being*?" is able to "reflect" on his own *humanness* and thereby gain an invaluable advantage in attempting to answer his question. The geometrician and the physicist simply lack this advantage.

History, therefore, can be rendered completely scientific only if that which is seen to be the ultimate subject matter of history, i.e., that which makes it "more real" than geometry, is *mind*. Without this assumption Vico's "maker's-knowledge criterion" will not work in the *unique way* that he suggests that it will in the area of history. Further, he would then be unable to make good his claim that his new science can reduce ". . . to certainty human choice, which by its nature is most uncertain which is as much to say that it reduces philology to the form of a science."[41]

Let us now assess this idealist version of "more real." The interpretation has two important points in its favor. First, it correctly argues that the primary concern of Vico's new science is mind. Second, it shows how the "maker's-knowledge criterion" works in the study of history. The criterion allows man "God-like" knowledge in history because in history there is the presence of a common link between the historian and historical agent, namely mind. Because of this common link, man can know the causes *completely* in history where it was impossible to do so in physics.

Although these points are essentially correct, this version must, nevertheless, be rejected unless it is modified. First, the above interpretation, as it stands, simply ignores the textual evidence offered by the realist interpretation. The realist put forth several passages from *The New Science* in which Vico explicitly indicated that (at least at certain times) he was thinking of the "real" in terms of the "corporeal."[42] Secondly, the God-man analogy (considered by the idealist to be so essential to Vico's argument because of its relation to the "maker's-knowledge

criterion") by itself does not *uniquely* aid the idealist version. That is, it does not by itself establish that mind is the unique subject of history and not, e.g., the subject of geometry. In both cases, i.e., in history and geometry, the God-man analogy satisfies all of the requirements it is supposed to. Man can know *both* history and geometry in a God-like way, i.e., completely, because the elements of both are made by man in a God-like way, i.e., completely. Therefore, by dismissing the corporeal the idealist is left with no way of distinguishing between history and geometry.

The idealist might here wish to point out that since the identity-feature of mind, discussed above, is unique to history, the historian's "making" will, *therefore*, be more real than that of the geometrician for it is only the former's making that is concerned with mind. However, this line of argument must be resisted. For since the first premise claims that the identity-feature *of mind* is unique to history and since this identity-feature of mind analytically implies the identity of mind, it is illegitimate then to use this premise to establish the desired conclusion, i.e., that mind is unique only to history.

Finally, the idealist version, when taken at face value, is faced with the problem of explaining how it is that we actually acquire historical knowledge in the first place. The idealist thesis seems to be that the past can be made intelligible only because the subject with which it deals is mind. This is to say that a human institution (e.g., a court of law) can be rendered completely intelligible only because the essence of that institution is or was at some time composed of human intentions which are themselves the purposeful activity of mind. The question that naturally

arises here is how are we to actually become acquainted with those intentions which display this purposeful activity of mind?[43]

Suppose that we take the institution of a court of law in Publilian Rome as our historical example. Let us perform the following thought-experiment: we abstract everything corporeal from this institution in order to "get at" the intentions, i.e., mind, which compose the institution's nature. But now the problem becomes evident: precisely where are we to find those ". . . inseparable properties of institutions . . ." that Vico tells us were ". . . due to the modification or guise with which they are born?" It is imperative that we locate these properties for they are the very properties that will enable us to ". . . verify that the nature or birth (natura o nascimento) [of the institution in question] was thus and not otherwise."[44]

In other words we must have a means of verifying this or that property of an institution in order to judge what particular purpose the institution in question serves or served. It is clear that Vico's intention is to provide us with such a means of verifying these necessarily "public" properties,[45] for this is the function of his "new critical art of criticism."[46] But the question forces itself upon us "how can public properties be verified if everything which is corporeally involved in the properties is excluded?" What could possibly count as historical *evidence* once *all* corporeality has been excluded? It seems obvious that to argue the "more real" of the historian's creation is mind to the exclusion of corporeality leaves us with no way of verifying the *inseparable properties*[47] of institutions and, hence, no way of knowing their nature.

The inescapable burden of the idealist version, therefore, is twofold: he must first show, while relying on Vico's basic epistemological

concepts (i.e., the "maker's-knowledge criterion," the God-man analogy, and the identity-feature of the historian and historical agent), that *history and not geometry* has for its ultimate subject matter the purposeful activity of mind. This is a real problem for the idealist interpretation, for it is not obvious why history but not geometry embodies the intentions of mind. Further, if we rule out the appeal to corporeality as the differentia, the problem is aggravated. Secondly, the idealist must show how it is that knowledge of mind, which is the "more real" of history, can be acquired. That is to say, he must show, e.g., what sorts of things would count as evidence for various historical claims and what sorts of things would not.

It is important to note that if this second condition cannot be met then neither can the first. For if the idealist cannot in principle show what counts as evidence for the claim that certain institutions have certain properties, neither will he be able to show what the *nature* of those institutions are and, a fortiori, that they ultimately display the workings of purposeful mind.[48] It seems quite clear that as long as the idealist version excludes corporeality from its interpretation of "more real," it will not be able to fulfill the above conditions. This is because it will have no way of showing that the subject matter of history is really mind (working through human institutions), for there will be nothing which will count as evidence for divining the particular properties which ultimately compose the particular natures of the institutions in question. As a consequence the idealist is in no position to argue that the historian's creation contains "more real truth" than does that of the geometrician (for there is no way of telling). Therefore, the idealist version, too, must be rejected.

The promise of the realist version was that it offered us a way of distinguishing the creation of the geometrician from that of the historian. The historian's creation was said to be "more real" precisely because its subject matter dealt ultimately with corporeality, whereas that of the geometrician did not. However, the failure of the realist's version rested on this very same claim. If the "more real" of the historian's creation is merely the corporeal, then there is no need for a "new science," for there is no good reason why physics (or a social science based upon the precepts of physics) should not be able adequately to account for the past actions of man.[49] This line of thought, however, is explicitly rejected by Vico.[50]

On the other hand the idealist version excludes the notion of corporeality as the real and argues positively that a new science is needed to allow for "scientific" knowledge of history. However, it, *too*, fails in the final analysis, for it offers no adequate way of distinguishing between the creation of the geometrician and that of the historian. Both the geometrician and the historian, according to idealist principles, make use of the "maker's-knowledge criterion," and both have access to their respective knowledge in a God-like way. The idealist, in pointing out that the subject matter of history is the purposeful activity of mind, excludes anything independent that would count as evidence for his claim.

I should now like to propose an amended version of the idealist interpretation of "more real truth" which (although it is not without difficulties of its own) I believe to be the most plausible account of what Vico had in mind when thinking of the "real truth" of history.

It was Vico's belief that his new science, i.e., the science of history (which was actually a science of humanity), was in fact the paragon of all the sciences. He held this view because he thought that only his new science could render knowledge of its subject matter, i.e., the human past, completely intelligible *and* completely certain. To achieve such intelligibility and certainty, Vico's science would have to incorporate the deductive features of geometrical reasoning, the inductive procedures of physics, and the necessary metaphysical truths of philosophy.[51]

Concerning the former, he says: ". . . and history cannot be more certain than when he who creates the things also narrates them." (349 N.S.) Because of the "maker's-knowledge criterion" and the identity-feature of the historian and the historical agent, the historian will be in a unique position to deduce with conscious certainty various truths (from Vico's axioms) concerning man's nature and his past.[52] However, Vico also tells us that ". . . Bacon, great alike as philosopher and statesman, proposes, commends, and illustrates the inductive method."[53] And that we, therefore:

> . . . shall be able to see in *fact* [my emphasis] this world of nations which we have studied in *idea* [my emphasis], following the best ascertained method of philosophizing that of Francis Bacon, Lord Verulam, but carrying it over from the institutions of nature, on which he composed his book Cogitat [et] Visa, to the civil institutions of *mankind*.[54]

It can be seen from Vico's insistence on the use of the inductive method that the subject matter of the new science must necessarily involve some element of corporeality. This is because the collection of evidence used to support this or that particular claim requires by its very nature nonvacuous alternatives.[55] If *The New Science* did not necessarily involve in its subject matter corporeal elements, then the inductive method of

Bacon could not be used, evidence could not be collected, and the truths of *The New Science* would be vacuous (or false insofar as they purport to be about the "real").

The shortcomings of the idealist and realist versions now begin to appear more evident in their mutual contrast. Each version used some of Vico's conceptual machinery while excluding some. For example, the idealist could make history completely certain (using the "maker's-knowledge criterion," the identity-feature, and deductive method) by arguing that history's "more real truth" was that of mind. On the other hand, the realist could make history completely real (using the maker's-knowledge criterion and the inductive method) by arguing that history's "more real truth" was that of corporeality. However, as we have seen, neither the idealist nor the realist succeeds in making history completely intelligible *and* completely real. Because of this, these versions fail to establish the science of history (i.e., the science of humanity) as the paragon of the sciences that Vico envisaged it to be.[56]

Finally, the failure of these versions to satisfy completely the criterion of scientific knowledge (i.e., to achieve complete truth *and* complete certainty) in the area of history indicates an important point concerning the *nature* of the subject matter with which Vico (in *The New Science*) is concerned. The subject matter of the historical world is seen by Vico to be of *a metaphysically different nature* from that of the "world of mathematics" or of the "world of physics." The subject matter of mathematics, it will be recalled, is the point and the unit, the mataphysical nature of which are fictions only,[57] connected with the real world by a metaphysical hypothesis.[58] That of physics is the movements of bodies,[59]

and God can have science of their metaphysical natures, for he has made them.[60] Man's knowledge of nature, i.e., his physics, is probable only, for the world of nature is infinite and man is finite.[61]

However, the subject matter of *The New Science* is history, i.e., making intelligible the social institutions of man. Vico's novel claim is that it is only in *this* area, i.e., only in the investigation of the "nature" of human institutions (which is at the same time an investigation of the human natures of the men that made them), can truth that is *both* certain and real be achieved. We must, therefore, briefly examine here what Vico has to say concerning the "metaphysical nature" of this *new* subject matter, i.e., man's humanity vis-à-vis its institutional history. We must examine this new nature if we are to come to some conclusion as to his meaning of "more real truth."[62]

Vico tells us, when speaking of the first primitive men, that his new science ". . . must take its start from the time these creatures began to think humanly."[63] When we inquire into the natures of these first men we learn that:

> . . . the founders of gentile humanity in a certain sense generated and produced in themselves the proper human form in its *two aspects* [my emphasis]: that is, . . . they brought forth from their giant bodies the form of our just *corporature* [my emphasis] and how by discipline of their household economy they brought forth from their bestial minds the form of our human mind.[64]

These two necessary elements of human nature are not new; Vico had told us as early as *De Antiquissima* that man was divided into two basic elements, body and soul.[65] However, now in *The New Science* where Vico's concern is history he reinforces this claim by adding that the nature of human *institutions* is also necessarily composed of those same basic elements.

". . . when the commonwealths were to spring forth, the *matters* [my emphasis] were all prepared and ready to receive the *form* [my emphasis] and there issued from them the format of the commonwealths, composed of mind *and* [my emphasis] body . . ."[66]

Vico goes on to tell us that the "matters" of the institution of, say, agrarian law were the actual people that made up the community of nobles and plebeians. These "matters" then set the stage for a certain "form" of commanding and obeying orders.[67] This form evolved into various government institutions which themselves could come about only because of the particular relationship of the form and matters given above. In this example the particular form was an aristocratic kind of rule:

> . . . so that people newly come to humanity might, by the very *form* of their governments, continue for a long time to remain enclosed within these confines and institutions, and so forget the infamous and nefarious promiscuity of the bestial and feral state.[68]

The point is that the nature of man as well as his institutions is seen by Vico to contain *two metaphysically necessary elements*, namely mind *and* body. Further, we believe that Vico must be taken at his word; this is to say that to understand the meaning of his "more real" it is necessary to take him to be saying that *history* (i.e., the story of man's developing nature vis-à-vis his institutions) is itself composed of these two elements. The *metaphysical nature* of the history of man and his institutions is *a combination* of mind *and* corporeality. Historical explanation, therefore, will contain reference to *both* of these elements. The idealist was right in saying that the ultimate subject matter of the new science is mind in the form of purposeful activity. His error was in necessarily excluding corporeality from the nature of mind.[69]

The kind of mind that Vico is concerned with in *The New Science* is very similar to Hegel's Geist in his philosophy of history. It is similar in two respects: first, Vico holds that the very nature of mind is such that it must be embodied,[70] and second, he thinks of mind as an activity in history which is directed by "something more" than any of the particular desires or wishes of particular human beings.[71] It is this notion of a metaphysically necessary, embodied, institutional, social mind that Vico believes to be the ultimate subject matter of the new science.

Therefore, the realist was also right in a qualified sense. The history of man does involve as one of its essential elements corporeality, and therefore, it will have ". . . a reality greater by just so much as the institutions having to do with human affairs are more real than points, lines, surfaces, and figures are."[72] The error of the realist was his failure to understand the *metaphysical status* of the corporeality with which Vico is concerned in *The New Science*. This is, as we have seen, the corporeality which is necessarily involved in man's process of humanizing himself. It includes ". . . men's religions, their own languages, their own lands, their own nuptials, their own names (clan or houses), their own arms, and hence, their own dominions, their own magistrates, and finally, their own laws."[73]

In *De Antiquissima* we saw that the conception of corporeality espoused by Vico was governed by the physicist's ideas. In that work corporeality was thought of as that which moved through space. It is clear that this is not the notion working in *The New Science*. In *The New Science* Vico sees corporeality as playing a sociohistorical role, i.e., that

of being the *socially prepared "matters* ready to receive various institutional *forms*."[74] Further, that these matters *must* receive their forms, and that form and matter (mind and body) are *both* metaphysically necessary[75] elements of institutions are now, for Vico, beyond dispute.

It is for these reasons that the historian's creations contain "more real truth" than the geometrician's. Geometry deals only with arbitrary fictions, completely made by man and, therefore, containing no "real" truth. History, on the other hand, is also completely made by man. However, the nature of its subject matter is not arbitrary but, rather, *metaphysically necessary*, involving *both* form and matter (mind *and* corporeality). It was Vico's belief that only *history* could give us knowledge of real truth *and* certainty. His contention was that because of his new science man will come to see *the* particular pattern or "ideal order" that the various forms of "prepared matters" necessarily follow. The result is that one will thereby be able to achieve *certainty* concerning historical claims made about particular "matters." This is so because one will have the pattern of forms which displays the purposeful order that those matters necessarily follow.

Having achieved some idea of wh t Vico had in mind when he claimed that history is "more real" than geometry, we must now try to understand his conception of the relationship of this "more real" (vis-à-vis his "maker's-knowledge criterion") to certainty. In order to do so we must now turn to an examination of his idea of *teleology* which he refers to as "Divine Providence."

Teleology

We have seen the manner in which Vico argues that his new science achieves real truth. The new science has as its ultimate subject matter

mind, whose nature necessitates embodiment in corporeality. Truth is still secured from the attacks of the sceptic in *The New Science* in essentially the same way as it was in *De Antiquissima*, i.e., it is epistemologically secured by the notion of "maker's-knowledge." What remains to be seen, however, is the kind of argument that Vico will use in order to achieve the *other* necessary element of every science, namely certainty.[76]

Vico's argument that certainty can be achieved in the science of history is basically an argument for the existence of an overriding *teleology* in human affairs. Although he presents various forms of this teleological argument throughout *The New Science*,[77] I think it can be better, i.e., more clearly, understood if it is divided into three distinct stages. Stage one may be seen as involving an argument for a particular *method* by which one can come to know that there is an "ideal plan" that determines the pattern which all human institutions follow. Stage two may be seen as an actual *description of the plan* itself. Finally, stage three may be seen as an argument involving *various examples* of teleological activity in human affairs vis-à-vis the "ideal plan" upon which those affairs are based.[78]

In this section, therefore, we shall first examine each of these stages, i.e., the "new metaphysical art of criticism," the "ideal eternal history," and "Divine Providence," in order that we may better understand Vico's argument for teleology in history. Afterwards, we shall examine the *formal relationship* between the epistemological justification for teleology and the "maker's-knowledge criterion." We should then be in a position to understand Vico's conception of truth and its relation to certainty in *The New Science*.

Vico tells us that in one of its "principal aspects" his new science is a history of human ideas.[79] He also says that:

> To determine the times and places for such a history--that is, when and where these human thoughts were born--and thus to give it certainty by means of its own (so to speak) metaphysical chronology and geography, our Science applies a likewise *metaphysical art of criticism* [my emphasis] with regard to the founders of these same nations.[80]

Vico thinks of his "metaphysical art of criticism" as *new* because for the first time it enjoins a synthesis of two distinct fields of study, namely philosophy and philology.[81] Vico held that it was because these areas had always seemed to be antagonistic to one another in the past that there had never been a *method* by which the *facts* of history could be accounted for *philosophically*.[82] Philosophy, the queen of the sciences, had always dealt with the necessary and the universal. The result of philosophical meditation was knowledge of eternal truth. Philology, on the other hand, concerned itself with only contingent, particular facts, the certainty of which depended solely upon the individual consciousness that witnessed them. On the other hand, philosophy was said to deal with the (eternally) true which it (philosophy) could show to be true through rational demonstration. On the other, philology's business was with the contingent fact which, although lacking in demonstration, was nevertheless made certain by appealing to individual experience.[83]

In his earlier work *De Antiquissima* Vico had argued for a similar distinction regarding truth and certainty. In *The New Science*, however, these two notions (i.e., truth and certainty) are paired off with philosophy and philology. Vico now explicitly argues that truth and certainty should be *synthesized* so that they will be seen as necessary complements of one another. Further, in *The New Science* Vico thinks that it

is precisely due to this complementary relationship of philosophy to philology that history can be made scientific.[84] It is because of this synthesis then that Vico's art of criticism is new.

Vico holds the view that the actual past affairs of mankind (i.e., man's history) is *itself* a synthesis of eternal truths and contingent facts. For that reason he thinks of his new art of criticism as the *only* method by which one may gain access to certain knowledge in history. This is to say that history can become a science *only* if we adopt Vico's new method. Vico holds that the conceptual structure of his new method reflects the *actual* synthesis of truth and certainty in the world. This is the meaning of his claim, e.g., that his ". . . Science applies a *likewise* metaphysical art of criticism with regard to the founders of these same notions . . ."[85] [my emphasis] And that whoever uses this art of criticism and ". . . meditates this Science narrates to himself this ideal eternal history . . ."[86]

Vico is arguing two things: First, that the truths of philosophy must be seen *in* the historical facts. That is to say, there is a deeper purpose to be discerned in the facts than just the facts themselves. The facts, in other words, are to be read and narrated philosophically.[87] Second, Vico believes that he has provided us with the required *new* art with which we may complete this task.[88] But here the question quite naturally arises, precisely what is it that is needed to achieve this synthesis of philosophy and philology? That is, what third thing must exist if these two antagonistic things (i.e., philosophy and philology) are to be synthesized thereby allowing us to see eternal truth in historical facts? Vico's answer is twofold. First:

> There must in the nature of human institutions be a mental language common to all nations, which uniformly grasps the substance of things feasible in human social life and expresses it with as many diverse modifications as these same things have diverse aspects. A proof of this is afforded by proverbs or maxims of vulgar wisdom, in which substantially the same meanings find as many diverse expressions as there are notions ancient and modern.
>
> This common mental language is proper to our Science, by whose light linguistic scholars will be enabled to construct a mental vocabulary common to all the various articulate languages, living and dead.[89]

Second, there must be a criterion for certainty which Vico takes to be ". . . the common sense of the human race, determined by the necessary harmony of human institutions."[90]

Vico believes that the synthesis of the true and the certain (i.e., philosophy and philology) can be achieved if in examining the facts we can establish the *necessary order* that human institutions follow. We shall be able to establish such a necessary order because there is a universal mental language. We can be certain of the meaning of this universal mental language because it is based upon the common sense of mankind.

Vico's argument may be summarized as follows: "Uniform ideas originating among entire peoples unknown to each other must have a common ground of truth."[91] This common ground is the common sense of the race which, as we've seen, is the criterion of the certain. That is to say, the common sense of peoples determines (with respect to their needs and utilities) what is certain. This holds true even in the case of their own so-called "natural" law.[92] Therefore, all nations, *because of* their uniform ideas, will have the *same* "natural" law.

The question then arises concerning the possibility of knowing the particular historical order of human institutions. Vico here argues

that the (philosopher) historian should in his investigations construct a "mental dictionary." By means of this dictionary he (the philosopher-historian) can then assign *origins* to the various nations' diverse languages.[93] He will be able to assign these origins because first the origins will have "public grounds" of truth, and second they will be the same from society to society.[94] Vico claims that in assigning these origins, the historian will be able to discover a *common mental language* which expresses what is and is not feasible concerning necessity and utility in social life.[95] The particular order of human institutions will then be traceable because the order of ideas expressed in the *common mental language* is traceable. How is this possible?

Vico has told us that the origins of the ideas concerning man's necessities and utilities are to be found in the "common sense" of mankind. That is to say that upon examining the "common sense" of mankind, we find that the ideas of early man were primarily concerned with practical necessity and utility. Further, we find that these concerns were expressed in various ways and in various languages. For example, early man expressed himself about needs and utilities in myths, poetry, and proverbs. Now with the aid of the historian's *mental dictionary* we shall come to see that the *apparently* different ideas (expressed in myths, poetry, and proverbs) are really expressions of common concerns in a common (i.e., universal) mental language. Further, because Vico considers it *axiomatic* that "the order of ideas must follow the order of institutions,"[96] the philosopher-historian will (by tracing the order of ideas), therefore, be in a position to discover the order of institutions. That is, the historian will be able to trace the order of ideas by examining (with his

mental dictionary) the common mental language, and once he has the order of ideas, he will also thereby have the order of institutions. Therefore, because the "common mental language" is universal and expresses the universal order of ideas, the historian should be able to discover the *universal (historical) order* of human institutions. Vico tells us that this history will be ". . . an ideal history traversed in time by the history of every nation in its rise, development, maturity, decline, and fall."[97] It is in this manner that Vico argues that the true and eternal is to be found in the certain and factual. Because he postulates a "universal mental language," he is able (he believes) to synthesize philosophy with philology and thereby provide a "new critical art" for the study of history.

Having achieved the synthesis of philosophy with philology and thus provided the historian with a method of investigation, Vico next tries to demonstrate knowledge of the general causes of historical facts. That is, he believes that the primary task of his "new critic" is to establish those general *conditions* which have brought about the multitude of historical facts that constitute the civil world. These conditions, he thinks, will themselves correspond *pari passu* with the *necessary order* of the genetic development of social institutions.

Once again, therefore, it is the knowledge of the *necessary development or order of human ideas* which places the philosopher-historian in the position of being able to "reduce to certainty human choice" (and thereby make history scientific).[98] Vico is quite aware of the fact that he must show (i.e., philosophically explain) why the particular order of institutions discovered by his "new critical principles"[99] is a *necessary* one. To demonstrate this necessity, he relies upon the rather paradoxical notion, which we shall now briefly examine, of an "ideal eternal history."

"Ideal-eternal History"

Vico believes that his new method will succeed where others have failed. He thinks that his method can take the "deplorable obscurity of causes and the almost infinite variety of effects . . ."[100] and reduce them to scientific history, i.e., to ". . . the form of a science by discovering in it a design of an ideal eternal history traversed in time by the history of all nations."[101] It is this introduction of an "ideal-eternal history" that allows Vico to view as necessary the particular order of human institutions in their development. He tells us that we come to the realization of this "ideal-eternal history" ". . . at the same time . . ."[102] that we reconstruct the various histories of nations. This happens in two (logically) distinct stages. First, we "meditate in idea"[103] upon the various philological (i.e., historical) facts. This is simply to say that we philosophically reflect on the (philological) facts by making use of Vico's "new art of criticism." Second, after having arrived at the *order of human ideas* (from which we also get the *order of institutions*), we then see that we were able to achieve knowledge of this order *only because* we had first thought of the facts *philosophically*, i.e., "in idea."[104] This, Vico thinks, is in effect to say that our discovery of a purposeful order of ideas (and thereby a purposeful order of instituions) is possible only because there exists a corresponding purposeful, ideal, necessary order.[105] Further, it is precisely this other "ideal necessary" order that Vico thinks his "new art" provides.

The "new art" allows us access to knowledge of the "times and places"[106] that were the developmental stages of man's ideas. His ideas follow his institutions which were in turn established because of certain

necessary conditions. Now it is the laws or principles which govern these conditions that Vico is interested in. He believes that these laws or principles are universal and necessary. They are not arrived at by merely examining the facts but instead by "meditating the facts in idea." It is these laws or principles that govern the stages of the "ideal eternal history." Because of his knowledge of the ideal-eternal history and its principles, the historian will be able to "scientifically" reconstruct the history of mankind. (Book Two, "Poetic Wisdom" of *The New Science* is an example of this reconstruction.)

The particular pattern or stages of the "ideal eternal history" that reduces history to certainty and, therefore, to a science,[107] may be briefly sketched as follows: the pattern consists of three parts, each reciprocally involved with the other. These parts are the nature of man, the ages of history, and the stages of man's institutional development. Upon examining the *natures* of man in general, we find that at one time-sect[108] man had a poetic nature; at another, a heroic nature; and at still another, a human nature. Further, we come to see that these natures have been going through a developing process, which is to say that the seeds for a later nature were sown in an earlier one. Corresponding to these natures--poetic, heroic, and human--are *ages* accompanied by their appropriate *institutions*.

The upshot of this developmental pattern is that man's institutions will reflect the times he lived in, while the times will in turn display the particular natures. Further, the natures of man are determined by social conditions, and it is *a combination* of the social conditions and the natures which give rise to and shape man's institutions. In other

words, in "making" his institutions man thereby "makes" himself.[109] This briefly is the pattern which constitutes Vico's "ideal eternal history." He says of it that it is an

> . . . ideal eternal history traversed in time by the histories of all nations. Wherever, emerging from savage, fierce, and bestial times, men begin to domesticate themselves by religion, they begin, proceed, and end by *those stages* [my emphasis] which are investigated here in Book Two, to be encountered agin in Book Four, where we shall treat of the course the nations run, and Book Five, where we shall treat of the recourse of human institutions.[110]

Divine Providence

We have seen that for Vico history can become a science only if it can be made certain. Further, it can be made certain only if one could see "in the facts" an ideal order or plan. Yet it is obvious that it is not enough that there simply be seen a necessary plan in the facts. Something further is needed to secure the notion of certainty in history, and that is that the facts be seen as *unfolding according to the plan*. That is to say that the institutional history of man must be able to be viewed such that it can be seen as being, in some sense, *forced* to follow the "ideal eternal history." Vico says:

> The decisive sort of proof in our Science is therefore this: that, since these institutions have been established by divine providence the course of the institutions of the nations *had to be, must now be,* and *will have to be* [my emphasis] such as our Science demonstrates . . .."[111]

Vico believes that he must show that divine providence is at work in the institutions of man if he is to "reduce to certainty human choice" and make history a science. We shall conclude our discussion of Vico's concept of certainty in history, therefore, by briefly examining his notion of "divine providence." For Vico, it is this *teleological* concept of

divine providence which is finally used to unite or synthesize the particular facts of various histories with the universal stages of the "ideal eternal history."

Vico's notion of providence was first developed in his early works on natural law and jurisprudence.[112] Space does not here allow us to examine the details of this early development. However, commentators tend to agree that Vico's theory of providence in *The New Science* is essentially the same as that of his earlier works on Roman jurisprudence.[113] The problem in the earlier work was to understand the precise relationship between the principles and ideals of universal law on the one hand and the particular historically determined causes which produced positive laws on the other.[114] As Professor R. Caponigri has pointed out:

> The function which Vico, in his interpretation of Roman law and jurisprudence, assigns to the concept of providence is precisely the function of reconciling the ideal and the temporal orders. . . the function of determining a natural law which arises within and with the movement of the actual formation of structures of positive law and which is therefore, an ideal process transpiring through time. The natural law is one which has arisen and arises with the customs of the peoples. It is an eternal law, . . . The concept of providence which is operative in the Vichian theory of history is the extension of the concept of providence which he associates with Roman Jurisprudence.[115]

Further, it is also clear (as another commentator has pointed out,[116] that the general problem of the relationship between historial and ideal law (i.e., positive law and universal law) is actually the *same* problem that exists in *The New Science* concerning the synthesis of the true with the certain. Because of the similarity of these problems, the solution to the "problem of law" is later seen by Vico as (basically) the *same* solution to the "problem of history." The problem is to reconcile the universal with the particular. The solution is to make use of the concept

of providence in such a manner (i.e., epistemologically) that one can achieve coherence and certainty (for the science of history) by linking particular historical facts to an ideal universal pattern. Vico, borrowing a page from Plato, emphasizes the similarity between law and history. Just as divine providence guides man's actions in history so too it guides his actions through legislation.

> Legislation considers man as he is in order to turn him to good uses in human society. Out of ferocity, avarice, and ambition, the three vices which run throughout the human race, it creates the military, merchant, and governing classes and thus the strength, riches, and wisdom of commonwealths . . .. This axiom proves that there is a divine providence and further that it is a divine legislative mind (*The New Science*, #132-33).

We may summarize Vico's notion of providence in the following three points: first, providence is a teleological activity, i.e., it is an activity which displays an overriding purpose operating in the affairs of man. The purpose is also to be seen as "forced," i.e., as *legislative*, because many times it goes directly against the particular intentions of the particular men involved. Often, ". . . without human discernment or counsel, and often against the designs of men, providence has ordered this great city of the human race."[117] Vico further believes that the preservation of the human race can only be accounted for if we assume that man's immediate actions do indeed follow an overriding purpose.[118]

Secondly, providence is to be thought of as divine. By "divine" Vico means that his new science provides us with the means of *discovering things*, i.e., finding out, ". . . from divinari, to divine, which is to understand what is hidden from men--the future--or what is hidden in them--their consciousness."[119] Divine providence is a providence, therefore, which, although it has been hidden from men, can now be discovered by our

historical examination of the ideas of men using Vico's "new critical method." [120]

Finally, providence is to be thought of as mind. This is because the only real alternative to fate (i.e., the physical determinism of the stoics) or to chance (i.e., the indeterminism of the Epicureans) is the purposeful activity of mind. Vico believes that we *must* assume this purposeful activity if we are to *explain* the affairs of men. "That which did all this was mind, for men did it with intelligence; it was not fate, for they did it by choice; not chance, for the results of their always so acting are perpetually the same."[121]

It is by his use of the concept of a "divine legislating mind" operating in the affairs of men, that Vico is able to show how a science of history is possible. Certainty in history can be achieved only because history is seen to be a teleological process. The affairs of men when viewed teleologically are seen to follow *necessarily* the sequence of stages demonstrated in "the ideal eternal history." The ultimate impetus for this teleological force itself is mind (i.e., God) whose purpose it is to "preserve the human race."[122] It is, therefore, because of Vico's epistemic use of the concept of teleology (in conjunction with his epistemic use of the "maker's-knowledge criterion") that he can claim to have achieved the synthesis of truth with certainty, the universal with the particular, and the various empirical histories of nations with an ideal eternal history. In this way Vico claims to have demonstrated with his new science the manner in which the science of *history* is possible.

I should like to conclude this chapter by examining three distinct, yet related, ideas that occur in *The New Science* and that seem to

follow from Vico's "maker's-knowledge criterion" in its relation to history. The ideas I have in mind are "making," "re-making,"[123] and "self-making,"[124] as they occur in the context of historicism.[125] In order to understand more precisely the relationship of these ideas to Vico's "maker's-knowledge criterion" I shall offer a sketch of what I consider to be the *formal* pattern of Vico's argument for the possibility of history being a science. I shall then show how the ideas mentioned above are related to this "formal" argument.

We shall begin by letting V stand for the "verum factum thesis," i.e., the thesis which states "what is true and what is fact (i.e., the made) are convertible."[126] It was because of this thesis and because of his acceptance of the theory of transcendentals that Vico arrived at his "maker's-knowledge criterion" of truth. To be a fact is to *be* One, True, and Good. All facts are made; therefore, truth is made. To know is to produce the causes; hence, "one can only know if one makes."

Next, let I stand for the "identity thesis"; this is the stronger version of the "maker's-knowledge criterion" (i.e., God's maker's knowledge) in that it claims that "when one knows, one *is thereby* making" and conversely "when one makes, one *is thereby* knowing." Vico arrived at this thesis by his God/man analogy, and he asserts that this is the thesis which holds for the sciences of geometry and history. This thesis claims that man has "God-like" knowledge in the sciences of geometry and history because *his* (man's) knowing also is equal to his making.[127]

Finally, let S stand for the "synthesis thesis"; this is the thesis that states "philosophical truth, i.e., the eternal and universal, may be seen in philological certainties, i.e., the contingent and

particular."[128] The synthesis thesis relies upon identifying those acts of men (i.e., the acts by which men have made their institutions) with the criterion of certainty, i.e., "the common sense of the human race." (This is, in effect, to identify the "made" with the "certain.") Because of this identity Vico is able to reconstruct the particular acts of men (i.e., the causes for the institutions) by his knowledge of man's common sense ideas. Having thus identified the *certain* with the *made*, Vico can then synthesize the *true* with the *certain* by relying upon the verum-factum thesis stated above. This then is the logical framework of Vico's claim that "because one *makes* history one can know it with *truth* and *certainty*."

From the above three theses we can construct Vico's argument as follows: Knowledge of anything is justified by the "maker's-knowledge criterion" (Thesis V, this is the argument of the first part of *De Antiquissima*). There exists some human knowledge which is classified as being identical with its making (Thesis I; for man this includes geometry and history). Knowledge which is classified as I necessarily comes under thesis S because of the identity of the "certain" with the "made" and because of thesis V. Add to this the argument of *The New Science* that history is "more real" than geometry and, therefore, is a genuine science, and we get the following conclusion. Since in historical knowledge V, I, and therefore, S obtain, history can be known with complete (real) truth and certainty. Therefore, it is a genuine science.

With this formal argument in mind let us now examine the three previously mentioned ideas. First, the making and knowing that Vico is referring to in the identity thesis is *not* the actual "first-order" making and knowing of the people being investigated. That is to say, Vico

does not mean, in claiming that "we can know the civil world because we have made it."[129] that we will precisely have *the same kind* of conscious awareness of the world that the *original* historical agents themselves had. That is, he does not mean to say that because they "made" the world and knew it, so too we "make" the world and can, therefore, know *their* world. He cannot mean this or anything like this because *that kind* of awareness, if at all achievable, would simply amount to an immediate psychological awareness of the historical agent's world which is mere consciousness (coscienza), not science (scienza).

On the contrary, Vico's notion is that *The New Science* explains the *historical conditions* (i.e., the causes) that determine human nature itself. It is human nature in turn which allows for the various kinds of consciousness that a people may have. As Max Fisch correctly observes:

> . . . the science of the world of nations has not come, *ipso facto* and *pari passu* with the [1st. order making], . . . The new science comes rather with a [2nd. order] *re*making, a *re*-construcing, which could not even begin until Vico had made a certain discovery.[130]

That discovery was of certain eternal principles[131] which would allow the historian to reconstruct the conditions and thus know the causes of the development of man's institutions.

A science of history becomes possible because the principles by which the civil world has been "made" (in the first-order sense of "made") are to be found within the modifications of the human mind.[132] Since the historian himself is a human mind, he will, therefore, be able to discover these same principles (within himself) that governed the makings of the original historical agents. It is precisely because of this identity-feature[133] of the historian with the historical agent that the

historian can scientifically *re-make* (by reflecting on and re-thinking the history of human ideas according to Vico's principles) the past and thereby create and know history. This point is summed up well by Leon Pompa:

> The identity between historian and historical agent, upon which the possibility of history itself depends, is therefore more than purely formal . . . for Vico, the peculiar intelligibility of history rests upon insights into our own nature which are accessible to us by virtue of our capacity to reflect upon ourselves in our various social and historical activities, so that we can be aware not merely of the different ways in which we see and react to our world but also of the different conditions which cause us to see and react thus.[134]

The "making" of the civil world of affairs and the "making" (i.e., (remaking) of its history, although epistemologically connected by the identity-feature of the historical agent and the historian, are thus two quite distinct kinds of "makings." It is because of the difference of these two "makings and knowings" that science of the original making is possible. The very functioning of the "maker's-knowledge criterion" and its strong identity-thesis use in history necessitates this difference. If the "making and knowing" of the historical agent were *literally the same as* the "making and knowing" of the historian, then the identity thesis set out above would justify only *consciousness* (coscienza) of the civil world of affairs (as experienced by the original historical agent). It would not justify *science* (scienza) of that world (i.e., its history) as constructed and experienced by the historian.[135]

The second important point, which is related to these distinct senses of "making," is that there emerges in Vico's philosophy of history (as a result of applying the "maker's-knowledge criterion" to history) the notion of a *developmental self-making*.[136] This is to say that Vico views historical development as self-development. The notion of self-development

is arrived at by our reflecting upon the "making" of the civil world by the original historical agent. Upon reflection we find that the historical agent's actions have caused whatever social changes that have occurred in the civil world. These social changes in turn are reflected by and take place in the agent's own institutions, e.g., laws, customs, etc. Hence, the *result* of the historical agent's actions is that his institutions bring about fundamental changes in his own nature, i.e., the creator of the institutions is shaped by his own creation. This is simply to say that the institutions which can be and are changed by men also change men.

It is in light of his "ideal eternal history" that Vico sees this reciprocal change as a *developmental* process [137] (#239-245). He holds, therefore, that the original "making" of the historical agent should be viewed as the activity which is responsible for *developing* man. When speaking of this *developmental* process, he tells us that men have made this world and ". . . in a certain sense *created themselves* [my emphasis] [138] (also see #367, 692, 520).

It is in this sense that the "making" of the civil world is seen as developmental and as a "self-making." The relation of the idea of "developmental self-making" to Vico's "maker's-knowledge criterion" (in theories of history) now becomes more apparent. Given Vico's epistemological theses concerning history (i.e., verum-factum thesis, identity thesis, and synthesis thesis), he has no alternative but to view historical development as the story of man *making himself rational*. We can see this most clearly by asking what would happen if Vico were to deny that this developmental self-making concept was a *necessary* concept for his doctrine of history.

The result would be an account of the development of human nature in non-human-made, i.e., ahistorical terms. This view would imply that the nature (or natures) of a thing is something that is totally independent of its historical circumstances. Vico could obviously not accept such a view since it is his theory that nature and *nascence* are one and the same. To know the nature of anything is simply to know ". . . that the nature or birth (natura o nascimento) was thus and not otherwise,"[139] and that the thing in question came ". . . into being at certain times and in certain guises."[140]

What Vico *is* arguing then is that to *know* the nature of anything one must know its history. The only way in which we *know* (i.e., scientifically ascertain with truth and certainty) a thing's history is by making use of the epistemological theses contained in Vico's maker's-knowledge theory. Upon making use of this theory in the area of history where the subject matter is human beings, we find that human nature exists solely within the context of human institutions and that the history of these institutions is actually the history of man *making himself human.*[141] This is to say that man's humanity is *itself* a human artifact. It is because man makes institutions, which in turn develop his own nature, that Vico sees the historical "making" of institutions as a process of man's own self-making and self-development.

Since the nature of man is "nothing but" his own historical past, genuine self-development is simply historical development. Therefore, the notion of "developmental self-making" is a necessary one for Vico because it is merely the other side of the coin of historical development. The notion of historical development, as we have seen, is epistemologically grounded in the maker's-knowledge theory of history.

Our third and final point concerns Vico's historicism. We have seen that it is Vico's anti-Aristotelian view of the "natures" of things (i.e., his denial that a nature or essence is something above and beyond its genesis or history) and his (own, original) positive ontogenetic view[142] that accounts for his commitment to historicism.[143] Further, we have seen that it is because of his "maker's-knowledge" theory that his *particular form* of historicism is decidedly idealistic. For Vico the "making" in the Verum-Factum thesis (i.e., the "remaking" which is done by the philosophical historian) is actually the *literal creation* of history. In other words Vico is claiming that history simply and finally *is* this "re-making."

This is finally to argue that the historian reflects upon the historical facts according to *philosophical* principles (thereby providing a *philosophical* justification of his interpretation of those facts). Also, in his meditating the historian at one and the same time *re-makes* the facts in such a way that he *thereby creates* history. Vico further insists that not only the historian, but *anyone* who "meditates this Science" according to Vico's principles will be creating history much in the same manner as God creates nature.[144] Let us here conclude our study by pointing out briefly how this *idealistic* historicism is related to Vico's own work, i.e., *The New Science* as a work.

We have seen that Vico simply considers it axiomatic that "Doctrines take their beginnings from that of the matters of which they treat."[145] This axiom, combined with what Vico has said concerning the identity of nature and nascence, gives us his controlling methodological postulate. This postulate says that to get at the essence of a thing we must uncover

its origin, for it is precisely within its origin that the thing's essence is constituted. Vico makes it clear in *The New Science* that the above notion is ". . . universally used in all the matters which are herein discussed."[146] It seems, therefore, that discovering the essence of any matter discussed in *The New Science* must involve inquiring into the *origins* of that matter, i.e., into its history. Now one such matter discussed throughout *The New Science* is science itself. Hence, it should follow that to understand the truth of science (including Vico's own "new" science) we must understand the history of science. We can now begin to see what this claim involves.

In order to understand the history of science, according to Vico's "maker's-knowledge thesis," we are required to see that first, science is one of the things made in the original "making" of the civil world of nations.[147] This is a necessary condition to be fulfilled in order that the essence of a science might eventually become known. This is to say that it is only by being a member of the "made" (first-order) civil world that something can have or be eligible to have, so to speak, an essence (i.e., a history). Further, it is only by having a history that the thing in question can be a possible object for scientific knowledge. Secondly, we must also see that the thing in question cannot have a history unless it is *meditated* by, i.e., seen in the "light of," Vico's principles. Hence, to achieve the truth of a science, including the science of history itself, i.e., *The New Science*, one must "meditate" it according to Vico's principles.

Where does this leave us? The essence of science (or anything else) is its history. This is Vico's historicist claim. To know the history of science (or anything else) requires that science be amenable

to the "maker's-knowledge criterion" and the other intricate epistemological arguments of *The New Science*. This is Vico's idealist claim. The essence of the thing is its history which is remade by mind. However, the "maker's knowledge criterion," as we have seen, also requires that that which it produces the truth of be *first* "made" in the world of civil nations. The result is that to know the essence of a particular science we must create its history, i.e., we must trace its development in the civil world of nations. Vico's claim is that the history of science is actually the science of science.[148] It is necessary, therefore, to trace out the history of physics, logic, astronomy, geography, economics, and metaphysics in order to have science of them. It is to Vico's credit that he saw that the essence of his own "new science" must be justified in this same manner. (One may even view his autobiography as concerning itself with just this task.)

The manner in which Vico's maker's knowledge theory functions in *The New Science* makes it *impossible* for man to achieve an *absolutely certain* science of nature. In order to have a science of nature, nature must have a history. In order for nature to have a history (according to Vico), it must be made by man. But nature cannot have a history, for nature was *not* originally made by man. Now, approximately sixty years later, a great German philosopher will argue that while it is true that history is the story of man making himself human, it is *also* true that nature can be known precisely *because* man has made it. The philosopher, of course, is Kant, and it is to his theory of maker's knowledge and nature that we now turn.

NOTES AND REFERENCES

CHAPTER II

[1]See paragraph #331, *The New Science*, trans. Bergin and Fisch (Ithaca, New York: Cornell University Press).

[2]See *De Antiquissima*, p. 66, "Sono . . . entita fittzie." Also see *The New Science*, paragraph #349.

[3]*The New Science*, paragraph #331. I have altered Bergin and Fisch's translation to emphasize Vico's new notion of "Scientific" knowledge as opposed to simply knowledge. Knowledge, plain and simple, is usually indicated by Vico by the word "conoscere," not "Scienza." Fisch's translation of the passage in question states ". . . since God made it, He alone knows," p. 96. The Italian reads "Iddio egli il fece, esso solo ne ha la scineza," Sansoni edition, Opere Filosofiche, p. 461.

[4]*The New Science*, paragraph #349.

[5]Ibid.

[6]*The New Science*, paragraph #344.

[7]Ibid.

[8]Ibid.

[9]Ibid.

[10]This is true of individual men, e.g., in *De Antiquissima*, Sansoni, p. 64, and of institutions as well, e.g., see paragraph #630 of *The New Science*, ". . . the commonwealths composed of mind and body," p. 236.

[11]See concerning this point an interesting essay by Howard N. Tuttle, "The Epistemological Status of the Cultural World in Vico and Dilthey, *Vico's Science of Humanity*, ed. Tagliacozzo and Verene (Baltimore, Maryland: Johns Hopkins University Press, 1976). Tuttle there points out how the ". . . meaningful interpretation of human artifacts . . . is fundamental to *The New Science*, p. 246.

[12]*The New Science*, paragraph #148.

[13]Ibid., paragraph #149.

[14]Ibid., paragraph #150.

[15]Ibid., paragraph #435.

[16]Ibid., paragraph #99.

[17]Ibid., paragraph #217.

[18]Ibid., paragraph #498.

[19]Ibid., paragraph #331 (my translation).

[20]Ibid., also see quote #3 above concerning the term "science." In the Italian this passage reads ". . . mondo civile, del quale, perche l'avevano fatto gli uomini, ne ptevano conseguire la scienza gli uomini." Sansoni, p. 461.

[21]Ibid., paragraph #349.

[22]Ibid.

[23]*De Antiquissima*, Sansoni, p. 68, "Physics studies the internal motion of bodies in nature." (my translation)

[24]I have in mind something like Hempel's idea in his paper "The Function of General Laws in History." In that paper Hempel concludes, speaking of history and other areas of scientific research, ". . . it is similarly unwarranted and futile to attempt the demarcation of sharp boundary lines between the different fields of scientific research, and an autonomous development of each of the fields. The necessity, in historical enquiry, to make extensive use of universal hypotheses of which at least the overwhelming majority come from fields of research traditionally distinguished from history is just one of the aspects of what may be called the methodological unity of empirical science." *Theories of History*, ed. by Patrick Gardiner, p. 356. My point here is that if the realist's interpretation is correct, then it would seem that Hempel's view would be correct, and Hempel's view is contrary to Vico's view; therefore, the realist's interpretation is wrong.

[25]*The New Science*, paragraph #331.

[26]See paragraphs #331, #349, and entire Section IV titled "Method," pp. 100-6.

[27]*The New Science*, paragraph #347.

[28]Ibid.

[29]Vico's principles may be distinguished into four different types: imaginative, natural, scientific, and formal. (Leon Pompa distinguishes three types in his book on Vico, natural, associative, and scientific.) The

imaginative and natural principles are those which govern the mind of primitive man. They are found in Section II of Book I, "Elements of the New Science," pp. 60-94. They are written in the form of axioms and their respective consequences. There are 114 of them. An example of an imaginative principle is Axiom 1., "Because of the indefinite nature of the human mind, wherever it is lost in ignorance man makes himself the measure of all things." An example of a natural principle is Axiom 11., "Human choice, by its nature most uncertain, is made certain and determined by the common sense of men with respect to human needs or utilities, which are the two sources of the natural law of the gentes."

Vico's scientific first principles are those universal and eternal principles which make *his* account of history true and other accounts false. They are principles of interpretation and historical reconstruction found in Book I under the title "Establishment of Principles." The arguments, however, used to support this establishment are to be found in the sections called the "Elements" and "Method," and also in the "Corollaries Concerning the Principal Aspects of This Science," pp. 121-6. An example of one such principle is #314 (p. 92): "Doctrines must take their beginning from that of the matters of which they treat."

Finally, Vico's first three formal institutional principles are "religion," "marriage," and "burial." These are stated succinctly in paragraphs #332-3. They correspond to his Platonic notion that philosophy demonstrates that there is divine providence, that the human passions should be moderated, and that the souls is immortal (paragraphs #129-130).

[30]We shall treat the "ideal eternal history" in the second part of the chapter which deals with teleology and certainty.

[31]*The New Science*, paragraph #336.

[32]". . . there is a divine providence and further . . . it is a divine legislative mind." Paragraph #133 (also see paragraphs #343, #344, #630, and #1108).

[33]*The New Science*, paragraph #147.

[34]Ibid., paragraph #148.

[35]Ibid., paragraph #630.

[36]Ibid., paragraphs #948, #949, and #951.

[37]"The first was that of religious times . . ." (paragraph #975) "The second was that of the punctilious . . ." (paragraph #976) "The third was that of the civil or modest times . . ." (paragraph #977)

[38]Ibid., paragraph #982.

[39]It is important to see that Vico was not thinking of his historical study of mind in any psychologistic sense (although Robert Neil Pasotti has argued

just this thesis in his dissertation "Giambattista Vico and the Psychology of History," Columbia University, 1963). It is true that he offers various (sometimes profound) psychological claims and insights concerning mind. For example, several of the Elements in Book 1 are claims about the psychological make-up of primitive man based on a psychological study of children. See, e.g., xxxvl, xLvlll, and Lll.

It is clear, however, that Vico thought of his new science as a metaphysical study of man. *The New Science* is a "philosophical" ". . . demonstration, so to speak, of what providence has wrought in history" (342). Providence is thought of by Vico as a "divine legislating mind" (133) that works in and through man's mind. The activities of Providence cannot be reduced to a science of the psychology of individual minds because the mind of which Vico is talking is a ". . . history of the institutions by which, *without human discernment or counsel, and often against the designs of men*, providence has ordered this great city of the human race. For though this world has been created in time and particular, the institutions established therein by providence are universal and eternal" (342) [my emphasis].

For a good discussion of the distinction between a philosophical-historical treatment of mind and a psychological treatment, see R. G. Collingwood, *Idea of History*, pp. 3-5. (It may be noted that this work of Collingwood's has a thoroughly Vichian flavor and without any acknowledgement from Collingwood who had translated Croce's *Philosophy of Giambattista Vico* twenty years earlier.

[40]"The human mind is naturally inclined by the senses to see itself externally in the body, and only with great difficulty does it come to understand itself by means of reflection." (Axiom Lxlll, p. 78, *The New Science*) As L. Pompa points out, Vico held that it was because ". . . judgements of common sense are 'without reflection' whereas those of the historian are not . . . that the real knowledge that the Scienza Nuova contains has been overlooked in favour of the pseudo-knowledge of the natural sciences . . ." (*Vico: A Study of the New Science*, pp. 165-6)

[41]*The New Science*, paragraph #390; Vico means by "philosophy" history: ". . . that is the doctrine of all the institutions that depend on human choice; for example, all histories of the languages, customs, and deeds of peoples in war and peace, . . ." (paragraph #7; also see paragraphs #138-9)

[42]*The New Science*, paragraph #435; ". . . five real words . . ." and paragraph #215; ". . . nothing but imitations of nature, and in a certain way real poems . . ."

[43]See, e.g., "Vico and the French Revolution," where Patrick H. Hutton argues that for Vico the purpose of ". . . social history is to study human intentions as they are manifested in the social world that men have themselves created." Hutton points out in a footnote (#6, p. 243) that "For Vico these intentions are transparent in the poetry of primitive peoples, and in their jurisprudence, which was a 'severe kind of poetry'." *Journal of the History of Ideas* (April-June 1976), pp. 241-257).

[44]*The New Science*, paragraph #148.

[45]Ibid., paragraph #149.

[46]Ibid., paragraph #7. ". . . a new critical art that has hitherto been lacking, . . . by virtue of new principles of mythology, . . . poetry . . . fables . . ." Vico's strategy was to reconstruct the purpose of the human institutions of Greece and Rome (and therefore their history) by relying on the poetry and myths of the early Greeks, e.g., Homer, and the Agrarian Law of early Rome, i.e., The Law of the Twelve Tables, and Publilian Petelian law. To accomplish his task, he needs a new method of interpretation by which he will show the meaning of the early poetry and law to be ". . . true and trustworthy histories of the customs of the most ancient peoples." (7) This new method of interpretation he refers to as his "metaphysical art of criticism." (348)

[47]*The New Science*, paragraph #147.

[48]Ibid., paragraphs #147-8.

[49]See quote #23 above.

[50]*The New Science*, paragraph #331.

[51]Concerning Vico's metaphysical justification of his new science, which is the crucial element of it that distinguishes it from all other historian's accounts, see paragraph #114: "However, if we consider well, this is not so much a hypothesis as a *truth meditated in idea* [my emphasis] which later will be authoritatively shown to be the fact . . . This then is an instance of an ideal eternal history traversed in time by the histories of all nations." (Also see paragraphs #415, #499, #138, #140, #349, #393, and #1043.)

[52]Vico's "Elements" paragraphs #120-329 lay out the various presuppositions from which these historical truths are to be deduced.

[53]*The New Science*, paragraph #499.

[54]Ibid., paragraph #163. Cogitata [et] Visa refers to Bacon's *Think and See*, written sometime between 1607 and 1609.

[55]This is simply to say that in order for one to be said to have "evidence" for a historical claim, something non-vacuous must be offered for or against the claim such that the absence or presence of the evidence would make some noticeable difference to the truth of the claim in question.

[56]*The New Science*, paragraph #331. Vico believed that the science of humanity is the paragon of the other sciences precisely because it is at the root of the other sciences, i.e., the other sciences could be fully understood only if it is understood how they are epistemologically legitimized. As we've seen, science can only be epistemologically legitimized if it is the case that "we know because we make." However, this maker's-knowledge

criterion means *human beings* "make" the sciences possible, so to understand the nature of that possibility we must understand the nature of humanity. This is to say that we must achieve self-understanding, which we can do only in history. In this sense the study of humanity is prior to and more basic than the study of the other sciences.

[57]". . . il punto . . . e l'uno . . . sono due entita fittizie." (Sansoni, p. 66), *De Antiquissima*.

[58]". . . per ipotesi sul punto metafisico." (Sansoni, p. 86, *De Antiquissima*) This hypothesis acts in much the same way as Kant's regulative ideas of reason. Further, Vico's metaphysical analogy concerning the generation of geometrical objects from geometrical points, and that of real objects from metaphysical points, has a striking parallel in Kant's discussion of the same issue, i.e., the extension of matter. In the "Axioms of Intuition" Kant tells us, "I cannot represent to myself a line, however small, without drawing it in thought, that is, generating from a point all its parts one after another." (B203/A163)

[59]*De Antiquissima*, Flint, p. 90.

[60]*The New Science*, paragraph #331.

[61]Sansoni, *De Antiquissima*, p. 82, and Fisch, *Symposium on Vico*, p. 409. "In physics the elements of natural things are outside us; we cannot demonstrate by causes, what we make is not what we seek to know but only something like it . . ."

[62]That Vico's new science is a science of humanity is appropriately recognized by Georgio Tagliacozzo and Donald Phillip Verene, the editors of a new collection of writings on Vico, *Giambattista Vico's Science of Humanity* (Baltimore, Maryland: Johns Hopkins University Press, 1976).

[63]*The New Science*, paragraph #338.

[64]Ibid., paragraph #692.

[65]". . . la scienza umana ha sezionato l'uomo in corpo e animo." Sansoni, *De Antiquissima*, p. 64.

[66]*The New Science*, paragraph #630.

[67]Ibid., paragraph #629.

[68]Ibid.

[69]See Introduction to Hegel's *Phenomenonology of Mind* and Introduction to *Philosophy of History*.

[70]It is clear that Vico thinks of mind as (1) embodied in matter and (2) somehow superior to matter, for it is mind that directs mind/body, e.g., see *De Antiquissima*, trans. Flint, p. 90. Also see paragraphs #130, #597, #630

of *The New Science*. Vico and Hegel differ fundamentally, however, in that for Hegel all of nature and thus all of corporeality is ultimately mind in the form of "the other." (Hegel makes use of a doctrine of "estrangement" to attempt to make this argument cohere.) For Vico corporeality is in some sense seen to be united with form in Platonic-Aristotelian manner that is never made quite explicit.

[71]". . . there is divine providence . . . a divine legislative mind. For out of the passions of men each bent on his private advantage, for the sake of which they would live like beasts in the wilderness, it has made the civil institutions by which they may live in human society." *The New Science*, paragraph #133 (also see #342, #1106).

[72]*The New Science*, paragraph #349.

[73]Ibid., paragraph #630.

[74]Ibid., paragraph #629-630.

[75]Concerning the priority and necessity of metaphysical truth over physical truth, see XLVII paragraphs 204-5 of the "Elements," in *The New Science*. Concerning form and matter, see #33 of the "Principles" ". . . now in order to make trial whether the proposition . . . can give form to the materials prepared . . .", etc.

[76]". . . by that property of every science, noted by Aristotle, that science has to do with what is universal and eternal (scientia debet sees de universalibus et aeternis." *The New Science*, paragraph #163.

[77]See, e.g., paragraphs #2, #5, #133, #342, #343, #1108, #1109, and #948 in *The New Science*.

[78]See, e.g., paragraph #7, ". . . and reduces it to the form of a science by discovering in it the design of an ideal eternal history . . ." And see paragraph #2, "The conduct of divine providence in this matter is one of the things whose rationale is *a chief business* [my emphasis] of our Science, which becomes in this aspect a rational civil theology of divine providence." *The New Science*.

[79]See paragraph #347 also for seven principal aspects of *The New Science*; see "Corollaries Concerning the Principal Aspects of This Science," pp. 121-6.

[80]*The New Science*, paragraph #348.

[81]It has been pointed out earlier that Vico uses the term "philology" to mean the ". . . histories of languages, customes, etc. . . ." See paragraph #7, *The New Science*.

[82]". . . to see in fact [i.e., in the facts] this world of nations which we have studied in idea . . ." *The New Science*, paragraph #163. Also see paragraph #140 ". . . the philosophers failed by half in not giving certainty to their reasonings by appeal to the authority of the philologians,

and likewise how the latter failed by half in not taking care to give their authority the sanction of truth by appeal to the reasoning of the philosophers . . ."

[83]*The New Science*, paragraph #138.

[84]The following passages are explicitly concerned with this synthesis: paragraphs #137 through #143, *The New Science*

[85]Ibid., paragraphs #348.

[86]Ibid., paragraphs #349.

[87]". . . a veder *in fatti* questo mondo di nazioni quale l'abbiamo meditato in idea." Sansoni, p. 438; see quote #7 above for translation. The sense of Vico's claim here is more readily seen in the Italian. The point is that the "idea" is immanent in the facts and with the proper method can be "seen" in the facts. Vico's further claim is that the history of ideas actually follows the facts, i.e., the order of institutions (238). But, history is confirmed by the history of philosophy (499), which in turn itself is told philosophically (1043). It seems that Vico shares the idea with Hegel and Husserl that the *history of philosophy* when seen philosophically tells us something important about history itself and truth.

[88]Vico's "new critical art" is thought by him to be different from other critical methods in at least two ways. First, it deals with Topics rather than Critics, #498, "Topics has the function of making minds inventive, as criticism has that of making them exact." Second, Vico believed his method was a better method because it was more comprehensive in that it grounded knowledge philosophically, i.e., metaphysically (#348, #392, #493, #662, and #839), where those "other" methods of the philologians did not.

[89]*The New Science*, paragraphs #161-2.

[90]Ibid., paragraph #348. It should be noted that the criterion of certainty here is a broader version than that found in *De Antiquissima* in that it now includes the common sense of *a people* at a given "time-sect."

[91]Ibid., paragraph #144.

[92]Ibid., paragraph #145.

[93]Ibid.

[94]Ibid., paragraphs #141-144. This is simply to say that human beings exposed to the same historical and social conditions concerning their needs and utilities will be conditioned in the same ways. (While there may be exceptions, the claim seems quite reasonable.)

[95]Ibid., paragraph #161.

[96]Ibid., paragraph #238.

[97]Ibid., paragraph #349.

[98]Vico's argument is basically this: to demonstrate the facts of history we need to know the conditions which established, or allowed for the establishment of, social institutions. This is because these institutions gave rise to the ideas which historical agents acted upon, thereby causing particular historical facts.

[99]Vico's "new art of criticism" contains a body of principles (referred to earlier) which are supposed to provide a procedure of verifying the content of various historical claims. He uses these principles to examine precisely what conditions would have been sufficient for the occurrence of particular facts. These principles then make up the *philological part* of the "new art" and they allow for the new sources of historical information. "For by virtue of new principles of mythology herein disclosed as consequences of the new principles of poetry found herein, it is shown that the fables were true and trustworthy histories of the customs of the most ancient peoples . . .", paragraph 7. See also paragraph #357.

The "new method" must then give a *philosophical* account of those theories which establish historical facts. This is the *philosophy part* (there are also philosophical principles) of the method. Therefore, the presuppositions of *any* historical theory that claims to establish the conditions which are the causes of particular historical facts (e.g., the theories of natural law theorists such as Seldon, Hobbes, or Pufendorf). Thus, presuppositions concerning human nature, or the nature of the relationship of human ideas to human actions, must themselves be philosophically justified in order that the particular theory in question may be accepted or rejected.

The point to see is that Vico requires that *both* philological and philosophical principles are necessary for history to become a science. For an example of certain facts established by his method, see paragraphs #727-8, #352-9, *The New Science*.

[100]*The New Science*, paragraph 7

[101]Ibid.

[102]Ibid., paragraph #349.

[103]Ibid., paragraph #7, e.g., "And here, by the principles of this new critical art, we meditate upon what determinate times and what particular occasions of human necessity or utility felt by the first man of the gentile world . . ." I have used here Leon Pompa's translation, for he better captures the sense of *meditatio* than does Fisch (Pompa, p. 100; Sansoni, p. 382).

[104]See reference #12 above.

[105]For the principles upon which the *order* of the ideal eternal history is based see paragraphs #241-295 in *The New Science* (Lxvl-xcvll). Vico is in

effect saying that the philosophical elucidation of the presuppositions which underlie his reconstruction of the histories of nations amounts to stating various *necessary philosophical truths*. He gives as an illustration the example of how the new Publilian law set the stage for a change from aristocratic government in Rome to a popular commonwealth. He says:

> If we read further into the history of Rome in the light of this hypothesis, we shall find by a thousand tests that it gives support and consistency to all the things therein narrated that have hitherto lacked a common foundation and a proper and particular connection among themselves . . . wherefore this hypothesis should be received as true. However, if we consider well, this *is not so much a hypothesis as a truth meditated in idea* which later will be shown with the aid of authority (conl' autorita) to be the fact . . .. This hypothesis gives us also the history of all the other cities of the world in times we have so far despaired of knowing. This then is an instance of an ideal eternal history traversed in time by the histories of all nations" (*The New Science*, paragraph #114).

(I owe acknowledgement to Leon Pompa for pointing out this passage and its philosophical import in his book on Vico, p. 149.)

[106]*The New Science*, paragraph #348.

[107]Ibid., paragraph #348, #349, and #390. It is important to note that Vico believed *all other attempts* at making history a science had failed for two primary reasons. First, there was no adequate philosophical account given as to how truth was to be secured from the sceptic (paragraph #331, #349). Vico, of course, remedied this with his "maker's-knowledge criterion." Second, there was no adequate philosophical account of how the truths of history were to be made certain. He remedies this with his "new art." He says:

> We trust therefore that we shall offend no man's right if we often reason differently and at times in direct opposition to the opinions which have been held up to now concerning the principles of the humanity of nations. By so doing we shall reduce them to scientific principles, by which the facts of certain history may be assigned their first origins, on which they rest and by which they are reconciled. For until now they have seemed to have no common foundation or continuous sequence or coherence among themselves (*The New Science*, paragraph #118)

[108]*The New Science*, paragraphs #975-8.

[109]Ibid., paragraphs #367, #520, #692. For a complete list of the institutions and times that correspond to the three natures which the course of every nation follows, see paragraphs #916, #979. Also see a list of principles in the first part of this chapter.

[110]Ibid., paragraph #393.

[111] Ibid., paragraph #348.

[112] *Sinopsi del diretto Universale* and *De universi iuris uno principio et fine uno*, Sansoni edition (Firenze, 1974), *Vico Opere Giuridiche*.

[113] Commentators, e.g., such as Flint, Croce, and Caponigri.

[114] See *Autobiography*, pp. 120-1.

[115] Caponigri, *Time and Idea*, pp. 93-94.

[116] See, e.g., Guido Fassò, "Law and the Historical Origin of the New Science," in *Vico's Science of Humanity*, ed. Tagliacozzo and Verene (Baltimore, Maryland: Johns Hopkins University Press, 1976), p. 12.

[117] *The New Science*, paragraph #342 (also see paragraph #1108).

[118] Ibid., paragraph #341, e.g., "Therefore it is only by divine providence that he [man] can be held within these institutions to practice justice as a member of . . . mankind."

And again, ". . . a divine argument which embraces all human institutions, no sublimer proofs can be desired than . . . the naturalness [of the means] the [unfolding institutive] order [in which they are employed] and the end [thereby served] which is the preservation of the human race." (paragraph #344)

[119] Ibid., paragraph #342

[120] Ibid.

[121] Ibid., paragraph #1108, see also paragraphs #341-2.

[122] Ibid., paragraphs #1107-8.

[123] At the bottom of Vico's notions of "re-making" and "re-constructing" is the important doctrine of "reflection" as is pointed out by Pompa (*Vico*, pp. 165-9).

[124] For the notion of "self-making," see paragraphs #367, #520, and #692 of *The New Science*.

[125] By "historicism" I mean the combination of two distinct doctrines: First, that the truth of anything is to be found only by knowing the history of the thing in question, i.e., its genetic development (#147, #148). And second, that history actually is and can only be the creation of the historian in the present (#349). As Collingwood puts it, "The paradoxical result is that the historical past is not past at all; it is present. It is not a past surviving into the present; it must *be* the present." *Idea of History*, p. 155. Vico's idea of history involves both of these points. Whether his historicism also involves relativism is a different question.

[126]"Verum e factum sono la medesima cosa." Sansoni, p. 62.

[127]"And this fact is an argument O reader, that these proofs are of a kind divine and should give thee a divine pleasure, since in God knowledge and creation *are one and the same thing* [my emphasis]. *The New Science*, paragraph #349. Also see paragraph #376 and #430.

[128]Ibid., see paragraphs #137-145.

[129]Ibid., see paragraphs #331 and #349.

[130]*Giambattista Vico: An International Symposium*, p. 413. Leon Pompa makes much the same point:

> The knowledge which the new science is to make available could never, therefore, be just an account of the historical or social situation as appreciated by the historical agents themselves. It would also have to involve an account of those historico-sociological conditions under which such appreciations arise, i.e., an account of the historical and sociological conditions under which common sense itself receives its content" (*Vico*, p. 84).

[131]*The New Science*, paragraph #7.

[132]Ibid., paragraph #331.

[133]See the idealist interpretation of "more real truth" in the first part of this chapter for an explanation of the identity-feature. This feature, although related, is distinct from the identity-thesis which equates knowing with making.

[134]Pompa, p. 167.

[135]This is not to deny that some aspects of the historical agent's consciousness can be identical with that of the historian's consciousness. In some cases they might very well be identical. In fact one philosopher, Emil Fackenheim, points out that ". . . if human is qua being and qua human historical, there can be no ontological divorce between the historical consciousness of the historian and the consciousness of the historical agent who is involved in history, and geared to the future." "Metaphysics and Historicity," *Aquinas Lecture 1961*, footnote #25, pp. 39-40.

Vico's implicit point I take to be this: if the historian merely recreates the identical consciousness of the historical agent's world, then he (the historian) will not be in a position to look at and explain, according to the standards of explanation of *his own* culture, the historical facts of the society that he is investigating. At the same time, however, he cannot simply explain *everything* in terms of his own culture (consciousness), for then he would be unable to point out the distinctively unique features of one society as against another, e.g., that of, say, Classical Greece and

medieval France. As Pompa aptly puts it "Thus on the first view history would cease to be a species of contemporary knowledge, and on the second it would cease to be historical." "Vico and the Presuppositions of Historical Knowledge," *Giambattista Vico's Science of Humanity* by Tagliacozzo and Verene, p. 127.

This means that the historian must be able to provide a philosophy of history which will establish the necessary connection between the historian's makings and those of the people he is investigating. This is what I take to be Vico's aim.

[136]For an excellent discussion of the dialectic of historicity and self-making see Emil Fackenheim, *Metaphysics and Historicity*, Aquinas Lecture 1961 (Milwaukee, Wisconsin: Marquette University Press, 1961). E.g., Fackenheim claims that "only a self-constituting process can be in its ontological constitution historical" (p. 34). ". . . And it will be seen that the concept of self-making marks historicity off from temporality; . . ." (p. 37).

[137]*The New Science*, paragraphs #239-245.

[138]Ibid., paragraphs #367, #520, #692.

[139]Ibid., paragraph #148.

[140]Ibid., paragraph #147.

[141]Ibid., paragraph #338, e.g., Vico tells us: "This is the science the philologians and philosophers have given us of the principles of humanity. Our treatment of it must take its start from the time these creatures began to think humanly. . . . To discover the way in which this first human thinking arose in the gentile world, . . ." Also see three kinds of natures, paragraphs #916-918.

[142]"Ontogenetic" here refers to what Max Fisch calls "The controlling methodological postulate of Vico's new science . . ." Namely that ". . . doctrines or theories must begin where the matters they treat begin. This is to assume that genesis, or becoming, is of the essence of that which the new science treats: that, at least for the new science, nascence and nature are the same." *The New Science*, Introduction, pxx.

[143]See footnote #50 above.

[144]See footnote #52 above.

[145]*The New Science*, paragraph #314.

[146]Ibid., paragraph #315.

[147]See, e.g., M. Fisch, *Symposium*, P314; "But science itself is true or intelligible only as made along with the making of the world of nations, and the history of science is therefore the science of it."

[148]Ibid.

CHAPTER III

KANT'S CRITERION IN GEOMETRY AND PHYSICS

In this chapter I shall examine Kant's use of the "maker's-knowledge criterion" in relation to geometry and physics. I shall then examine his notion of reflective (teleological) judgment. Once we have an idea of Kant's thinking in these areas we shall then (in Chapter IV) be in a position to understand his use of these concepts in his philosophy of history.

In the preface to the second edition of the *Critique of Pure Reason*, Kant tells us that the histories of mathematics and natural sciences have something in common, in method, to which they owe their success. That something he informs us is the revolutionary principle that ". . . reason has insight only into that which it produces after a plan of its own."[1] In mathematics the first man to demonstrate the properties of an isosceles triangle was aware of this "new method." He found that he must ". . . bring out what was necessarily implied in the concepts that he had himself formed a priori, and had put into the figure in the construction by which he presented it to himself."[2]

A similar revolution occurred later in natural science. Beginning with the experiments of Bacon and moving on to those of Galileo, Torricelli, and Stahl, Kant says: "A light broke upon all students of nature."[3] These experiments had shown that reason in natural science would no longer be kept ". . . as it were, in nature's leading-strings, but must itself show the way

with principles of judgement based upon fixed laws, constraining nature to give answer to questions of reason's own determining."[4]

Kant proceeds to tell us that the success of these sciences should by analogy incline philosophers to imitate their method. He says: "We must therefore make trial whether we may not have more success in the tasks of metaphysics, if we suppose that objects must conform to our knowledge."[5]

Now, what we must first do here in this chapter is get as clear an understanding as we can of Kant's epistemological ground for this so-called "new method." As we have pointed out earlier, Jaakko Hintikka in an article on transcendental arguments refers to this ground as a kind of "maker's knowledge." After quoting the famous passage that ". . . we are adopting as our new method of thought . . . that we can know a priori of things only what we ourselves put into them,"[6] Hintikka tells us that this and other passages show that: ". . . Kant was a link in a long but in our modern days almost forgotten tradition which may be called the tradition of genuine knowledge as maker's knowledge."[7]

Two things here seem clear: first, the ground of the new method is the same one that we have examined in the previous two chapters on Vico. Second, Kant sees this "maker's-knowledge criterion" as his *most fundamental* epistemological claim, for it is upon this idea that his so-called "Copernican revolution" rests.

Like Copernicus who could explain the sun's apparent revolutions around the earth by showing that it is the earth's daily rotation on its axis that explains those appearances, so too the critical philosophy would endeavor to explain the appearances of a realist's world (i.e., a substance-populated causally efficacious world) by showing that it is the activity of

mind which "makes," constitutes, and therefore can fully explain those appearances.[8] P. F. Strawson in his book *The Bounds of Sense*, states the importance of Kant's "maker's-knowledge criterion" in the following manner:

> The very possibility of knowledge of necessary features of experience is seen by him [Kant] as dependent upon his transcendental subjectivism, the theory of the *mind making nature* [my emphasis]. This indeed is the essence of the "Copernican revolution" which he proudly announced as the key to a reformed and scientific metaphysics. It is only because objects of experience must conform to the constitution of our minds that we can have the sort of a priori knowledge of the nature of experience which is demonstrated, in outline, in the Critique itself.[9]

Strawson correctly observes that Kant wishes us to understand that the *only way* in which we may have a priori knowledge of the nature of experience is if the objects of experience conform to the constitution of our mind. We might shorten this by saying that, for Kant, we can have a priori knowledge of objects of experience *only* because we constitute those objects. In other words we can know a priori because we "make," and we can know a priori *only if* we "make."

It is important here to note that Kant is saying that we can have *a priori* knowledge only if we make it. The *a priori* is crucial, for it is this notion that picks out the element of necessity that is so essential to "scientific" knowledge.

> Any knowledge that professes to hold *a priori* lays claim to be regarded as absolutely necessary. This applies still more to any determination of all pure a priori knowledge, since such determination has to serve as the measure, and therefore as the (supreme) example of all apodeictic (philosophical) certainty.[10]

Kant understands the a priori part of reason, i.e., the "pure" part, to be that which *determines* its phenomenal object completely.[11] It is due to this determination of the "object" of experience by reason that reason can know

the necessary elements of experience. Once again then reason can know *a priori* what it has made. Further, reason can know *a priori only if* reason has made the object.

Kant's problem, therefore, was to understand exactly how an idea "in us" refers to and constitutes *a priori* knowledge of an object. He arrived at an answer by assuming a "maker's-knowledge criterion" of truth.[12] He came to this criterion, he tells us, by examining the alternatives of realism and idealism and finding them insufficient answers to his own sceptical doubts.[13]

Let us here review Kant's procedure. First, he tell us that:

> Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to extend our knowledge of objects by establishing something in regard to them a priori, by means of concepts, have, *on this assumption* [my emphasis], ended in failure.[14]

The "failure" occurs on both the level of intuition and on the level of (conceptual) thought. ". . . if an intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter a priori . . ."[15] And if ". . . the *concepts*, by means of which I obtain this determination, conform to the object . . . I am again in the same perplexity as to how I can know anything a priori in regard to the objects."[16]

While realism seems to offer no adequate solution to the problem of knowledge, Kant tells us that idealism (in the form of Descartes' *Cogito*) fares no better. "Problematic" idealism fails to secure knowledge of objects precisely because it fails to establish the knowledge of the self upon which the knowledge of objects was to be finally secured.

> . . . I am conscious of the existence of my soul in time, but this soul is only cognized as an object of the internal sense by phenomena that constitute an internal state, and of which the essence in itself, which forms the basis of these phenomena, is unknown.[17]

> . . . The consciousness of self is thus very far from being a knowledge of self . . .[18]

> Cartesian idealism therefore does nothing but distinguish external experience from dreaming.[19]

Thus, having rejected the alternatives of realism and idealism because of their inability to answer satisfactorily the doubts of the sceptic (and Kant himself), Kant must now show how *his* assumption, i.e., a "maker's-knowledge criterion," can explain the possibility of knowing a priori.[20] He offers us as an alternative explanation to the problem of the possibility of a priori knowledge the following: ". . . if the object (as object of the senses) must conform to the constitution of our faculty of intuition, I have no difficulty in conceiving such a possibility."[21] The same he thinks applies to concepts. If ". . . I assume that the objects . . . conform to the concepts . . . the outlook is more hopeful."[22]

Now the precise detailed argument by which Kant attempts to show how the "maker's-knowledge criterion" actually solves the problem of a priori knowledge in geometry and physics (and metaphysics) is to be found throughout the Transcendental Analytic. However, there are several important passages which make clear Kant's general idea. That is, they show how Kant thought of his "maker's-knowledge criterion" as supplying *the* solution to the problem of knowledge. Because of their importance, I shall quote the passage at length.

> There can be in us no *modes* [my emphasis] of knowledge, no connection or unity of one mode of knowledge with another, without that unity of consciousness which precedes all data of intuitions, and by relation to which representation of objects is alone possible.[23]

> Were the unity given in itself independently of the first sources of our thought, this [a priori knowledge] would never be possible. We should not then know of any source from which we could obtain the synthetic propositions asserting such a universal unity of nature. For they would then have to be derrived from the objects of nature themselves.[24]

However,

> We can extract clear concepts of them [i.e., rules or laws of nature] from experience, only because we have put them into experience, and because experience is thus itself brought about only by their means.[25]

The "maker's-knowledge criterion" is the correct assumption, therefore,

because:

> We are merely anticipating our own apprehension, the formal condition of which, since it dwells in us prior to all appearance that is given, must certainly be capable of being known a priori.[26]

We should conclude, therefore, that:

> . . . the highest legislation of nature must lie in ourselves, i.e., in our understanding, . . . For how were it otherwise possible to know a priori these laws, . . .[27]

> Thus the order and regularity in the appearances which we entitle *nature*, we ourselves introduce.[28]

> Thus the *mode* [my emphasis] in which the manifold of sensible representation (intuition) belongs to one consciousness precedes all knowledge of the object as the intellectual *form* [my emphasis] of such knowledge, and itself constitutes a formal a priori knowledge of all objects, so far as they are thought (categories).[29]

> However exaggerated and absurd it may sound, to say that the understanding is itself the source of the laws of nature, and so of its formal unity, such an assertion is nonetheless correct, and is in keeping with the object to which it refers, namely experience.[30]

Finally,

> This peculiarity of our understanding, that it can produce a priori unity of apperception solely by means of the categories, and only by such and so many, is as little capable of further explanation as why we have just these and no other functions of judgment, or why space and time are the only forms of our possible intuition.[31]

Hence the only alternative that can satisfactorily explain the possibility of a priori knowledge is the "maker's-knowledge criterion." This criterion shows that "The understanding does not derive its laws (a priori) from, but prescribes them to, nature."[32]

Having argued that it is by "maker's-knowledge" that man can explain the possibility of a priori knowing, Kant proceeds to show how this criterion functions in science, specifically in mathematics (geometry) and physics. There are two questions that must be answered in each of these sciences: first, are the judgments of these sciences a priori and yet synthetic? Second, if the first question is answered affirmatively, how are such judgments possible?

In mathematics Kant answers the first question affirmatively by saying:

> . . . it has to be noted that mathematical propositions, strictly so called, are always judgments *a priori*, not empirical; because they carry with them necessity, which cannot be derrived from experience.[33]

Further, "All mathematical judgments, without exception, are synthetic."[34] To say that a mathematical judgment is a priori synthetic is to say that it is on the one hand a necessary and universal judgment and, on the other, that something more is contained in the predicate concept of the judgment than is contained in its subject concept. An example of this would be the judgment "a straight line between two points is the shortest distance." This judgment, while necessary and universal, is for Kant also synthetic. This is because

> . . . the concept of *straight* contains nothing of quantity, but only of quality. The concept of shortest is wholly an addition, and cannot be derived through any process of analysis from the concept of the straight line.[35]

In the natural sciences (i.e., physics) Kant again answers the first question in the affirmative. He cites as an illustration the following example: ". . . in all changes of the material world the quantity of matter remains unchanged."[36] Kant believes that the necessity here, and thus the

a priori origin of the judgment, is evident enough. He claims, however, that this judgment must also be synthetic for the same reason that was given in the case (above) of mathematics. He tells us:

> . . . in the concept of matter I do not think its permanence, out only its presence in the space which it occupies. I go outside and beyond the concept of matter, joining to it *a priori* in thought something which I have not thought *in* it. The proposition is not, therefore, analytic but synthetic, and yet is thought a priori; and so likewise are the other propositions of the pure part of natural science.[37]

Given these affirmative answers to question one, we next come to the second question, which Kant considered to be the "single problem" of the *Critique of Pure Reason*, namely how are such a priori synthetic judgments possible?[38] The answer to this question will at the same time show us how we are to answer the questions "how is pure mathematics possible?", how is pure science of nature possible?", and the question of particular interest for us "how is a pure science of history possible?"[39] (Kant goes on to ask how metaphysics as a science is possible, but this question does not *directly* concern us and our present topic.) Here too, i.e., in the area of history as in the areas of geometry and physics, we shall see that the validity of Kant's answer to these questions rests upon his use of the "maker's-knowledge criterion."

Geometry

Let us now turn to geometry. I should like to point out here that in the few lines that I shall devote to an exposition of Kant's argument for the possibility of geometry, I do not intend the exposition to be taken as a thorough comprehensive study of the issue. I shall not, e.g., even enter into the debate concerning the consistency of Kant's views on space and mathematics, e.g., those views expressed in the *Dissertation of 1770*

and those of the Aesthetic or the Analytic. I might say that I agree with S. Körner that sketches of this kind are inadequate, especially when compared to the commentary of, say, Vaihinger who devotes over one hundred pages to Kant's argument[40] (or to Christopher Garnette who devotes an entire book to the subject). Nevertheless, such a sketch, I feel, is necessary so long as our goal is to merely achieve an idea of Kant's intent and method. Therefore, I shall sketch Kant's argument for the possibility of geometry and physics in relation to the "maker's-knowledge criterion." In this manner we may get a better idea of how his criterion "works" in history. With this in mind let us proceed to the argument.

Kant wishes to show that synthetic a priori judgments make up Euclidian geometry.[41] By showing this, coupled with an analysis of what synthetic a priori judgments are, he believes he can show how we "make" the concepts of that science and thus acquire knowledge. The "making" or construction of these concepts takes place in pure intuition, and it is for this reason that they are themselves "pure" (i.e., because they are constructed from and in accordance with a priori intuition).[42] Thus, these concepts, Kant tells us, are wholly determinate. His reasoning is that the wholly determined concepts of geometry must rest on an a priori intuition of space since it is space that geometry is the "mathematics of."[43]

The problem, therefore, is to show (1) that space is a priori, and (2) that judgments concerning it (i.e., spatial judgments, e.g., geometrical judgments) are at the same time synthetic. If this can be shown, then Kant believes the "a priori synthetic" character of geometry will be shown and thus too will the possibility of judgments about it.[44] Hence, the question to be answered (concerning the possibility of a priori synthetic

judgments in geometry) is "can an exposition of the concept of *space* explain how it is possible that a judgment of geometry is, on the one hand, synthetic and on the other hand, universal and necessary?" Kant, as we've seen, answers this question affirmatively, and he offers the following reasoning to support his answer.

We must begin by giving a "metaphysical" exposition of the concept of space (and of time). We first perform a thought-experiment in which we isolate space. We can do this (i.e., isolate space) by first isolating sensibility from the understanding. The result is that we achieve possession (in our thought-experiment) of a "bare" empirical intuition. (This is an intuition which has not yet gone on to be "thought" by the categories and "made" into an "object.") We then perform a *second* thought-experiment on *this* empirical intuition, separating the sensations of the empirical intuition from the intuition itself. What remains is a *pure* intuition, i.e., an intuition "in which there is nothing that belongs to sensation." It is this *pure* intuition, Kant holds, that must be the form of *any* outer appearance. This is to say that this pure intuition is the aspect of the appearance that *remains* when substance, force, divisibility, etc., have all been taken away. This pure intuition, Kant tells us, is space; it is the form of all outer appearances.

Having arrived at the isolated pure intuition, space, Kant proceeds to explicate its concept.[45] He tells us that space is not an empirical concept but is, rather, a necessary a priori representation. This is to say, among other things, that the concept of space is in no way discursive but is instead intuitive. Why is this?

Kant gives us several arguments, of which I shall only sketch a few. If space were an empirical concept, Kant thinks we should then be

able to represent to ourselves two perceptions which are "external to and beside each other" and, at the same time, we should not *have to presuppose* that space contains them. This is to say that we should be able to first have the perceptions and then, secondly (empirically), obtain *from them* our concept of space. Kant's claim is that this is impossible. He argues that the experience of those perceptions (i.e., our outer experience) is *itself* possible only through *the prior* representation of space.[46] He concludes that space cannot, therefore, be of an empirical origin but *must* be a priori.

Kant tries to emphasize this same point in other ways. He says, e.g., we are driven to the view that space is a priori because we cannot think or imagine the absence of space, where we might very well imagine "it empty of objects." This is again simply to reiterate that while the representation of an *object* is not a necessary representation, that of *space* must be.[47] Further, since necessity itself is a mark of a priority, space *must*, therefore, be an a priori representation.

Finally, he argues that space is not a discursive concept but an intuition. (This argument is actually the other side of the "a priority-of-space" coin.) He tells us, e.g., that if space were a discursive concept, we should be able to represent to ourselves many "diverse spaces." However, we cannot do this because we find, upon reflection, that we always mean by "*many diverse spaces*" simply parts of *one whole space*. Since "space is essentially one," it *must*, therefore, be an intuition because it is only by intuition that one can "pick out" individuals such as the *individual singular whole space*. (Concepts, on the other hand, ultimately refer to or "pick out" a plurality, i.e., many individuals.[48]) Therefore, if space were not

an intuition but were a discursive concept instead, the plurality of individuals to which the concept refers (in this case the "many diverse spaces") would precede the individual whole space in which the many spaces "coexist ad infinitum."[49] This, of course, Kant finds unacceptable because (as he has told us) many spaces *presuppose* one whole space, and it is only *in intuition* that the whole precedes the parts.[50] Therefore, space cannot be a discursive concept but must instead be an intuition.

We can see then the manner in which Kant argues that space must be pure necessary intuition. It is, however, still left for us to understand how he establishes that geometrical judgments, i.e., judgments about space, result in synthetic a priori knowledge. Kant's explanation is, in the main, given in his "transcendental" exposition of the concept space. In this exposition we learn that the science of geometry is possible because space is really "in us." It is to this issue that we now turn.

Kant has told us that "geometry is a science which determines the properties of space synthetically, and yet a priori."[51] This means at least three things: first, that the propositions of geometry "go beyond the concept," i.e., their truth is not arrived at by simply discursively analyzing the subject-concept contained in those propositions.[52] Therefore, space must be an intuition. Second, it again emphasizes that space must be an *a priori* intuition because all of the propositions of geometry are apodeictic in that they are "bound up with the consciousness of their necessity."[53] Third, because the a priori intuition of space is "pure" and not empirical, it must, therefore, be "found in us prior to any perception of an object."[54] The intuition of space must be found in us (i.e., it must have "its seat in the subject only") Kant believes because (as we saw earlier) this is the

only alternative left to explain the possibility of geometry. (The alternatives of realism and Cartesian idealism were canvassed and found wanting.)

Kant's strategy now begins to make itself evident. Knowledge of the truths of geometry *must* depend upon our pure spatial intuition *because* geometry is the science *of that* intuition. The necessity involved in geometrical construction will, therefore, have its origin in the necessary characteristics of space. Since space is "in us," the necessary truths of geometry are possible *because* we construct them, i.e., we *make* them. Reasoning in this manner, Kant can then show that space is (1) an intuition and (2) universal and necessary. He can show this by showing that space is not a discursive concept and necessitated prior to any empirical investigation. Both of these claims are, in turn, justified by assuming that space is contributed by the subject.

Nevertheless, there still remains a problem. For geometry to be a science, i.e., for it to give us "knowledge of the world," its product, i.e., geometrical truths, must be shown to apply somehow to the world (thus reinforcing their synthetic character).[56]* Kant must, therefore, explain

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* I realize that Kant has told us that the "synthetic character" of a judgment is simply that the predicate term is not contained in the subject term. My point is simply that if we were to unpack his meaning here, we should find that synthetic judgments in geometry (i.e., a priori synthetic judgments) are judgments which apply to the "world of fact." And, further, that they *must* so apply if they are to count as "knowledge" as Kant claims they do.

In Kant's "straight-line" example, he tells us that "the concept of shortest is wholly an addition, and cannot be derived through any process of analysis from the concept of the straight line." My claim is simply that the concept *shortest* is derived from experience, and hence the *unique* feature of a synthetic a priori judgment is that it is a necessary statement concerning *experience*.

how this relationship is possible, i.e., how it is that geometric truths apply to the empirical world. His general argument is the following.[57]

Things-in-themselves affect us. As a result of their affecting us and in conjunction with our various "makings," i.e., our contribution of the forms of pure intuition and the categories, we construct, represent, and thus are able to experience "objects." One of the necessary features of this experience of objects is spatial intuition. This is to say that the nature of the human mind is such that it is "constrained" to represent space whenever it has an outer intuition.[58] (That is, it is constrained to see the final results or effects of things-in-themselves in a spatial perspective.)

However, the mind may also have a spatial intuition *without* being affected by things-in-themselves. For example, we may simply construct a triangle or some other geometrical figure at will.[59] Nevertheless, even in *this* case we still have spatial intuitions. This is because geometry is the science which concerns itself with the construction of *spatial* figures. The question that naturally arises is precisely what is the relationship of the spatial intuition of the science of spatial figures, i.e., geometrical space, to the spatial intuition of the space that natural "objects" occupy? Kant's answer is that since there is only one space,[60] the spatial intuition that occurs during the experience of an "object" will be *identical with* the spatial intuition that occurs in the construction of the geometrical figure. This is to say that for Kant the nature of space is such that it will *guarantee* that the intuition of an object will occur *only if* the object has the *same* measurable properties as those measured by Euclidian geometry.[61]

Since space is an a priori intuition with which we construct or in some sense "make" objects, we cannot help representing the same space as a pure intuition when we represent (experience) objects, be they physical or geometrical. Once again, this is so because all pure intuition in geometry is actually a special case (i.e., the geometrical case) of the pure intuition of space *per se*. Further, because of this *identity*, the form of intuition in geometry will then be identical with the form of intuition in the empirical *intuition* of objects.[62] Therefore, the conclusions of geometry and the conclusions of experience will always involve exactly the same space, and therefore, geometrical knowledge will necessarily apply to the empirical world.

It is clear that the key to Kant's argument here lies in his doctrine of intuition, for although it is true that "knowledge" is composed of two essential elements, the concept and a given intuition, Kant nevertheless tells us (concerning geometry) that

> Mathematical concepts are not . . . by themselves knowledge . . . the pure concepts of understanding, even when they are applied to *a priori intuitions*, . . . yield knowledge only insofar as these intuitions . . . can be applied to empirical *intuitions*.[63] [my emphasis]

Human beings acquire intuition only through sensibility. "Sensible" intuition is either pure or empirical. It is precisely due to *pure* intuition, i.e., the a priori intuition of space (and time), that geometry is a *necessary* science. Further, for geometry to be a science of the "world," i.e., for it to result in *knowledge* as opposed to mere *thought*, it must somehow deal with the "things" in the world.[64] (This is again to say that it must also be synthetic.) "Now *things* [my emphasis] in space and time are given only insofar as they are perceptions . . . therefore only through empirical

representation."[65] Geometry, therefore, can become a mathematical science of "empirical representations" (i.e., spatial objects in the natural world) *only if* it enlists the aid of *intuition*. This is because it is only within *intuition* that "things" are given to the human mind. Hence, Kant's philosophy of geometry succeeds because it shows how geometrical concepts apply to the natural world of "things" by way of the *a priori intuition* of space. In this way we can understand (philosophically) how geometry as a science (i.e., as a body of a priori synthetic judgments) is possible. It is possible (epistemologically) because of Kant's "maker's-knowledge criterion." We can have a priori synthetic knowledge in mathematics (geometry) because we "make" the objects of mathematics.

We can summarize Kant's view of geometry vis à vis his "maker's-knowledge criterion" as follows: "Mathematical knowledge is the knowledge gained by reason from the construction of concepts. To construct a concept means to exhibit a priori the *intuition* which corresponds to the concept."[66] [my emphasis] The intuition in the case of geometry is space: "The apodeictic certainty of all geometrical propositions, and the possibility of their a priori construction, is grounded in this a priori necessity of space."[67] This spatial intuition ". . . has its seat in the subject only, as the formal character of the subject . . ."[68] Therefore, we can have a science of geometry because ". . . we can know *a priori* of things only what we ourselves put into them."[69]

Physics

What of physics? Kant has told us that by solving the general problem of the possibility of a priori judgments (which he solves by

introducing his "maker's-knowledge criterion") he will have at the same time succeeded in showing (1) how pure mathematics is possible and (2) how a pure science of nature is possible.[70] It is to the argument for the pure science of nature, or physics, that we shall now turn in order to see how Kant uses his "maker's-knowledge criterion" to justify that science. The same remarks apply here that were made concerning the inadequacy of my sketching Kant's argument for geometry (i.e., that a sketch should not be taken to be a thorough and comprehensive treatment). Since the question of the possibility of a science of nature is seen by Kant to be equivalent to the question "how is nature possible?" it is in terms of this latter question that I shall sketch Kant's answer.

It should be noted that Kant's strategy for demonstrating the possibility of a science nature is quite similar to that for demonstrating the possibility of geometry. Just as the possibility of our synthetic a priori knowledge of geometry depends upon our "making," "constructing," or "putting into" those objects *forms of intuition,* so too will our synthetic a priori knowledge of the natural world depend upon our "making," "constructing," and "determining" *those natural objects* with *forms of thought.* These "forms of thought" Kant refers to as "categories." Concerning their validity he tells us: "If we can prove that by their means alone an object can be thought, this will be a sufficient deduction of them, and will justify their objective validity."[71]

Kant's desire is to show that his categories (and the forms of intuition, space, and time) are the necessary conditions for the possibility of the experience of objects (i.e., appearances). This, he thinks, is in effect to say that they are the conditions for the possibility of any

experience.[72] He sets out to show this by presenting us with a metaphysical and a transcendental deduction or proof of the categories. The design of the metaphysical deduction is to show that the categories (i.e., the pure concepts of the understanding) which determine the "objects" of nature correspond to and have their sense derived from our logical forms of judgment.[73] We are to think of these "categories" as concepts which determine the given when it is brought under the forms of logical *judgment*. The categories are *devoid of significance* except and insofar as they are related to the logical forms of *judgment*.[74]

This *metaphysical* deduction makes it quite clear that Kant's categories do not merely "categorize" the given as such (as e.g., Aristotle's categories do) but also *necessarily refer to the subject* in that they necessarily refer to the subject's *forms of judging*. Because of this "built in" self-reference, i.e., because the Kantian category is a concept which *necessarily* refers to the logical forms of judgment, it is not abstracted *from* experience. It must, therefore, be a priori. (It may be noted that this was the same strategy employed in the mataphysical exposition of the concept of space, i.e., that our concept of space is not abstracted *from*, but presupposed *by*, experience.) The Kantian category, therefore, is to be seen as, first, a necessary manner *in which we understand nature*, and second, *a necessary character of nature*. Kant's argument is that without *both* of these features (i.e., without *his* categories) we should never be able to experience necessity in nature which amounts to saying (for Kant) that experience would be impossible.

The transcendental deduction is designed to show that the categories are objectively valid. Kant's problem here is to demonstrate that we are

in fact justified in believing that *just these* (i.e., Kant's twelve) categories are *the* categories that are employed in experience. His strategy to demonstrate this (as was mentioned above) is to show that it is by means of these categories alone that an object can be "thought" (i.e., judged, "made") and, therefore, experienced. The difference then between the *metaphysical* and *transcendental* deductions is that while the former is concerned with the *a priori origins* of the categories (locating them in the subject's forms of judgment), the latter is concerned with the *objective validity* of the categories. The transcendental deduction wished to establish *our right* to employ these twelve categories in experience while the metaphysical deduction is concerned with their *necessary* origin.

Now, I think we should be in a better position to understand Kant's claim, i.e., that for an "object" of knowledge (in this case, nature) to *be* an "object" of knowledge, it must be a "made" object if we see him as putting forth the following two interrelated theses: first is the thesis that "the object of an experience is possible *only if* the subject that has the experience can distinguish himself *as a judging subject* from *that which is judged*." That is to say, the subject *must* be able to distinguish himself as something that *is judging* from *what* is judged. This is the thesis of the "transcendental unity of apperception."

The second thesis [and this the transcendental deduction only poin to] is assuming that a form of consciousness is capable of being aware of itself as "judging consciousness" and thus aware of itself as a transcendental unitary consciousness, that "consciousness must in turn be able to perceive a necessary (temporal) order among some of its perceptions as

against others." This is the causality thesis.* I think that if we focus on these two theses (which Kant offers in support of his basic epistemological claim that only a "maker's-knowledge criterion" of truth can account for the possibility of genuine theoretical knowledge of nature), we shall get a general idea of how Kant's "maker's-knowledge criterion" "works" in physics.

Let us here, therefore, examine these two theses in their relation to one another. The first thesis, we have said, is that in Kant's attempt to prove the "objective" validity of the categories, he first argues that there must be a transcendental unity of apperception. This essentially means that if experience is to be possible, we must be able to distinguish between the judging subject and the object judged. If we could not make this distinction, it would not then be possible for the "I think" to accompany all my representations. That is to say, it would not be possible for me to have

> . . . that self-consciousness which, while generating the representation "I think" (a representation which must be capable of accompanying all other representations, and which in all consciousness is one and the same), cannot itself be accompanied by any further representations.[75]

> The thought that the representations given in intuition one and all belong to me, is therefore equivalent to the thought that I unite them in one self-consciousness: . . .[76]

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* It should be noted here that I am including *more* in the sphere of the transcendental deduction (specifically deduction B) than is technically included by Kant in his divisions in *The Critique of Pure Reason*. For example, I am also including the argument of the Analogies, whereas technically this argument comes under the heading "Analytic of Principles." Nevertheless, I place the causality argument in this relation to the transcendental deduction because I think we can more easily understand Kant's view of "making an object" if we focus on the relationship of the transcendental unity of apperception to the categories. The very notion of "making an object" requires that the subject in distinguishing himself from the object "think" the object according to the categories. (In our example, the category of

Therefore, if it is to be possible that a subject may have an experience of an object, it must be possible to distinguish the subject as a "judging" subject, i.e., as a transcendental unitary self-consciousness, *from* the object judged. But it is precisely here that Kant relies on his "maker's-knowledge criterion." For this distinction between subject and object, so essential to Kant, is really a distinction drawn between a judging, unifying, i.e., a "making" subject on the one hand, and a judged, unified, "made" object on the other. That is to say that the one side of this distinction, namely the judging, "making" side, necessitates that there be a "maker's-knowledge criterion" of truth operative in connection with a transcendental unitary consciousness. This, again, *must* be the case if in having an experience we are to be entitled to call it *our own* experience.

> Only in so far, therefore, as I can unite a manifold of given representations in one consciousness, is it possible for me to represent to myself the identity of the consciousness in these representations.[77]

What of the other side of the distinction, i.e., what of the judged or "made" object? Here Kant's design is to argue that in order for the

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causality.) Therefore, if I could not here place the argument for causality (causality in particular and the categories in general) in relation to the transcendental deduction, I should only be able to sketch *part* of what I take to be Kant's epistemic strategy in the transcendental deduction, i.e., to establish the transcendental unity of apperception vis à vis the distinction between *judging* subject and object *judged*. I have used the category of causality as my example because it demonstrates in an obvious manner Kant's belief that to distinguish the judging subject from the object judged the categories are required. (For example, it is required that some perceptions be seen to follow a necessary order while others do not.) See B239-240. Also see Arthur Melnick's book *Kant's Analogies of Experience* (Chicago: University of Chicago Press, 1973) to which I am much indebted for this line of argument taken here.

object to be "made" and thereby experienced by the subject, the categories must be brought into play. This is not to say that an object could not *appear* without the categories, for Kant explicitly says that it may (A89/B122). It is to say, however, that one cannot have *knowledge* of objects without the categories, which is in essence to say that without the categories, one cannot have an experience.* In this way the question of the "made" object really presupposes the categories. This becomes quite obvious in the case of causality, and it is for this reason that I chose it as one of the two "essential" theses.

Kant argues in the Second Analogy that in order for experience to be possible some perceptions, as against others, must be seen to, i.e., "judged to," follow each other according to a necessary rule. In relation to the first thesis discussed above, this means that in order for the subject to distinguish himself from the object (by his "making" the given into an object), it is necessary that he be able to distinguish some perceptions as following a necessary order from others which do not. If he were not able to make this distinction Kant tells us "All succession of perception would then be only in the apprehension, that is, would be merely subjective . . . We should then have only a play of representations, relating to no object."[78] Kant concludes the Second Analogy by arguing that if we are to distinguish a "made" object from a "making" subject, we must be able first to make the prior distinction between a subjective experience and that which it is an experience *of*. In other words we must be able to distinguish between some perceptions that the subject judges as *having a necessary order* and others judged to lack this order.

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* "In other words they [the categories] serve only for the possibility of empirical knowledge; and such knowledge is what we entitle experience." (B147)

The obvious question is how? Kant asks precisely how it is ". . . that we posit an object for these representations, and so, in addition to their subjective reality, as modifications, ascribe to them some mysterious kind of objective reality."[79] His answer is emphatic: some perceptions, as against others, are seen to be "bound down" (B237) according to a rule, thus making objective experience possible. It is Kant's view then that if there were no such necessary order or "rule" we could not:

> . . . then assert that two states follow upon one another in the (field of) appearance, but only that one apprehension follows upon the other. [But] That is something merely subjective, determining no object; and may not, therefore, be regarded as knowledge of any object, not even of an object in the field of appearance.[80]

This is essentially to push the question of the "made" object back a step farther. That is to say, we now have to show what *conditions* must necessarily hold if we are *to be able* to distinguish our subjective and objective experiences and thus be in a position to understand how "objects" are "made."[81]

Once again (precisely at this point), Kant relies upon his "maker's-knowledge criterion" to solve the problem. The experiencing subject must be in a position to "make" the given into an "object" (i.e., to judge the given according to the categories). This *must* be possible if the subject is to distinguish himself from the object. This "making" takes place *in and through judgment* where the given, in being "judged," is brought under the categories (in our example, the category causality). In this way what is judged can then be represented as an "object" of nature.[82]

Kant's strategy then is the following: in order to have an experience, the subject must be able to distinguish himself rom the "judged"

object. In order to make *this* distinction, the subject must "make" the given into an object. This "making" simply means that the subject must "judge" the given through the categories, in this case (i.e., in our example) the category causality. Therefore, it is Kant's view that an experience of an object is possible *only if* a judgment of (i.e., a "making" of) the object through the categories is possible.[83] It is in this way that one of the "essential" theses relied upon by Kant for "making" the given into object of experience turn out to be an argument for causality. (This is not to say that the other categories are not also "essential" to Kant's argument.) In this manner (i.e., by arguing for a necessary distinction between subjective and objective experience by way of a necessary temporal order of perceptions due to "rule-governedness") Kant is able to show how the features of substance, causality, and reciprocity are fundamental to our objective experience of nature.

Further, and more important for our purposes, Kant attempts to show that these necessary aspects of experience have as their *epistemological ground* the "maker's-knowledge criterion" of truth. Knowledge of nature is due to the unity of self-consciousness and to the categories (as well as the forms of intuition) which give order to our representations.[84] "Nature" is possible (and a fortiori so too is knowledge of it) only because we "make" it, i.e., determine it through judgment. This "making" of nature may be summarized as follows:

1. The judging subject must be distinguished from the object of experience. Such a distinction requires that there be a transcendental unified consciousness.

2. A second requirement that allows us to distinguish the judging subject from the judged object is that there be material capable of being "made" into an object in the first place, i.e., a "given" is required.

3. The categories demonstrate that in order for the subject to experience "objects," he must "make" the "given" into "objects" according to *rules*.

4. In "making," i.e., judging the object, we apply rules which allow us then to distinguish "objects" (i.e., objective experience) from merely subjective perceptions. We can become aware of this if we heed the distinction between temporal orders of perceptions, i.e., subjective as against an objective time series (as demonstrated by Kant in the Second Analogy).

5. Once we have "made" an object, we can then draw the necessary distinction between a judging, making subject (i.e., the transcendental unity of apperception) and the judged, made object of experience (i.e., nature). This distinction is a necessary condition for any possible experience of nature.

6. Finally, this analysis (above) is not in any sense chronological in character, i.e., none of these steps in any temporal sense occurs first. Rather, these are logical (or transcendental perhaps) distinctions.

Reflective Judgment

Having seen how Kant relates his doctrine of maker's-knowledge to geometry and physics via the epistemic notion of judgment, we can now understand why Kant should devote so much discussion (in two separate *Critiques*) to the notion of judgment. The reason is that it is precisely this notion, i.e., judgment, which is made responsible for the "making" character in his philosophy.[85]

In the third Critique (i.e., *The Critique of Judgement*) Kant distinguishes a second kind of judgement from the "determinate" kind of the first *Critique*, which also plays an important role in judging nature. This judgment is referred to by Kant as a "reflective" judgment. This notion of reflective judgment is important to the argument of Kant's philosophy of history because it is this notion that acts as the epistemological ground of history. We shall in this section, therefore, briefly comment upon

Kant's notion of "reflective" judgment, contrasting it with his notion of "determinate" judgment.

We have seen that Kant's solution to the problem of knowledge is (epistemologically) based upon his "maker's-knowledge criterion," whose central element, i.e., the "making" element, is judgment. (It is this idea of "judgment creating objects" that makes Kant a revolutionary in the area of epistemology.) Hence, Kant's problem in the first *Critique* was to show how experience could be "made," i.e., judged, into unified "objects" of knowledge. To show this would be, so Kant reasoned, to demonstrate the possibility of a priori synthetic knowledge. In a second *Critique*, i.e., *The Critique of Practical Reason* (which we have not examined and will not examine here) Kant addressed himself to a different but related problem, namely how to show in the area of morality: "In the same way [how] *reason*, which contains constitutive *a priori* principles solely in respect of *the faculty of desire*, gets its holding." (CJ 168) Finally, in yet a third Critique, i.e., *The Critique of Judgment*, Kant tells us:

> But now comes judgment, which in the order of our cognitive faculties forms a middle term between understanding and reason. Has *it* got independent *a priori* principles? If so, are they constitutive, or are they merely regulative, thus indicating no special realm? And do they give a rule *a priori* . . .? This is the topic to which the present Critique is devoted.[86]

Kant divides *The Critique of Judgment* into two parts: "The Critique of Aesthetic Judgment" and "The Critique of Teleological Judgment." Although both parts are concerned with the notion of "reflective" judgment and its relationship to experience, we shall here concern ourselves with only the second part, "The Critique of Teleological Judgment." We do this because we must first understand Kant's concept of teleology (not beauty) if we are to understand the epistemic ground of his philosophy of history.

Kant has made it clear in the first and third Critiques that to "judge" is to "think" a particular representation as being contained under a universal concept. It is in this way that the knower, the understanding (i.e., the judging subject) "makes" nature into one unified experience and thus distinguishes it from merely subjective representations.[87] Judgment is that which distinguishes the objective from the subjective by taking some representations to stand under rules.[88] It is these rules then that allow for the various acts of synthesis which in turn allow for the judging (making) of our various subjective awarenesses (of the manifold) into "objects" by bringing them (the awarenesses) under universal concepts.

One such rule which occurs in our determination of objects in this way is the rule of necessary succession, i.e., causality. We have seen that this notion is possible only if the temporal series in question is determined.[89] And further, we have seen that it is through the faculty of judgment that such determination takes place. Therefore, it is a *determinative judgment* that is responsible for the necessary order that is known as causality as well as for the possibility of experience in general.

Kant tells us:

> Judgment in general is the faculty of thinking the particular under the universal. If the universal (the rule, principle, or law) is given, then the judgment which subsumes the particular under it is determinant . . .. The determinant judgment determines under universal transcendental laws furnished by understanding and is subsumptive only; the law is marked out for it *a priori*, and it has no need to devise a law for its own guidance to enable it to subordinate the particular in nature to the universal.[90]

It is determinate judgments which, by applying categories to our various representations, allow for the possibility of our experience of nature. Without determinate judgments (i.e., without judging representations categorically and constitutively), objective experience would be impossible.

The transcendental deduction showed that for nature to be possible it must exist as an a priori system in accordance with categorial principles such that its objects form a necessary unity. This unity could be effected only by judgment, specifically determinate judgment. This is because determinate judgment has at its disposal the universal (which is "in us") and could, therefore, simply subsume the particular under it.[91]

So much for the necessity involved in accounting for the possibility of nature. It is at this point that there arises a different but related problem concerning our systematic knowledge of nature. Kant states the problem as follows:

> But there are such manifold forms of nature, so many modifications, as it were, of the universal transcendental concepts of nature left undetermined by the laws furnished by pure understanding a priori as above mentioned, and for the reason that these laws only touch the general possibility of a nature (as an object of sense) that there must needs also be laws in this behalf. These laws being empirical may be contingent as far as the light of *our* understanding goes, but still if they are to be called laws (as the concept of nature requires), they must be regarded as necessary on a principle, unknown though it be to us, of the unity of the manifold.[92]

The problem is that the necessary laws which allow for the possibility of nature in general (whose necessity has its origin in determinate judgment) are not themselves sufficient for adequately explaining other necessary concepts (i.e., rules or laws) that must also be employed in order to come to an adequate understanding of nature. When we ask why the former (mechanistic) laws are inadequate, Kant replies that they can account for the *possibility* of nature only and not its apparent *systematic unity*.[93]

This notion of systematic unity, Kant holds, can only be accounted for if we introduce the concept of teleology into natural explanation. However, the problem is that this concept, i.e., teleology, is not numbered

among those categories that allow for the possibility of nature. Hence, a teleological judgment, though necessary (according to Kant) for systematic unity, will be different in character from a determinate judgment because it will have a different origin.

Let us quickly review Kant's argument. In order for knowledge of nature to achieve the rank of science, it must be able to obtain systematic unity.[94] However, this unity is to be thought of on two distinct levels. First, there is the systematic unity that is to be demonstrated by showing how pure natural science, i.e., "mechanistic" science, is possible. This is the unity treated in the Transcendental Analytic which has shown that experience of objects is possible only because certain necessary categories have formed (i.e., "made") via determinative judgment our subjective experience into certain objective unities. It is the *principles* of these categories that constitute, on one level, our systematic knowledge of nature. "This system of categories makes all treatment of every object of pure reason itself systematic . . ."[95] This level of systematic unity of nature precedes any empirical knowledge of nature because it is *due to* this unity that empirical nature is itself possible.

> By nature, in the empirical sense, we understand the connection of appearances as regards their existence according to necessary rules, that is, according to laws. There are certain laws which first make a nature possible, and these laws are *a priori*. Empirical laws can exist and be discerned only through experience, and indeed in consequence of those original laws through which experience itself first becomes possible.[96]

There is, however, also *a second level* of the unity of nature to be accounted for, namely the systematic unity of nature's diverse *empirical* laws. Kant is well aware of the fact that ". . . in respect of nature's merely empirical laws, we must think in nature a possibility of an endless

multiplicity . . ."[97] Nevertheless, in order to achieve *science* of nature, these laws must be seen as forming a systematic unity ". . . necessarily presupposed and assumed, as otherwise we should not have a thoroughgoing connexion of empirical cognition in a whole of experience."[98]

Once again then the problem is to show how such a systematic unity of empirical laws of nature can be epistemologically justified (given the "maker's-knowledge criterion" of truth and the argument of the first *Critique*). As we have seen above, the categories and the corresponding determinate judgment with which objective experience is made possible can be of no direct help. The categories account only for the *possibility* of nature by presenting us with the apparatus by which we "make" nature. After "making" nature possible, the categories have nothing to say concerning its specific details. For these, we must investigate nature. The details that we discover in our investigations provide the basis for our empirical generalizations, i.e., our empirical laws. However, we must still *unify* these empirical laws themselves. That is, we must *systematically relate* these laws to each other. *This* unification cannot be done by "determinate" judgment but requires instead "reflective" judgment. As McFarland correctly observes:

> . . . the systematic unity of the empirical detail of nature is not constitutive of our experience, since we could quite well have experience which, though subject to the categorical principles, was otherwise so diverse as to be incapable of further systematization.[99]

How then and by what principle are we to justify our viewing nature such that we see her empirical laws as necessarily forming a systematic unity? Kant's answer may be broken down into three basic stages.

First, we must judge nature *reflectively*, i.e., we must make use of a judgment which, as opposed to determinate judgment, can " . . . ascend from the particular in nature to the universal."[100] This judgment is prior to empirical experience in that its function is to establish the unity of empirical laws. At the same time it does not unify experience in the manner that the categories do, for then it would be a determinate judgment and thus constitutive in the same manner as determinate judgments. Therefore, the "transcendental" character of this judgment is that it functions as a necessary guide, i.e., it ". . . prescribes a law, not to nature (as autonomy), but to itself (as heautonomy), to guide its reflection upon nature."[101]

Second, we must secure for this "reflective" judgment a necessary principle, i.e., we must show by principle that reflective judgment can *necessarily* guarantee an account of the systematic unity of nature while it itself is not derived from an empirical investigation of nature. Kant says:

> . . . the principle sought can only be this: as universal laws of nature have their ground in our understanding, which prescribes them to nature (though only according to the universal concept of it as nature) particular empirical laws must be regarded in respect of that which is left undetermined in them by these universal laws, according to such as they would if an understanding (though it be not ours) had supplied them for the benefit of our cognitive faculties, so as to render possible a system of experience according to particular natural laws.[102]

Finally, the above two points lead us to see that *reflective judgment* (i.e., the judgment which must find a universal for the particular by assuming that nature was created by some "other" intelligence *for our* "cognitive faculties") will be one which necessarily thinks *purposiveness* into nature. This is to say that *because of* reflective judgment, we will judge

nature "as if" it were created according to a plan. This kind of judgment is necessary once again in order for us to succeed in unifying nature's empirical laws and thus achieve *science*.[103] As Kant states it, ". . . the principle of [reflective] judgement is that nature specifies its universal laws to empirical ones, according to the form of a logical system, for the purpose of the judgement."[104]

We must, therefore, be able to assume that nature is of such a character that it can be "scientifically" known. For nature to be "scientifically" known in the *full sense*, it must first be made possible according to determinate judgment, and second, rendered certain and systematic according to teleological (reflective) judgment. A teleological judgment of nature is possible only if we assume that empirical laws conform to *our* power of judgment. This in turn is possible only by assuming that an understanding analogous to our own created the world *for us* such that we are capable of seeing the world's unity. This judgment then cannot be of a determinate character, for determinate judgments do not guarantee the unification of the empirical laws of nature. They instead guarantee only nature's possibility. Therefore, a reflective judgment (i.e., a teleological judgment) is required, for only a reflective (teleological) judgment can guarantee the systematic unity of nature's empirical laws inasmuch as only teleological judgments think of nature as a purposeful unity.[105] This then in brief is a summary of Kant's argument for the necessity of thinking of nature as a teleological system.

I should like to end my comments here by noting that it is reflective judgment that Kant sees as securing certainty (i.e., necessity) for the science of nature. One of the central notions involved in Kant's

concept of science is the notion of necessary unity. Without a necessary unity, we can have no science, and further, all necessary unity is imposed by mind. "An *idea* has to underlie the possibility of the natural product."[106] [my emphasis] (I develop this notion more in Chapter IV where it is directly related to history via Kant's discussion of "ultimate" and "final ends.") It is because Kant contrasts the notion of necessary unity with that of *chance* (identifying "blind chance" with a "mere mechanistic explanation"[107]) that mechanistic explanation ("because it leaves things to chance") cannot provide the unity required for a science of nature.

Kant reiterates this thesis in several different ways. For example, he says that for a science of nature to be possible empirical laws, though in one respect *contingent*, must be thought of if they are truly "laws,[109] this being especially obvious in the case of *organisms*. Organisms, Kant says, *must* be judged reflectively (i.e., teleologically), for they can be properly conceived only if they are conceived as having been designedly formed.[110] Finally, ". . . once such a guide for the study of nature has been adopted, and its application verified, it is obvious that we must at least try this maxim of judgement also on *nature as a whole* [my emphasis]. . ."[111]

The upshot of this line of reasoning is that *only* reflective judgment (by which nature is judged as a purposeful unity) can secure the necessity, and thus the certainty, required in order to have a complete systematic explanation, and therefore a "science," of nature.

Kant discusses at great length in the "Critique of Teleological Judgement" the related problems of mechanism and teleology. He also deduces there an antinomy and offers a solution, the discussion of which is quite

beyond our scope here.[112] The important point for us to see here is that Kant considers it absolutely *necessary* that nature be viewed as purposeful. He tells us, e.g.:

> For were it not for this presupposition, we should have no order of nature in accordance with empirical laws, and consequently, no guiding thread for an experience that is to be brought to bear upon these in all their variety, or for an investigation of them.[113]

We may here pause and ask, in light of Kant's notion of reflective judgment, where have we come? The question we set out to answer was "how is science possible?" This question, as we have seen, is a specific expression of the general problem of Pure Reason, namely how are a priori synthetic judgments possible? To answer this question, we have had to look at two sciences and their epistemological presuppositions.

We found that for Kant knowledge of geometry (i.e., of the a priori synthetic judgments which comprise the mathematical science of space) is possible only if we in some sense "make" the elements of that science. So too we found that physics (i.e., the science of natural objects in space) is possible only if we in some sense "make" the given manifold into an "object." Further, in the case of physics, it became apparent that in order to have a complete understanding (and thus a proper science) of nature, we must judge nature such that we see in it a unity of a *teleological* character.

The unity of nature's empirical laws, her various organized natural products, her vast systems of plant and animal life, these Kant held could not be due to mere chance or fate but must, instead, be seen *as teleologically necessary*. They could be seen as necessary (in other words) only if they could be seen as evidencing a purposeful plan. Nature must be judged, therefore, "as if" it were designed according to a plan.

To judge nature in this manner required a "new kind" of judgment. A determinate judgment could not be the ground of such a concept as "purpose," for a determinate judgment does not allow that its object contain its own purposeful end. Determinate judgments, while constitutive, are merely mechanistic. Further, the arrangement of the object of a determinate judgment is always contingent, i.e., any particular arrangement of the objects could have been otherwise and yet still have been adequately (on mechanistic principles) explained.

We found, therefore, that determinate judgment could not give us the second kind of necessary unity that "science" requires. Hence, we needed a "new kind" of judgment to achieve this unity, and this judgment Kant called "reflective." It was *reflective* judgment that allowed us the kind of concept (i.e., teleological concepts) and unity that we were looking for. That is the concept of ". . . an object, so far as it contains at the same time the ground of the actuality of this object, [this] is called its end."[114]

Therefore, we must make use of reflective judgment if we are to achieve a "science" of nature because *only* reflective judgment allows us to view nature as a purposeful whole.[115] Reflective judgment allows us to conceive nature as a teleological whole by working hand and hand with Kant's "maker's-knowledge criterion." It is because we in "making" nature can judge (i.e., "make") it into a *purposeful whole* that we can achieve a complete science of it. "For we can have complete insight only into what we can make and accomplish according to our conceptions."[116]

What does this mean for history? In his essay *Idea for a Universal History* Kant says, "The history of mankind can be seen, in the large, as

the realization of nature's secret plan . . ."[117] He then asks (at the beginning of a later essay, *An Old Question Raised Again: Is the Human Race Constantly Progressing*) "But how is a history a priori possible?" He answers, ". . . if the diviner himself creates and contrives the events which he announces in advance."[118]

We are, now, finally in a position to try to understand what the *epistemic notions* of "making and knowing" and "teleology" mean in Kant's philosophy of history, and it is to this task that we shall now turn.

NOTES AND REFERENCES

[1]*Critique of Pure Reason*, translated by Norman Kemp Smith (Bxlll). Also see, e.g., Bxi-Bxii: "The true method, so he [Thales or some other] found, was not to inspect what he discerned either in the figure [geometrical] or in the bare concept of it, and from this, as it were, to read off its properties; but to bring out what was necessarily impli-d in the concepts that he had himself formed *a priori* and had put into the figure in the construction by which he presented it to himself."

[2]Bxll

[3]Bxlll

[4]Bxll

[5]Bxvl

[6]Bxvlll

[7]Jaakko Hintikka, "Transcendental Arguments: Genuine and Spurious,"*Nous* VI (September 1972), p. 274.

Also see *Practical Reason*, ed. Stephan Körner, specifically the article by Hintikka, "Practical vs. Theoretical Reason--An Ambiguous Legacy." In this article Hintikka mentions both Vico and Kant as users of "maker's knowledge." Concerning Vico: "For Vico, the scope of epistemologically relevant maker's knowledge is not restricted to human thoughts, plans, decisions, intentions, hopes and wishes but comprises also their concrete manifestations and results in the realm of culture and society." (pp. 88-9)

And concerning Kant: "One of the most interesting variants of the tradition of 'maker's knowledge' in effect suggests that we can have a priori knowledge of things only through imposing this kind of anticipatory framework on them. 'Reason has insight only into that which it produces after a plan of its own,' says Kant (*Critique of Pure Reason*, tran. by Kemp Smith, Bxlll, p. 93)."

[8]C. Pure R. Bxvl and Bxxll footnote. For explanation of Kant's Copernicus analogy see Paton, *Kant's Metaphysics of Experience*, Vol. I, pp. 75-76.

We might note here that Kant's "maker's-knowledge criterion" as used by humans, not God, answers the question of how physics is possible on two different levels. Vico's criterion, on the other hand, does so only on one. In physics it is by constructing hypotheses that both Vico and Kant hold that man can gain knowledge of nature. That is to say, man can know only because he constructs experiments based on hypotheses which he has constructed in reflection and has thereby determined in advance what nature's answers to his questions will be or at least what would count as an answer. This is the meaning of Kant's statement ". . . adopting as a guide that which it [reason] has itself put into nature." (bxiv). Again ". . . a judge who compels the witnesses to answer questions which he has himself formulated." (Bxlll) On this level Vico and Kant's criterion operates in the same way.

However, there is a second level of explanation for natural objects and, therefore, for physics, namely a metaphysical level on which Kant's "maker's-knowledge criterion" *operates and Vico's does not. On this level* the thesis of maker's knowledge is used by Kant to show that the actual *objects* of nature, and hence knowledge of them, are possible because of man's making. It is this second level that I shall concern myself with here in this chapter for it is at this level, as we shall see later, that Kant's maker's-knowledge thesis is of importance to his philosophy of history.

Finally, Vico also has his "maker's-knowledge criterion" operate on a metaphysical level, i.e., constructing natural objects, but it is the Divine maker's knowledge that does so, not man's. There is, of course, a sense in which this is true for Kant also. The point is probably best expressed by saying that the notion of "appearance vs. thing-in-itself" is foreign to the Vichian philosophy.

[9]P. F. Strawson, *The Bounds of Sense* (Nethuen and Co Ltd, 1973), p. 22.

[10]*Critique of Pure Reason*, AXV

[11]Ibid, BX

[12]"It is a logic of truth. For no knowledge can contradict it without at once losing all content, that is, all relation to any object, and therefore, all truth." (A62-3/B87) Also see A237/B296.

[13]"I openly confess, the suggestion of David Hume was the very thing, which many years ago first interrupted my dogmatic slumber . . ." *Prolegomena*, p. 7.

Kant considered it a scandal to philosophy and human reason that an adequate answer had not yet been provided to the question "how it is we have knowledge of objects." His doctrine of "maker's knowledge" was, once and for all, to provide and answer to this question. Further, it would bypass all of the mistakes of previous "idealisms" because of his "special" doctrine of sensible intuition which could account for the possibility of *objects*. See footnote in *Prolegomena*, p. 153.

[14]C. of Pure R. BXVI

[15]BXVII

[16]Ibid.

[17]*Prolegomena*, pp. 102-3. Kant refers to the idealism of Descartes as "problematic" and to the idealism of Berkeley as "dogmatic." See "Refutation of Idealism," in *The Critique of Pure Reason*, pp. 244-7.

[18]B158, *C. Pure R.* (Also compare this with Vico's criticism of Descartes.)

[19]*Prolegomena*, pp. 102-3.

[20]Bxvll (Also see B 160)

[21]Ibid.

[22]Ibid. (Also see B22-3, where Kant tells us that his ". . . critique of pure reason, in the end, necessarily leads to scientific knowledge, while its dogmatic employment on the other hand, lands us in dogmatic assertions to which other assertions, equally specious, can always be opposed--that is, in *scepticism*."

[23]A 107

[24]A 114. See also B 166-7.

[25]A 196/B241

[26]A 210/B256. See also Axx: "What reason produces entirely out of itself cannot be concealed, but is brought to light by reason itself . . ." (And see BXXIII, A477/B505.)

[27]*Prolegomena*, pp. 80-1.

[28]A 125

[29]A 129-30. Compare this with Vico's claim that ". . . Science is the knowledge of the form or of the *mode* in which a thing is produced, and by which the mind, because in knowing a thing it combines its elements, makes the thing." (Flint, p. 87)

[30]A 127

[31]B 145-6

[32]*Prolegomena*, pp. 81-2.

[33]B14-15

[34]A10/B14

[35]B16-17, p. 53, Kemp Smith. The same idea applies to judgments of arithmetic. ". . . we find that the concept of the sum 7 and 5 contains nothing save the union of the two numbers into one, and in this no thought is being taken as to what that single number may be which combines both. The concept of 12 is by no means already thought in merely thinking this union of 7 and 5; and I may analyze my concept of such a possible sum as long as I please, still I shall never find the 12 in it." (B15)

[36]B17, p. 54.

[37]B17-18

[38]B19

[39]See *On History*, eds. L. W. Beck, Robert Anchor, and Emil Fackenheim (Bobbs-Merrill Co.), specifically the essay "An Old Question Raised Again: Is the Human Race Constantly Progressing?", p. 137.

Of course, Kant held that the answers to these questions, i.e., the possibility of geometry, physics, and history, required an answer to the question "how metaphysics is possible?" See, e.g., paragraph 40 of the *Prolegomena*.

[40]S. Körner, *Kant* (A Pelican Original), p. 34. Also see the excellent book of Christopher Garnette, *The Kantian Philosophy of Space* (Port Washington, New York: Kennikat Press, Inc., 1965).

[41]B16-17, A 25, B40/41, B64-5/A47, B120/A88, B204, B207.

[42]A724/B752, A715-16/B743/44.

[43]B204. Also B40: "The science which determines the properties of space synthetically, and yet a priori."

[44]B41.

[45]*Critique of Pure Reason*, trans. Kemp Smith, pp. 66-7.

[46]B38: "The representation of space cannot, therefore, be empirically obtained from the relations of outer appearance. On the contrary, this outer experience is itself possible at all only through that representation." (Ibid.)

[47]A24/B39.

[48]". . . every concept must be thought as a representation which is contained in an infinite number of different possible representations (as their common character)." B40

[49]"It is in this latter way, however, that space is thought; for all the parts of space coexist *ad infinitum*." B40

[50]C Pure Reason A25/B40, 4th argument.

[51]B40

[52]B16

[53]B41

[54]Ibid.

[55]A713/B741. "Thus I construct a triangle by representing the object . . . completely *a priori*, without having borrowed the pattern from any experience."

[56]See B147 for Kant's discussion of this. He is here faced with the same problem that Vico had when he (Vico) tried to show how geometry was possible on maker's-knowledge principles; namely the problem of the relation of geometry to the world of nature. Vico solved this by way of a "metaphysical hypothesis" (see Chapter I). Kant solves the problem by way of his doctrine of "geometer's" space, i.e., the thesis that physical space is really *identical with* (Euclidian) geometrical space.

[57]I wish once again to emphasize the generality of my sketch. I do not, e.g., even enter the squabble over the Analytic vs. the Aesthetic interpretation of space, i.e., whether the Axioms are really concerned with the *construction* of figures in space and *therefore* with the construction of space, as against the doctrine of the Aesthetic, which teaches that space is represented as an infinite *given* magnitude and, therefore, *not* constructed.

[58]A34

[59]See #55 above.

[60]A25. For Kant, this "one" space is the identical "one" space of geometry.

[61]As Strawson points out, "This is the reason why the pure mathematics of space is also the mathematics of physical space, why the propositions of pure geometry necessarily hold of the physical objects of empirical intuition." (*Bounds of Sense*, p. 67) Also see pp. 281-4 of that same work.

[62]I owe this particular form of this argument to Professor Christopher Garnette as stated in his book *The Kantian Philosophy of Space*, p. 183.

[63]B147

[64]". . . *things* [my emphasis] which allow of being presented to us only in accordance with the form of that pure sensible intuition." B147

[65]B147

[66]A713/B741

[67]A24/B39 (#3A edition)

[68]B41

[69]Bxv111

[70]B20. Kant holds that our knowledge of objects is knowledge of *appearances* and not *things-in-themselves*. He means by this that "something" which we can never know affects us in such a way that it brings about in us a sensation. As a result of this effect, we, in relating our intuitions of space and time to sensations, acquire empirical intuitions. In being presented with an empirical intuition (which is not yet an object; it is an "undetermined" object), we are being presented with an appearance. (See A89/B122) The appearance has two parts, matter and form. The form of the appearance is that which the mind completely contributes a priori, thus "determining" (i.e., making) the appearance through judgment (and the categories) into an object. Hence, we can know objects because we have made (i.e., determined) them. (A19-21)

[71]A97

[72]"Categories are concepts which prescribe laws *a priori* to appearances, and therefore to nature . . ." (B163)

[73]"The same function which gives unity to the various representations *in a judgment* also gives unity to the mere synthesis of various representations *in an intuition*; and this unity, in its most general expression, we entitle the pure concept of the understanding. The same understanding, through the same operations by which in concepts, by means of analytical unity, it produced the logical form of a judgment also introduces a transcendental content into its representations, by means of the synthetic unity of the manifold in intuition in general. On this account we are entitled to call these representations pure concepts of the understanding, and to regard them as applying *a priori* to objects--a conclusion which general logic is not in a position to establish.

In This manner there arise precisely the same number of pure concepts of the understanding which apply *a priori* to objects of intuition in general, as, in the preceding table, there have been found to be logical functions in all possible judgments." (B104-105/A79-80)

[74]". . . these functions [i.e., the logical functions of judgment] specify the understanding [i.e., the categories] completely, and yield an exhaustive inventory of its powers." (B105)

As Strawson puts it: "We must take it that the categories are here derived simply by adding to the forms of logic the idea of applying those forms in making true judgements about objects of awareness (intuition) in general . . ." (*Bounds of Sense*, p. 77)

[75]B132 (Also see B1133

[76]B134

[77]B133

[78]B239

[79]B242

[80]B240. Further, Kant tells us: "I could not then assert that two states follow upon one another in the [field of] appearance, but only that one apprehension follows upon the other. That is something merely subjective, determining no object; and may not, therefore, be regarded as knowledge of any object, not even of an object in the [field of] appearance." (B240/A195)

[81]Kant's answer, of course, is that there must be *categories* which allow us to "make" an object of experience. These categories will be the rules by which we may avoid the arbitrary and thus derive ". . . the subjective succession of apprehension from the objective succession of appearances. [We must be able to do this since] the subjective succession by itself is altogether arbitrary, it does not prove anything as to the manner in which the manifold is connected in the object." (B238/A193)

"We have, then, to show, in the case under consideration, that we never, even in experience, ascribe succession (that is, the happening of some event which previously did not exist) to the object, *and so distinguish it from subjective sequence* in our apprehension, except when there is an underlying rule which compels us to observe this *order of perceptions* rather than any other." (B241-42/A196-97) [emphasis added]

[82]"I find that a judgment is nothing but the manner in which given modes of knowledge are brought to the objective unity of apperception. This is what is intended by the copula 'is.' It is employed to distinguish the objective unity of given representations from the subjective." (B141-2)

[83]B236/A191. Kant's claim is that appearance can be represented as an object only if it stands under a rule.

[84]See #72 above.

[85]For a thorough discussion of the central epistemic notion of judgment in its relation to "making," see Arthur Melnick's excellent book on Kant, *Kant's Analogies of Experience* (Chicago: University of Chicago Press, 1973). Melnick correctly argues that the notion of an "object" in Kant should be interpreted as being primarily the notion of an *object of judgment*. For example, he says, "Kant's major point is that judgment can relate to what is given in experience (or what is given in experience can be an object of judgment) only if what is given conforms to certain epistemic categories that set up or define the relation between judgment and what is given sensibly in the first place . . . In Kant's terminology, epistemic concepts and only epistemic concepts can bring appearances (what is given) into necessary relation to the understanding (the faculty of judgment)." (p. 45)

[86]*Critique of Judgement*, trans. James Creed Meredith (Oxford: The Clarendon Press, 1973), p. 4.

[87]See A68/B93 and also (179), *Critique of Judgement*, from now on referred to as CJ.

[88]". . . judgement . . . the faculty of subsuming under rules; that is, of distinguishing whether something does or does not stand under a given rule (casus datae legis)." (A132)

[89]"The order in which the perceptions succeed one another in apprehension is in this instance determined, and to this order apprehension is bound down." (A192/B238)

[90]CJ (179)

[91]"That nature should direct itself according to our subjective ground of apperception, and should indeed depend upon it in respect of its conformity to law, sounds very strange and absurd. But when we consider that this nature 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." (A114) Concerning this see also *First Introduction to the Critique of Judgement*, trans. James Haden (Bobbs-Merrill, 1965) (208-9), p. 14.

[92]CJ (179-80) in the *First Introduction* (Bobbs-Merrill) he says: ". . . experience . . . must ideally form a system of potential empirical knowledge according to universal as well as particular laws, insofar as this is objectively possible, at least in principle. The unity of nature under a principle of the thoroughgoing connection of everything contained in this sum of all appearances requires this." (208-9)

"Therefore it is a subjectively necessary, transcendental *presupposition* that this dismaying unlimited diversity of empirical laws and this heterogeneity of natural forms does not belong in nature, that instead, nature is fitted for experience as an empirical system through the affinity of particular laws under more general ones." (209)

For a discussion of this point and also a good analysis of Kant's concept of teleology, see J. D. McFarland's book *Kant's Concept of Teleology* (Edinburgh: University of Edinburgh Press, 1970).

[93]"It is, I mean, quite certain that we can never get a sufficient knowledge of organized beings and their inner possibility, much less an explanation of them, by looking merely to mechanical principles of nature. Indeed so certain is it, that we may confidently assert that it is absurd for men even to entertain any thought of so doing or to hope that maybe another Newton may some day arise, to make intelligible to us even the genesis of but a blade of grass from natural laws that no design has ordered." CJ (400)

[94]A832/B860 C Pure R.

[95]*Prolegomena*, p. 88.

[96]B263

[97]CJ (179-80)

[98]CJ (183-4). Also see CJ 184 and C Pure R A650/B678. "The law of reason which requires us to seek for this unity, is a necessary law, since without it we should have no reason at all, and without reason no coherent employment of the understanding, and in the absence of this no sufficient criterion of empirical truth. In order, therefore, to secure an empirical criterion we have no option save *to presuppose the systematic unity of nature as objectively valid and necessary* [my emphasis] . . . That the manifold respects in which individual things differ do not exclude identity of species, that the various species must be regarded merely as different determinations of a few genera, and these, in turn, of still higher genera, and so on; in short, that we must seek for a certain systematic unity of all possible empirical concepts, insofar as they can be deduced from higher and more general concepts--this is a logical principle, a rule of the Schools, without which there could be no employment of reason." (A651-52/B679-80)

[99]McFarland, *Kant's Concept of Teleology*, p. 16.

[100]CJ (180). Also see *First Introduction* (203-4).

[101]CJ (185-6).

[102]CJ (180). Also see *First Introduction* (203-4) and compare with footnote #3 above.

[103]*First Introduction to Critique of Judgement* (215-16).

[104]Ibid.

[105]McFarland, *Kant's Concept of Teleology*, p. 85.

[106]CJ 377

[107]". . . the explanation adopted by Epicurus. It completely denies and abolishes the distinction between a technic of nature and its mere mechanism. Blind chance is accepted as the explanation . . ." (CJ 393)

It is worth noting that both Vico and Kant saw their respective maker's knowledge criteria, in conjunction with their teleological explanations, as refuting the doctrines of "Blind chance" and "Deterministic Fate." For example, Vico says "Hence Epicurus, who believes in chance, is refuted by the facts, . . . and so are Zeno and Spinoza, who believe in fate." (1109) *New Science*.

And Kant tells us when speaking of the explanatory power of Epicurus' "Blind Chance doctrine": "Hence nothing is explained, not even the illusion in our teleological judgements, . . . [and of "Blind Necessity"] "But Spinozism does not effect what it intends . . . suppose we grant it this mode of existence for its beings of the world, such ontological unity is not then and there a *unity of end* and does not make it in any way intelligible." (393) CJ

[108]CJ (180)

[109]CJ (370)

[110]CJ (398) ". . . reflective judgement is essentially necessary, if for no other purpose, to obtain an empirical knowledge of their [certain natural objects] intrinsic character. For the very notion that they are organized things is itself impossible unless we associate with it the notion of a production by design." (398)

It is clear that Kant thinks of organisms as embodying designed physical ends. He says, "A thing exists as a physical end *if it is both cause and effect of itself*. For this involves a kind of causality that we cannot associate with the mere conception of a nature unless we make that nature rest on one underlying end, . . ." (371) CJ

[111]Ibid.

[112]CJ (404-8)

[113]CJ (185)

[114]CJ (180)

[115]"We are entitled, nay incited, by the example that nature affords us in its organic products, to expect nothing from it and its laws but what is final [purposeful] when things are viewed as a whole." CJ (379).

[116]CJ (384)

[117]*Idea for a Universal History*, p. 27.

[118]*An Old Question Raised Again: Is the Human Race Constantly Progressing?* pp. 79-80.

CHAPTER IV

KANT AND HISTORY

In this chapter we shall examine how the notions of teleology and maker's knowledge operate in Kant's philosophy of history. We shall first isolate Kant's problem with history and then consider his use of these two concepts in his solution. This will involve our seeing how Kant's notion of teleology is transferred *from nature* and a "physical" teleology *to history* and a "moral" teleology.

Secondly, I wish to construct what I think would constitute a plausible Kantian answer to the question "how is history as a science possible?" Although Kant never explicitly raised *this* question, it is my contention that his "maker's-knowledge criterion," in conjunction with his various writings on history, points to a [rather] definite answer to it. Further, I think it will greatly benefit us, in attempting to understand the full import of Kant's philosophy of history, if *we* raise the above question and construct an answer to it on Kantian principles.

The Problem of History

In the *Critique of Pure Reason* and in the *Critique of Practical Reason*, as well as in the *Groundwork* and other writings, Kant had developed a picture of man that was composed of two seemingly incongruous elements.

On the one hand there was man viewed as phenomenon, i.e., a mere product of nature, a process or sum of processes governed by laws which he must blindly obey. This perspective rendered man just as much a determined part of nature as any other part, obeying, like the rest of nature, strictly mechanical laws. On the other hand, the *Critique of Practical Reason*, as well as the *Critique of Judgement*, viewed man as noumenon, i.e., a thing unto himself and a member of an "intelligible" world. This perspective renders man as a lawgiver unto himself, a moral legislator, that is, one who is precisely *not* determined by mechanical laws but, rather, is a self-determining, free agent in his consciousness of a higher, moral law.

The problem of history for Kant arises exactly here. First, which kind of perspective is the correct one viewed from a historical perspective? Second, what implications arise, and what shall we think of history itself after it is decided whether it is a physical or moral process? Kant's answers to these questions are complex. He does not come down squarely for one or the other of the alternatives of the first question, and as a result his answer to the second is a combination on the one hand of thinking of history as a physical (i.e., a natural) process and on the other as a moral process. In either case (i.e., be it a physical or moral process or some combination of the two) Kant holds that history is teleological in character. It is, therefore, to this question that we should first turn so as to understand better his answer to the others.

We saw earlier in Chapter III that it was Kant's view that in order to have a completely unified science of nature it is necessary that we be able to judge and thus think of nature in at least two different ways. First, we must judge nature determinately, i.e., we must judge nature such that in

the act of judging it we determine it under universal transcendental laws. In so doing, we thereby "make" nature and, a fortiori, make knowledge of it possible.

However, we also learned secondly that we must judge nature reflectively, i.e., in those cases where we have "given" to us particulars of nature made possible by determinate judgement , but yet requiring a universal (rule, principle, or law) by which we can systematize those particulars into one organic unity.[1] This second way of judging nature, i.e., via reflective judgment, is what Kant means by teleology. In his teleological moods Kant claims that we *must* judge nature's parts "as if" they serve purposeful ends if we wish to achieve systematic science.

Now it is because of the necessity of this second manner of judging nature (i.e., teleologically) that Kant is prompted in his essay *Idea for a Universal History* to ask, "Is it reasonable to assume a purposiveness in all the parts of nature and to deny it to the whole?"[2] He answers negatively:

> If we adopt the principle of an objective finality in the manifold variety of the specific forms of terrestial life and in their extrinsic relations to one another as beings with a structure adapted to ends, it is only rational to go on and imagine that in this extrinsic relation there is also a certain organization and a system of *the whole kingdom of nature* [my emphasis] following final causes."[3]

Finally, when we press on and ask, "Precisely what is the purpose or end of nature as a whole?" Kant tells us that it is the production of man ". . . the being upon this earth who is the *ultimate end* of nature and the one in relation to whom all other natural things constitute a system of ends."[4]

Nature then is to be seen as a teleological system, a purposeful whole whose ultimate end is man. This rather traditional but profound idea

is the "guiding thread" in the Kantian philosophy of history. Kant's "idea" is that behind the manifestations of human actions there is a providential purpose at work. History is the story of human actions which ". . . being physical phenomena themselves, . . . like every other natural event are determined by universal laws." (*Idea*, p. 17) However, these particular actions, i.e., *historical* actions, are special, Kant thinks, because they are *free*. This is to say that they are determined only by man's own good will. Hence, history is the story of providence producing a being (man) who can become capable of achieving freedom.

The purpose of the historian is to narrate the manifestations of man's will in such a manner that his past actions can be made intelligible by being seen in the light of some underlying plan. To accomplish this requires a "philosophical" study of history which may enable man to:

> . . . discern a regular movement in it, and that what seems complex and chaotic in the single individual may be seen from the standpoint of the human race as a whole to be a steady and progressive though slow evolution of its original endowment.[5]

The problem of history, therefore, is the "discernment of a regular movement" on the one hand and the explanation of this historical movement as now a natural and now a normal process on the other.

It is important to note that Kant sees *both* of these elements (i.e., the natural and the moral-teleological elements) as forming the epistemological basis of history. History is the story of man as a "teleological" product of nature, "making" himself into a cultured and moral being.[6] This is essentially to say for Kant that history is the story of "natural" man making himself human. To see what Kant has in mind here, let us begin by examining the "physical," i.e., the natural-teleological element in Kant's essay *Idea for a Universal History*.

Nine Theses

The typically Kantian move which becomes evident here is to inquire into the conditions for the possibility of history. These conditions will be those which allow for the "discernment of a regular movement" in the appearances that we know as human actions. These conditions Kant refers to (in this essay) as theses, of which there are nine. Therefore, we shall examine the meaning of these nine theses in order to see how the "maker's-knowledge criterion" and the concept of teleology are applied. We might note here that the last four of these nine theses apply to the future. This is because Kant does not think of history as simply whatever *has happened in the past*. He thinks, instead, of history as a special kind of "on-going" process which has a special purpose to fulfill.

In the "First Thesis" we learn that in Kant's view man *necessarily* has a history. This necessity is made clearer by keeping in mind the following points: *The Critique of Judgement* had established that nature is a (physical) teleological unity. A consequence of this is that any "natural" capacity of any creature is destined to evolve to its "natural" end.[7] Man is a natural creature, and he has a unique capacity, namely rationality. Further, man's rationality is of such a developmental nature (i.e., it is not instinctive) that it would be impossible for it to evolve to its natural end in the lifetime of, say, Euclid. Kant's claim, therefore, is that only through a ". . . series of generations, each of which passes its own enlightenment to its successor"[8] can the species man fully develop the faculty of reason. Therefore, only *through* history (i.e., only through man's time as a species) can the ultimate* purpose of nature--the development of man and his rational faculties--be realized.

*"Ultimate" is used technically by Kant, and we shall examine his usage later.

It is by a *physical* teleology (i.e., nature's plan or tendency for man as a species, progressively to develop his faculties) that Kant accounts for the *necessity* of man having a history. This is to say that *part* of what history means for Kant is that there are purposeful "natural" processes that take *time* to occur, thereby allowing man the ability to develop his rationality. Hence, there is a sense for Kant in which men are already "historical" creatures before they are aware of history. That is, they are, in a sense, "naturally" historical because it is *nature* that brings about the means by which man will in the future civilize himself, thus making himself fully human. Finally, this "bringing about" is itself *part* of the meaning of history. (As we have said, Kant later adds a *second* sense--a "moral" meaning--to his "natural"-historical process, and as a result, history is thought of *not* as the history of nature, but rather as the history of freedom.[9])

It would seem then that the philosopher-historian[10] is concerned with accounting for history naturally. He must, therefore

> . . . try to see if he can discover a *natural* purpose in this idiotic course of things human . . .[i.e.], to have a history with a definite *natural* plan for creatures who have no plan of their own.[11]

Kant believes that it is only in this way (i.e., by appealing to a "plan" of nature) that one can account for why there *must* be such a thing as human history. Once again, human history is the story of man's cultural and moral development, i.e., the story of freedom. In order for man to achieve this developmental end there must be a prior "natural Plan" which will "bring about" (at least the beginning of) man's development.

> The means employed by nature to bring about the development of all the capacities of men in their *antagonism* [my emphasis] in society, so far as this is, in the end, the cause of a lawful order among men.[12]

The question may arise "What would happen if this so-called antagonism of men (i.e., their "natural" unsocial-sociability) were absent?" Kant's answer is that if there were no such "plan of nature," and thus no antagonism, there would be no history. Further, if there were no history, there would be no development of man's potentialities and, therefore, man's

> . . . talents would remain hidden, unborn in an Arcadian shepherd's life, with all its concord, contentment, and mutual affection. Men, good-natured as the sheep they herd, would hardly reach a higher worth than their beasts; they would not fill the empty place in creation by achieving their end, which is rational nature.[13]

Hence, with his argument for a plan of nature, Kant has, as R. G. Collingwood pointed out some years ago:

> . . . achieved the remarkable feat of showing why there should be such a thing as history; it is, he shows, because man is a rational being, and the full development of his potentialities therefore requires an historical process.[14]

We may conclude our discussion of this First Thesis, which gives a reason why there *must* be history, by recapitulating Kant's view. Man *must* have a history for he is a natural being whose faculties (in this case the unique faculty, rationality) must be allowed to develop to their natural end. This natural process of development is itself regarded by Kant as part of the meaning of history.

The next five theses trace out nature's plan for man. The picture again demonstrates nature's plan. Nature has forced man to develop himself by placing in him on the one hand ". . . an inclination to associate with others because in society he feels himself to be more than man, i.e., as more than the developed form of his *natural* [my emphasis] capacities"[15] and on the other hand ". . . a strong propensity to isolate himself from others, because he finds in himself . . . the unsocial characteristic of wishing to

have everything go according to his own wish."[16] Hence, nature has thrown man into a state of conflict. But this conflict, it turns out, is a positive thing, for it is only conflict that produces a state of culture. Conflict eventually turns to culture because in conflict man's powers are awakened, and this brings him to ". . . conquer his inclination to laziness, and, propelled by vainglory, lust for power, and avarice, to achieve a rank among his fellows whom he cannot tolerate but from whom he cannot withdraw."[17]

Nature produces antagonism among men in order that man may further his interests in a social context, the only context in which his interest can be furthered, for it is the only context in which he can *have* interests in the first place. In the Fifth Thesis Kant argues that because of the impetus of nature (i.e., the "natural" antagonism) man must create a society which allows him the greatest amount of freedom possible to pursue his own interests while yet preserving the society in question. The only kind of society capable of such freedom Kant tells us is one which has a just civic constitution. To create such a constitution is "the greatest problem of the human race, to the solution of which nature drives man . . ."[18]

In the Sixth Thesis Kant tells us how difficult this problem is by pointing out that the problem is not solved by merely having a master. Hobbes had argued that because man agrees that law should apply equally to all and at the same time (due to his self-interest) thinks of *himself* as an exception, he must have a master to ensure conformity of *his* will to the law. Kant shares this view but cogently asks:

> . . . whence does he get this master? Only from the human race. But then the master is himself an animal, and needs a master . . . The highest master should be just in himself, and yet a man. This task is therefore the hardest of all . . .[19]

Kant tells us that this problem of establishing a civil society will be the last to be solved and that its solution will require at least four ingredients: a correct conception of a possible constitution, a great amount of experience, and most important of all, a *good will* ready to accept such a constitution.[20] The fourth ingredient is the subject of the Seventh Thesis. In this thesis Kant asks "What is the use of working toward a lawful civic constitution among individuals when the same natural antagonism that drives man to create commonwealths also causes any single commonwealth to 'stand in unrestricted freedom in relation to others'?" The only solution, he believes, is a league of nations where "even the smallest state could expect security and justice, . . ."

Further, he says that when we look at "men in the large" we find that nature has been attempting to get man to establish just such a league all along. "All wars are accordingly so many attempts (not in the intention of man, but in the intention of nature) to establish . . . a state . . . which, like a civic commonwealth, can maintain itself automatically."[21] He thinks it is reasonable, therefore, to assume that nature proceeds as a purposive unity to try to stop man from "wasting the powers of the commonwealths in armaments to be used against each other, through devastation brought on by war"[22] and attempts to force him to ". . . institute a cosmopolitan condition." The success of such a cosmopolitan condition depends, of course, upon man, and Kant makes it quite clear in the Seventh Thesis that without a rational (which here necessarily includes peaceful) system of relations between nation states, the problem of establishing a perfect civic constitution is insoluble.[23]

The final two theses (i.e., light and mind) for the possibility of history are the most interesting in relation to our particular problem (i.e., the status of the "physical" teleological element in Kant's philosophy of history). The Eighth Thesis states:

> The history of mankind can be seen, in the large, as the realization of nature's secret plan to bring forth a perfectly constituted state as the only condition in which the capacities of mankind can be fully developed, and also bring forth that external relation among states which is perfectly adequate to this end.[24]

Three comments are here in order. *First* , history is to be seen as displaying a natural purpose (which is not to say that human history is *simply* "natural" history like that of "bees and beavers") only when it can be seen "in the large." That is, only when humanity is viewed *as a whole* can a purpose be discerned in history. This is simply because individual events do not by themselves evidence any overall purpose. Kant tells us that when we look at individual actions, the course of things strikes us as "idiotic," but when viewed as a whole (i.e., teleologically, which involves the use of reflective judgment and the "God-man maker's-knowledge" analogy), the result is that we discern that humanity is ordained by Providence. We see, in other words, that history has a definite plan.

Second, by viewing humanity as a whole from a "cosmopolitan" point of view, we come to see that, e.g., the annual tables of marriages, births, and deaths, which seem at first glance to follow no rule (being subject to man's free will), do in fact occur according to rather stable laws. Kant's point is that since mankind is a part of nature it too should (like nature) be viewed teleologically. This is simply to repeat that history's beginning is a "natural" one, and we must, therefore, always interpret historical

actions as being part of a natural plan. Once again, this is *not* to say that history for Kant is *simply* a natural process. It is to say, rather, that natural (or physical) teleology makes up an essential element of history.

Third, because Kant has argued that an essential element of history is physical teleology, i.e., a "plan of nature," and because we must interpret historical actions with constant reference to "nature's plan," it follows that history is not concerned merely with man's past but with his present and future as well. That is to say that if part of the meaning of the historical process is "natural," then, like nature, the historical process must be thought of as a whole unity and, therefore, as having been going on in the past, even before man was aware that he had a past. Further, it (history) must also be thought of as "going on" now in the present just as natural processes are, far beyond any *direct* control of our own. Finally, the historical process will include a view of the future such that the future is seen as giving meaning to the present. This means that to think of history as being (in part) the result of a "physical" teleology (i.e., as a plan of *nature*) entails thinking of the historical purpose as unfolding now and in the future, achieving its providential end which at the same time "clarifies" the "real" meaning of the present.[25]

It should be noted that Kant does not claim that one can predict the course of human events. Indeed, he asks rather sceptically "Does nature reveal anything of a path to this end?" (p. 22 Idea). And he answers, "She reveals something, but very little." (Ibid.) Kant's main contention is that history can only be possible if we *assume* nature to have a plan and that this *assumption* entails that human actions, when viewed "historically," be interpreted in the light of this plan.

This brings us to the Ninth and final thesis of the essay where Kant tells us:

> A philosophical attempt to work out a universal history according to a natural plan directed to achieving the civic union of the human race must be regarded as possible, and, indeed, as contributing to this end of nature.[26]

Kant's idea here is that if we regard the history of mankind as the realization of nature's secret plan, etc., then we should also be willing to grant that a philosophical attempt to "work out" such a universal history on the one hand and a natural plan on the other is logical. If history is to be thought of as universal (i.e., as an overall unity whose purpose can be discerned) and if it is to nature that we must turn in order to discern the beginnings and interpretation of such a purpose, then to say that one has worked out a "philosophical" universal history is to say that one has simply discerned the workings of nature's plan.[27] Kant's intention, therefore, in explaining how such a history can be possible is to show that he has an "idea" which allows us to look at human actions in such a way (i.e., purposefully, and therefore, historically) that we may better understand them. Therefore, he offers us an "idea" of history--a "guiding thread"--by which we may attempt to unify this "planless conglomeration of human action." His belief is that it is only by means of such an "idea" that one can see unity in human activity, have such a thing as history, and thereby clarify "the confused play of things human."

One last comment about this Ninth Thesis. In the Introduction to the essay, while speaking of the composition of the so-called laws of history (which if discovered would thereby render history a science), Kant tells us:

> . . . we leave it to nature to produce the man capable of composing it. Thus nature produced Kepler, who subjected, in an unexpected way, the eccentric paths of the planets to definite laws; and she produced Newton, who explained these laws by a universal natural cause.[28]

Kant makes it quite clear in this Ninth Thesis that nature has produced at least one person who has attempted *to contribute* to this end, i.e., of achieving a civic union of the human race, namely Kant himself. This is to say that Kant's "idea" for a universal history is a "philosophical attempt" which *itself* contributes to the plan of nature (i.e., achieving a civic union of the human race, etc.).

He reiterates that this attempt (i.e., his "idea") is extremely important if we are to gain a "guiding thread" by which we may see the justification of Providence in the world. In fact, Kant seems to suggest that *this* "idea" (i.e., the idea that history displays a purpose, namely that the ultimate end of nature is man's civic union) is somehow the very best idea possible.

> For what is the good of esteeming the majesty and wisdom of creation in the realm of brute nature and of recommending that we contemplate it, if that part of the great stage of supreme wisdom *which contains the purpose of all the others--the history of mankind*--[my emphasis] must remain an unceasing reproach to it?[29]

Moral Teleology

Let us turn now from the "natural" to the other element that composes Kant's philosophy of history, namely the "moral" teleological element.[30] First, Kant distinguishes between two kinds of ends, natural and moral, referring to them as "ultimate" and "final" ends of nature respectively.[31] Then in a lengthy but important passage, he tells us:

> A thing is possible only as an end where the causality to which it owes its origin must not be sought in the mechanism of nature, but

> in a cause whose capacity of acting is determined *by conceptions* [my emphasis]. What is required in order that we may perceive that a thing is only possible in this way is that its form is not possible on purely natural laws--that is to say, such laws as we may cognize by means of unaided understanding applied to objects of sense--but that, on the contrary, even to know it empirically in respect of its cause and effect presupposes *conceptions of reason* [my emphasis] . . . Now reason in every case insists on cognizing the *necessity of the form* [my emphasis] of a natural product, *even where it only desires to perceive the conditions involved in its production* [my emphasis].[32]

There are three important points to be kept in mind from this passage. First, the very notion of a thing being an "end" entails that the cause of the form of the thing in question is always an *idea*.[33] Second, the source of this *particular kind* of idea is never the understanding but, instead, reason. Third, reason *must* be satisfied in knowing the necessity for such a teleological form of the thing in question. Reason can do this if it can become aware of the *origin* of the form, i.e., whence the form is produced.[34] This is finally to say that reason will come to recognize that it is itself, via reflective judgment, the origin of the teleological forms of natural products and, therefore, that the very notion of an "end" (for Kant) entails the use of certain "ideas" of reason.

Now we have seen that one of the reasons that Kant introduced his talk of "ends" was that he held the belief that organisms were radically different things from non-organic things. He believed, therefore, that organisms must be "thought" of differently from lifeless matter. Now a straightforward reading of the passage quoted above makes it sound as if Kant is saying that an idea (which comes from us) is the actual cause of the (teleological) organism. Yet it is quite clear that this is not Kant's intention. Kant is claiming, with his talk of "ends" that an organism is

simply the type of thing whose parts are intrinsically and reciprocally determined, which is to say that it must be "both cause and effect of itself."[35] If this is the case, i.e., if the parts of an organism must be *intrinsically* and *reciprocally* determined, it follows that an "idea" could not possibly be the cause of an organism, for if it were, then the cause of the organism would not be in (i.e., intrinsically) the make-up of the organism, but rather in minds where ideas have their origin (i.e., *extrinsic to* the organism).[36]

Yet, if this is true, what then are we to make of the claim that "an 'end' is possible only if its causal origin is something whose capacity for acting is determined by conceptions?" I think that the following is Kant's complicated but intelligible answer.

As we have seen earlier,[37] Kant has "built into" his conception of maker's-knowledge (i.e., that the mind can have knowledge only of that which the mind makes) a "God-man maker's-knowledge analogy." He uses the analogy to drive home the limitedness of human *discursive* maker's-knowledge by contrasting it to God's unlimited *intuitive* maker's knowledge.[38] All of God's "maker's-knowledge objects" are "made" actual in a way different from those objects of man's "maker's-knowledge." That is, simply by virtue of God's *intellectual intuition* the object of knowledge *becomes actual*. Man's maker's-knowledge, however, does *not*, correspondingly, make the object actual by merely thinking it, "For if understanding thinks it--. . . then the thing is represented merely as possible."[39] For man, the object can be actual only by being "given" in sensible intuition.

Nevertheless, Kant tells us that thinking *certain kinds* of objects (e.g., God) is an "indispensable idea of reason, a valid use of the

employement of our cognitive faculties." (CJ 402-3) Now, the "idea" of a being who has, by intellectual intuition, "made" actual the objects of nature according to a plan or idea, is *itself* one of those necessary objects that must be thought by beings who have cognitive faculties with *our* peculiar structure. Therefore, the "idea" *of a being who makes objects actual according to a plan or idea* is a necessary idea by which we should judge organisms. This is the meaning of the (troublesome) passage in which Kant explains the possibility of organisms. An organism is a unique "object."

> Its parts must in their collective unity reciprocally produce one another alike as to form and combination, and thus by their own causality produce a whole, the conception of which, conversely,--in a being possessing the causality according to conceptions that is adequate for such a product--could in turn be the cause of the whole according to a principle, . . .[40]

Yet one difficulty remains, namely *whose* "idea" is it that is the (teleological) cause of the organism? Let us here pause and restate the problem. Kant says, on the one hand, that we are to think of an organism as a system. This means that an organism is a whole whose parts are related to each other in a "special" way (i.e., they are reciprocally cause and effect of each other) such that they depend upon a "plan." This is to say that they (i.e., organisms) depend upon an "intelligent idea" which is their cause. It is this *idea* then that forms organisms into unified wholes. On the other hand, since the organism is a product of nature (and not a *human* work of art), the "idea" cannot be a *human* "idea," for that would mean that the cause was external to the organism, thus contradicting the very notion of an organism (namely that an organism is a unified whole whose cause is *internal to* and reciprocally related with its effect).[41] But surely the "idea" *must* be a human "idea" if it is humans which are to experience (i.e., judge) nature teleologically.

The solution to this apparent difficulty is to see that Kant is actually speaking of *two distinct kinds* of teleological ideas which have two distinct origins. He is saying in the first place that we must make use of the "idea" (call it Idea #1) that "organisms are to be judged as if they depend in a 'special' way upon an idea" (call it Idea #2) of a non-human mind. Now the special way in which organisms depend upon that mind *cannot* be that the idea (Idea #2) exists *external to* the organism. For if this were the case, the idea would *thereby* be disqualified as a "cause" of the organism. (This is so, once again, because organisms are defined as being caused by an idea which is *internal to* their make-up.)

Further, the mind in question *cannot* be a human mind, for if it were, then a human idea could be the *actual* cause of the organism. This is to say that in merely thinking the idea of an organism we (humans) could thereby bring organisms into existence. This claim, i.e., that human beings have intellectual intuition of organisms, Kant, of course, denies.

The conclusion, therefore, must be that there is a non-human intelligence or mind which, simply by virtue of having an "idea," thereby makes actual the objects of nature, in this case organisms.[42] Hence, there are *two distinct kinds* of teleological ideas that come from two distinct origins--man's mind and God's mind. On the one hand, there is *our* idea (Idea #1) whose origin is our human reason. This is the teleological idea *of* an organism "as having been produced by an intelligent cause, i.e., a plan." The organism is, as a consequence of this idea (Idea #1), thought of as being completely determined by an idea (Idea #2) which *is* the intelligent cause of the organism, i.e., which actually does the determining. On the other hand, the origin of the *second* idea (Idea #2) is a non-human

intelligence (God) which, given the occasion of his having the idea (Idea #2), he thereby causes the actuality of the object. (This is to say that God, in knowing nature, makes it.) Therefore, there are *two kinds* of ideas involved here: Idea #1 which is *of* something (namely a non-human mind endowed with intellectual intuition) and is itself non-creating. Further, there is Idea #2 which is not *merely* of something but also creates and, therefore, *is* that something.

If we keep in mind these *two* kinds of teleological ideas and their origins, we shall better understand the explanatory function of Kant's "God-man maker's-knowledge analogy" in its relation to teleological explanation. Kant uses it, for example, to account for the teleological character of nature. He speaks of the necessity of using such an idea (Idea #1) in the following passage:

> We are bound to have present to our minds the thought of another possible form of intuition if ours was to be deemed one of a special kind, one namely, for which objects were only to rank as phenomena. Were this not so it could not be said that certain natural products must, from the particular constitution of our understanding, be *considered by us*--if we are to conceive the possibility of their production--as having been produced designedly and as ends, . . . (CJ 405-6)[43]

We saw earlier that reason must be satisfied in knowing the necessity of *all* forms of nature even if that simply meant that reason must be able to become aware of the *origin* of such forms. We now see that reason does become aware of the origin of the teleological forms of nature by analyzing the concept of an "end." In discovering this origin, reason is satisfied. The origin of the teleological form of an organism is in our reason (specifically, reflective judgment) which necessarily makes use of a (teleological) idea (Idea #1) of a being which possesses "a different type of causality from that of physical laws,"[44] i.e., a ". . . causality

according to conceptions that is adequate for such a product [as an organism] . . ." [Idea #2].[45]

How then is this relevant to history? Kant makes it clear that reflective judgment is necessary for beings with our particular constitution in judging the world. He has told us, concerning organisms, that we *must* judge parts of nature such that we view them as ends. Further, he says:

> . . . we must at least try this maxim of judgement also on nature as a whole, because many of its laws might be discoverable in the light of this maxim which otherwise . . . would remain hidden from us.[46]

In judging the whole of nature reflectively, i.e., as a designed end, the question naturally arises, "For what end does nature itself exist?" It is here that Kant claims that it is *man alone* who is the "*ultimate end* [my emphasis] of nature, and the one in relation to whom all other natural things constitute a system of ends."[47]

We have seen earlier that the history of mankind is to be viewed as the realization of nature's *ultimate* end or secret plan. We now see what this end is, namely to produce a being that will "make himself human," i.e., *make himself*, through his moral actions into a *final* end. History, then, is the story of *man making himself into a final end* with the aid of nature (in that she promotes him as her own ultimate end). It is because man is the only being on earth that possesses understanding and, therefore, the only being that can set ends before himself by choice, that he is the ". . . titular lord of nature, and, supposing we regard nature as a teleological system, he is born to be its *ultimate* [my emphasis] end." (CJ 434)

Kand did not, however, believe that man comes into the world with reason and moral qualities in him full-blown. Instead, he believed that

man must "make" himself into a rational and moral creature.[48] Man does this with the aid of nature, but it is nature's job to prepare man to become self-sufficing and independent of nature. Nature does this by producing in man a certain aptitude. It is precisely this aptitude ". . . for any ends whatever of his own choosing, consequently of the aptitude of a being in his freedom, [which] is [man's] culture." (CJ 431) It is through culture, then, that nature helps man bring about his own freedom and thus allows him to become a *final* end.

We can begin to see how the "moral" teleological element makes up the "other aspect" of Kant's philosophy of history. This moral element has its locus within the notion of a "final" end (as opposed to an "ultimate" end). A *final* end is one which does not require any other end as a "condition of its possibility," it is unconditioned, i.e., it is dependent upon no conditions other than its own "idea." An *ultimate* end, on the other hand, is dependent on other conditions, i.e., other "natural" things. For example, although man is the ultimate end of nature *as an end*, he nevertheless *depends upon* nature. This is not the case with final ends.

Now there is only one being in the world, Kant tells us, which can determine ends for itself *unconditionally*, and that being is man.

> He is the only natural creature whose peculiar objective characterization is nevertheless such as to enable us to recognize in him a supersensible faculty--his freedom--and to perceive both the law of causality and the object of freedom which that faculty is able to set before itself as the highest end--the supreme good in the world.[50]

Therefore, man as noumenon, i.e., as a member of the intelligible world, is an absolute end in himself (which is again to say that he is a final end). He is this because, as the only rational creature on earth, he possesses *will* (i.e., practical reason) which Kant defines as a kind of free

causality. As Paton puts it, "To describe such a will as *free* would be to say that it can act causally *without* being caused to do so by something other than itself."[51]

It is having this property of "free will," then, which allows us to view man and only man as the "final" end "to which nature is teleologically subordinated." (CJ 436). Because of free will, man acts purposively and yet without the force of any condition other than his own idea. It is in history, as opposed to nature, that man himself determines the conditions for his actions, and this, for Kant, means that man, by acting in accordance with only his own idea, makes himself human in the process. Kant tells us, e.g., ". . . Man is destined by his reason to live in a society with men and in it to *cultivate* [my emphasis] himself, to *civilize* [my emphasis] himself, and to *make* [my emphasis] himself *moral* [my emphasis] by the arts and sciences."[52]

The historical process, then, is a *moral* process precisely because it is founded upon the notion of a different kind of causality, i.e., a free, unconditioned causality which Kant thinks of as action in accordance with an "idea." If man had no such *will*, he could not act from his own idea and would then, like nature, forever depend upon prior conditions. Therefore, he would not be thought of as a "final" end. This is why Kant tells us in his essay "Conjectual Beginning of Human History" that history was possible, i.e., precisely because man had a (free) will and with it made himself free of nature as soon as:

> . . . reason began to stir. He stood, as it were, at the brink of an abyss. Until that moment instinct had directed him toward specific objects of desire. But from these there now opened up an infinity of such objects and he did not yet know how to choose between them. On the other hand, it was impossible for him to return to the state of servitude (i.e., subjection to instinct) from the state of freedom, once he had tasted the latter.[53]

(I shall not here enter into the intricate relationships among the good will, duty, freedom, and the categorical imperative. Suffice it to say that, for Kant, morality (The Good) depends absolutely on this notion of "will," for as he says, "It is impossible to conceive of anything at all in the world, or even out of it, which can be taken as good without qualification, except a good will."[54])

We may here say in summation that it is because man can become a rational being and has "practical" reason, i.e., a will, that he is not totally subject to conditions imposed by nature. Therefore, man operates by a different kind of causality, namely freedom. For history to be possible, there must be a creature who is *both* the *ultimate* end of nature and a *final* end in himself. There is such a creature, Kant tells us--man. We are able to come to see that man is an ultimate end of nature *because* we are able to judge nature as a teleological process. We are able to come to see that man is an end in himself *because* we can judge him as a teleological and a moral (final) end. History, then, is the story of man's becoming a final end. The notion of end, however, as we have seen, depends upon there being a "special" kind of judgment, i.e., a "reflective" judgment which allows for teleological judgments in the first place.

Before turning now to the final section of this chapter, i.e., the construction of a Kantian answer to the question "How is history as a pure science possible?", I wish to comment upon one last notion and its relation to history, namely Kant's notion of "self-making."

Making and Self-Making

Michel Despland in his book *Kant on History and Religion* has pointed out that there is a difference for Kant in our knowledge of nature

and our knowledge of history. He says:

> Our knowledge of nature, helped by regulative ideas, is seen as an ongoing process: but the substratum for that knowledge is not seen as an ongoing process (or the question as to whether the substratum, or better, the things in themselves are in the process of becoming is not raised because it cannot be raised in the context of the Kantian system). Such is not entirely the case with history. *We make what we subsequently come to know* [my emphasis] (or at least participate in the making of it), *and that we make it is morally very important* [my emphasis].[55]

I believe Despland is correct in his observation, and I should like to develop his remark with the following comments. For Kant, nature is known, or at least,knowable, because we "make" it. However, our knowledge of the kind of making that goes on in the world of nature is not seen to have any *direct* moral implications. This is because the philosophy which explains how "natural" objects are "made" (i.e., the critical philosophy of the first Critique) in no direct way entails the notions of "self-making" and "self-knowing."

On the other hand, when this same critical philosophy turns its attention to the *historical* world and attempts there to give an account of the "object" of history (i.e., man), the notions of "self-making" and "self-knowing" are brought straight to the surface. It is *these* notions, then, i.e., self-making and self-knowing, that mark out the difference between natural and historical knowledge.

Kant made it quite clear in the *Critique of Pure Reason* that the objective of the "critical philosophy" was, ". . . to secure for human reason complete satisfaction in regard to that with which it has all along so eagerly occupied itself, though hitherto in vain."[56] The first Critique was a "tribunal" by whose institution the task, namely ". . . that of self-knowledge" (Axi), was to be finally achieved. By understanding how it is

that knowledge of nature is possible, e.g., geometry and physics, man comes to understand himself. That is when man "makes" nature and can, therefore, come to have knowledge of nature, he also, in seeing *how* he "makes" nature (via the critical philosophy), at the same time gains knowledge of his own capacities and limits. This, for Kant, is one sense of "self-knowledge."

However, man also "makes" history, and here too self-knowledge is involved, although in an altogether different sense. We have seen that the "making" of history is a twofold process. *First*, it is because man has made nature and made it purposeful that it becomes possible for him to discover a "regular movement in the appearances of the play of freedom of the human will at large." That is, because of these conceptual "makings" (i.e., determinative and reflective judgment), it becomes possible for there to be such a thing as history. In this sense history is possible because reflective judgment allows nature to be seen as purposeful and man to be viewed as a final end. Now it is because history is possible in the above sense that man can come to see himself, when viewing history "at large," *as a historical agent* whose actions make a difference to his own *nature*. As a *historical agent*, man "makes" history, and *this* sense of "making" is different from that discussed above. Further, the "self-knowledge" gained from this second sense of "making" history will also be different. This "sense" may be thought of as a kind of "practical making" and so too the "self-knowledge" gained from it. In giving a "philosophical" account of how history is possible, Kant has thereby shown how its object (i.e., man) comes to be viewed as a being who has, *through his actions*, "made" himself into what he is. As Emil Fackenheim puts it, for Kant, "historiography investigates what he [man] has made of himself. The past achievements of freedom, as much as its present possibilities and actualities, escape the reach of natural laws."[57]

In his "Conjectural Beginnings of Human History" Kant pointed to this difference between history and nature. Only in history does *man make himself* into a cultured being quite independent of, and at times "in opposition to" nature. This is not to say that history somehow represents the good while nature represents the bad, for Kant in fact held just the opposite view.[58] It is simply to say that the meaning of historical activity is qualitatively distinct from the meaning of natural activity. It is in history and not nature that man attains culture and morality. It is also in history and not nature that human strife, fear, anxiety, war, and responsibility reside. Because of his power of reason, man leaves the "womb of nature" to succumb to the fate of his own self-making. This is

> . . . an alteration of condition which is honorable, to be sure, but also fraught with danger. For nature had now driven him from the safe and harmless state of childhood--a garden as it were, which looked after his needs without any trouble on his part (3:23)--into the wide world, where so many cares, troubles, and unforseen ills awaited him. (p. 59 Conj Beg)

Hence, history is the story of man *in his distinctness from* nature *making himself* human. The knowledge that is gained from history will therefore also be a distinct kind from that of natural knowledge in that it will be a different kind of self-knowledge. Instead of the self-knowledge gained simply by an awareness of one's limits and capacities, in history man instead acquires knowledge of the origins and development of his *own "self-made" humanity*.

History is then distinguished from nature by Kant by being the locus for the origin of humanity, i.e., the origin of man's own self-making. It is in this manner that Kant solves the "problem" of history (i.e., whether history is a moral or physical process and what the answer to this question implies for man). History is to be seen as *both* a natural

and a moral process. In viewing history from this perspective, Kant develops a concept of man as a self-making, self-actualizing, autonomous being who, with the aid of nature, develops his own humanity. Kant holds that accomplishing this development will necessitate the guarantee of certain fundamental rights in local and world governments. For example, it is necessary that institutions which guarantee man's liberty and survival be established if man is to accomplish his task of self-development.

History demonstrates that man "makes" himself civilized, moral, and thereby human. Finally, in showing this, history gives man a "practical" self-knowledge which again points to a quanlitative difference between knowledge of nature and knowledge of history. This is the reason for Despland's remark that it is morally important to Kant that we "make" history. Only in the historical process, which is a "self-making" process, can man gain knowledge of the origins of his humanity. Since the critical philosophy has been established that only by knowing the *origins* of objects is knowledge finally possible, it follows that only in the area of historical knowledge is knowledge of *man* possible. Therefore, genuine "self-knowledge" is possible only in historical knowledge.

History as an A Priori Science

I should now like to conclude by constructing a general Kantian answer to the question, "How is history as a science possible?" Such a construction is important in that it will help to establish the epistemological roles played by the concepts of maker's-knowledge and teleology in Kant's philosophy of history. It is my view that these concepts are *epistemologically basic* to Kant's philosophy of history, which is to say that without seeing how they function, we shall fail to understand it philosophically.[59]

Kant's answer can be divided into three steps. *First*, having come to the conclusion that there is such a thing as history and that it displays the process of man making himself human, we ask in the manner of the other Critiques, How is it possible as a science?[60] We find that this question, translated into Kantian language, is really asking, "What are the epistemological grounds for truth and certainty in the area of history?" The answer to this question can only be discovered by tracing out the *origin* of the necessity that is contained in historical judgments. This is because ". . . we have complete insight only into what we can make and accomplish according to our conceptions."[61]

Second, we next discover that the possibility of science of nature actually rests upon *our own understanding* in that, through judgment, we constitute the objects of nature in a "law-like" fashion. Further, in our need to systematize the particular laws of nature and account for our peculiar experience of organisms, we "judge" nature teleologically as well as mechanistically and find that the "teleological necessity" involved in nature as a whole *also* has its origin "in us." From this we conclude that the truth and certainty are epistemologically grounded in a "maker's-knowledge criterion," i.e., that the "maker's-knowledge criterion" is really the logic of nature since it is the "logic of truth."[62]

Third and finally, we show that history as a science is possible by using the same strategy that allowed us to see how a science of nature was possible. That is to say, we attempt to show that there are synthetic a priori truths of history, the necessity of which can only be accounted for in terms of the epistemological concepts "maker's knowledge" and "teleology." We would then see that Kant's "maker's-knowledge criterion" performs *two*

important functions. First, it provides the epistemological basis for a mechanistic science of nature. Second, it provides the basis for a useful analogy (i.e., "God-man maker's-knowledge analogy") which in turn provides the basis for a teleological view of nature. It is this teleological view of nature that makes it possible for history to be a science.

Concerning the second teleological view, we have seen that it is *reflective judgment* that grounds that view of nature and thus also grounds our teleological view of *man*. Such a view of man is absolutely essential to a science of history because *only a teleological explanation* of man's action ("in the large") will account for the element of certainty that every science (including history) requires. Finally, the question arises, "Upon what principle is reflective judgment to be based?" Kant answers:

> . . . as universal laws of nature have their ground in our understanding, which prescribes them to nature (though only according to the universal concept of it as nature), particular empirical laws must be regarded, in respect of that which is left undetermined in them by these universal laws, according to a unity such as they would have if an understanding (though it be not ours) had supplied them for the benefit of our cognitive faculties, so as to render possible a system of experience according to particular natural laws.[63]

It is by means, then, of an analogical argument that Kant accomplishes his task. By arguing that we must assume that there is an understanding *like ours* in the respect that it knows only because it makes and *unlike ours*, in that in knowing it thereby brings about the existence of the actual being via intellectual intuition, we account for teleology in nature. With this line of argument Kant claims that teleological explanation is the indispensable kind of explanation for a science of history. Teleological explanation, it will be remembered, was seen as *indispensable* for natural science in its study of organisms and in its general unification of particular

empirical laws. This kind of "explaining" was accomplished by making use of "*theoretical* reflective judgment" which itself was in principle based upon the assumption of an intelligent world cause. All of this was involved in Kant's notion of a "physical" teleology. On the other hand, he argued that there must *also be* a "final" end of nature as well as an ultimate end. Here only "*practical* reflective judgment" could judge *man* to be the *sole* candidate for this office. The reasoning was that only man (on earth) is a rational creature and that, therefore, only he has that unconditioned property that allows him to set ends for himself, namely an autonomous will. In this way Kant introduces his notion of "moral" teleology. This notion also requires the assumption of an intelligent *world cause* and adds that it must be a *moral cause*. It (God) must be moral if man is to be judged as a final end of nature; for if it were not, then man would abandon his pursuit of the moral law and thereby cease to exercise his good (autonomous) will, ceasing thereupon to be a final end.[64]

How, then, is history possible? We have said that history is the story of man "making" himself human. Further, to see history as such a story we require the use of a "maker's-knowledge criterion" of truth and a concept of teleology. Maker's knowledge allows the possibility of nature and, by way of analogy, a non-human intelligence which has created a teleological world. Teleological judgment allows us to have certainty in our explanations of history. Moreover, it is *moral* teleological judgment that allows for the possibility of a priori truths of history. This is to claim that teleological, reflective judgment, once it has passed *out of the area of mere nature* and into the area of history, becomes a *constitutive* judgment.[65]

It becomes clear that, on Kantian principles, only if constitutive judgments can be "made" in history can history be possible as a science. This is because only constitutive judgments, in the Kantian system, account for the actual necessity of appearance. Hence, the construction of a Kantian answer to the question, "How is history as an a priori science possible?" must in the end show that constitutive judgments are possible in the area of history, as they were in geometry and physics. Kant never argued this. Yet this is precisely what is suggested to us when we examine his epistemic notions of maker's knowledge and teleology in relation to history. Further, this is precisely what was suggested to philosophers of the nineteenth and twentieth centuries in their attempts to demonstrate that history is a science and, in some cases, *the* science. (I have in mind such philosophers as Hegel, Dilthey, Croce, Gentile, and Collingwood.)

For Kant (in *our* construction) history as a science is possible only if two conditions are met: *first*, we can have historical knowledge only if we "make" the object of that knowledge. This "historical" knowledge will be different from that of natural knowledge in that the "object" of our knowledge is (moral) man and so the "making" of the object ends up being a self-making resulting in a (special) self-knowledge.[66] *Second*, we can have historical knowledge only if we can judge *nature* in a *theoretically* teleological reflective way and *man* in a *practical*, teleological, reflective way. In so doing, we can then establish the a priori conditions (i.e., Kant's nine theses) by which it can be shown that man's history as the "final" end of creation is the story of his making himself human.

Of course, there is a sense in which this whole question of the possibility of the "science" of history is, for Kant, moot. Kant never

raised the issue. However, if *we* raise it and construct an answer on Kantian grounds, I am confident that the paradigm for the "science" of history would *not* be that put forth in the first Critique. It would, instead, involve the construction of a *new paradigm*, involving *the constitutive use* of concepts such as maker's knowledge and teleology *in the area of history* thus, in effect, offering a "new science."

NOTES AND REFERENCES

[1]". . . systematic unity is what first raises ordinary knowledge to the rank of science, . . ." A832/B860 C Pure R.

"The unity of the end to which all the parts relate and in the idea of which they all stand in relation to one another, . . ." (Ibid.)

". . . but make this systematic unity of nature completely *universal*, . . . For we then treat nature as resting upon a purposiveness, in accordance with universal laws, from which no special arrangement is exempt, however difficult it may be to establish this in any given case. We then have a regulative principle of systematic unity of teleological connection." (A691/B719 C Pure R.)

[2]Idea for a Universal History, p. 20. It is important to note that Kant thinks of "idea" in the above essay in a technical sense, which he makes clear in the *Critique of Pure Reason*, A313/B370. As Beck explains it: "Kant takes the word 'idea' from Plato, though he does not ascribe metaphysical reality and power to ideas, as Plato often did. An Idea for Kant is like Plato's idea, however, in being a conception for which no experience can give us an exemplar, yet a conception which is not arbitrarily constructed by the imagination . . . Kant believed that they [the Ideas] were necessary for the guidance of our theoretical knowledge and practical or moral experience, holding before us an unrealized systematic goal for our piecemeal dealings with particular problems." (Pxlx-xx, Introduction to Kant's *On History*)

[3]Critique of Judgement (427) (hereafter referred to as CJ).

[4]CJ (429).

[5]Idea for a Universal History From A Cosmopolitan Point of View, p. 11. (hereafter referred to as "Idea").

[6]"This alone remains as what nature can effect relative to the final end that lies outside it, and as what may therefore be regarded as its ultimate end. The production in a rational being of an aptitude for any ends whatever of his own choosing, consequently of the aptitude of a being in his freedom, is *culture*. Hence it is only culture that can be the ultimate end which we have cause to attribute to nature in respect of the human race." (431)

[7]Idea, p. 12, first thesis.

[8]Idea, p. 13, second thesis, also see p. 18. ". . . it may be with the dwellers on other planets and their nature . . . that each individual can perfectly attain his destiny in his own life. Among us, it is different; only the race can hope to attain it." (p. 18, Idea, footnote #2)

[9]On the other hand, one should not assume that *simply* because history in the second sense is "moral," that *therefore* it is somehow better than the natural history which precedes it. In fact, Kant explicitly states that "The history of nature therefore begins with good, for it is the work of God, while the history of freedom begins with wickedness, for it is the work of Man." (Conjectural Beginnings of Human History, p. 60). However, Kant does seem, in not clearly distinguishing, to confuse history with natural processes. We shall return to this point later in the chapter.

[10]It is to be noted that Kant in his philosophy of history is not accusing the workaday historian of not doing his job correctly merely because he has not come to the same conclusions about history that Kant himself has. Vico, on the other hand, takes the historian to task on precisely this point; see, e.g., #140 *The New Science*, where he says that the historians have ". . . failed by half in not taking care to give their authority the sanction of truth by appeal to the reasoning of the philosophers." Kant states quite clearly "That I would want to displace the work of practicing empirical historians with this idea of World History, which is to some extent based upon an a priori principle, would be a misinterpretation of my intention. It is only a suggestion of what a philosophical mind which would have to be well versed in history could essay from another point of view. " (Idea, p. 25)

[11]Idea, p. 12.

[12]Idea, p. 15.

[13]Idea, pp. 15-16.

[14]R. G. Collingwood, *Idea of History*, p. 98.

[15]Idea, p. 15.

[16]Ibid.

[17]Ibid.

[18]Idea, p. 16, fifth thesis.

[19]Idea, p. 17.

[20]Idea, p. 18. A problem of circularity arises here, for on the one hand we are led to believe that man can become a cultured and moral being only if he leaves the state of nature and civilizes himself by means of society,

the state, etc. On the other hand, it seems that a "good will" is a necessary condition for there to be a state such that man could exist for a length of time long enough to civilize himself. The "good will" seems to presuppose the state, while the state seems to presuppose the "good will."

[21]Idea, p. 19, seventh thesis.

[22]Idea, p. 20.

[23]"The problem of establishing a perfect civic institution is dependent upon the problem of a lawful external relation among states and cannot be solved without a solution of the latter problem." (Idea, p. 18, seventh thesis)

[24]Idea, p. 21, eighth thesis.

[25]"It can serve . . . for giving a consoling view of the future (which could not be reasonably hoped for without the presupposition of a natural plan) in which there will be exhibited in the distance how the human race finally achieves the condition in which all the seeds planted in it by nature can fully develop and in which the destiny of the race can be fulfilled here on earth." (Idea, p. 25)

[26]Idea, p. 23, ninth thesis.

[27]Actually, it is the "Idea" of nature having a plan, and thus allowing the possibility of history, that is important to Kant, as opposed to the factual knowledge of all of the workings of nature's plan. "Even if we are too blind to see the secret mechanism of its workings, this idea may still serve as a guiding thread for presenting as a system, at least in broad outlines, what would otherwise be a planless conglomeration of human actions." (Idea, p. 24)

[28]Idea, p. 12.

[29]Idea, p. 25.

[30]We shall, in this section, be examining the ideas contained in the Appendix of *The Critique of Judgement*, specifically sections 79-86 (section 83 being the particular section that deals with history). The Appendix titled "Theory of the Method of Applying the Teleological Judgement," together with the "Idea for a Universal History" and "The Conjectural Beginning of Human History," are the most important of Kant's writings on history.

[31]CJ (426-427).

[32]CJ (369-70).

[33]". . . where the representation of an effect is at the same time the ground determining an *intelligent efficient cause to its production* [my emphasis], the effect so represented is termed an *end* [my emphasis]." CJ (426)

[34]This is yet another important parallel between Kant and Vico, i.e., the respective methods are employed by each philosopher for satisfying reason and thereby achieving truth, the "genetic" method, the search for origins. (See, e.g., Vico's *The New Science*, paragraphs #147-50.)

[35]Kant states the principle on which the intrinsic finality in organisms is estimated as "an organized natural product. . . one in which every part is reciprocally both end and means." (CJ 376)

He goes on to say that "in such a product nothing is in vain, without an end, or to be ascribed to a blind mechanism of nature." (Ibid.)

[36]"But if a thing is a product of nature, and in this character is notwithstanding to contain intrinsically and in its inner possibility a relation to ends, in other words, is to be possible only as a physical end and independently of the causality of the conceptions of external rational agents, then this second requisite is invalid, namely, that the parts of the things combine of *themselves* into the unity of a whole by being reciprocally cause and effect of their form." (CJ 373)

[37]See beginning of Chapter III.

[38]See, e.g., CJ 402-6.

[39]CJ 402-3.

[40]CJ 373.

[41]"But so far as the possibility of a thing is only thought in this way [i.e., that it must be determined by an idea external to the thing], it is simply a work of art." (CJ 373)

[42]As J. D. McFarland puts it, ". . . organisms seem to him [Kant] to depend on some notion of what they were intended to be, and he can deal with this future reference only by retaining the notion of an intention and making it the possible cause of the organism." (*Kant's Concept of Teleology*, p. 104)

"What the organisms *are to be* seems to determine in some way the lines along which their parts develop; . . . consequently, the only course open to him was to appeal to a *possible* intention in the mind of a *possible* being who knew what organisms were to be and so arranged things that they would develop inevitably in that direction." (Ibid., p. 106)

McFarland's account is somewhat misleading, however, in that it is essential to Kant's thesis that the idea or "intention" of the organism, that is its cause, must not in any way be *external to* the organism. Therefore, the idea must be such that *in the very act of being thought* (in this case being intuited, intellectually), it thereby brings the organism into existence. Since *our* ideas cannot do this, there must be a non-*human* intelligence which does it. This, then, is the meaning of the principle upon which reflective judgment is, and must be, for Kant, grounded, i.e., a "God-man maker's-knowledge analogy." See, e.g., CJ 180.

[43]CJ, 405-6

[44]CJ 408.

[45]CJ 373.

[46]CJ 398.

[47]CJ 427.

[48]Kant asks, e.g., "Where in man at any rate are we to place this *ultimate end* of nature?" He [Kant] says that happiness cannot be the ultimate end because happiness is "a mere idea of a state, and one to which he [man] seeks to make his actual state of being adequate under purely empirical conditions--an impossible task . . . his [man's] own nature is not so constituted as to rest or be satisfied in any possession or enjoyment whatever." (CJ 430)

To discover man's ultimate end, therefore, we must ". . . seek out what nature can supply for the purpose of preparing him for *what he himself must do* in order to be a final end, and we must segregate it from all ends whose possibility rests upon conditions that man can only await at the hand of nature." (CJ 430)

[49]CJ 431.

[50]CJ 435. Now the connection between nature, teleology, and history becomes more evident. For nature to establish its ultimate end, i.e., culture, it requires a civic constitution so that man's freedom will not be abused, a civic community in the form of a cosmopolitan whole, which will discourage all states from acting injuriously to one another, etc. (CJ 432-3)

[51]H. J. Paton, *Groundwork of the Metaphysics of Morals* (New York: Harper Torchbooks, 1964), p. 41. Kant puts it this way: "Will is a kind of causality belonging to living beings so far as they are rational. *Freedom* would then be the property this causality has of being able to work independently of *determination* by alien causes; just as *natural necessity* is a property characterizing the causality of all non-rational beings--the property of being determined to activity by the influence of alien causes." (Groundwork, p. 114)

[52]*Anthropology*, trans. Mary J. Gregor (Martinu/Nijhoff Press), p. 186 (325). Also see Idea, p. 13, the Third Thesis: "Nature has willed that man should, by himself, produce everything that goes beyond the mechanical ordering of his animal existence, and that he should partake of no other happiness or perfection than that which he himself, independently of instinct, has created by his own reason."

[53]Conj. Beginning (112), p. 55.

[54]Groundwork, p. 61.

[55]Michael Despland, *Kant on History and Religion* (Montreal-London: McGill Queen's University Press, 1973), Chapter III, p. 59.

[56]*Critique of Pure Reason*, A856/B884 (Also see Axi).

[57]*Kant's Concept of History*, Kant-Studien #48, 1957, pp. 381-98 (p. 385).

[58]*Conjectural Beginning of Human History*, p. 60.

[59]Kant says, e.g., when speaking of the principle of reflective judgment, that we *must* assume that a non-human (maker's-knowledge) intelligence accounts for teleology in nature. This assumption is ". . . the epistemological basis upon which the systematic unity of the form and combination of all the manifold contained in the given matter becomes cognizable for the person estimating it." (CJ 373)

[60]It should be re-emphasized that we are here *assuming* that history is a science for the purpose of constructing a Kantian answer as to its possibility. This is in the same manner as Kant stated the question for the other sciences. He says, "How is pure mathematics possible? How is pure science of nature possible? Since these sciences actually exist, it is quite proper to ask *how* they are possible; for that they must be possible is proved by the fact that they exist." (*Critique of Pure Reason* B20-21)

[61]CJ 384. Necessity is then found in the Understanding. It is the job of Reason to investigate the Understanding, thereby determining the *origin* of its laws and coming to satisfaction concerning its inquiry. "The understanding is an object for reason, just as sensibility is for the understanding. It is the business of reason to render the unity of all possible empirical acts of the understanding systematic." (A664/B692)

". . . these rules of understanding are not only true *a priori*, but are indeed the source of all truth (that is, of the agreement of our knowledge with objects), inasmuch as they contain in themselves the ground of the possibility of experience . . ." (B296/A2347, also see A63)

"The law of reason which requires us to seek for this unity, is a necessary law, since without it we should have no reason at all, and without reason no coherent employment of the understanding, and in the absence of this no sufficient criterion of empirical truth." (A652/B679)

[62]*Critique of Pure Reason* A62/B87.

[63]CJ 180.

[64]It is important to note that Kant is *not* saying that men should be moral, or are moral, merely because they will receive immortality from the hands of a just and moral God. He is saying, instead, that if there were no *moral* God then man could ". . . never expect to find in nature a uniform agreement--a consistent agreement according to fixed rules, answering to what his maxims are . . . Thus the end which this right-minded man would have, and ought to have, in view in his pursuit of the moral law, would certainly have to be abandoned by him as impossible." CJ 452.

[65]It may be that it is constitutive even in the area of nature, i.e., in our experience of organisms. This is left unclear by Kant. In any case it is clear that ". . . once the question touches practical matters, a *regulative* principle of this kind--one for providence or wisdom to follow--which directs us to act in conformity with something, as an end, the possibility of which, by the frame of our cognitive faculties, can only be conceived by is in a certain manner, then becomes also *constitutive*." (CJ 457)

[66]For a superb paper on the notions of history, self-making, and self-knowing, see Emil L. Fackenheim's *Metaphysics and Historicity*, The Aquinas Lecture, 1961.

CHAPTER V

COMPARISON AND CONTRAST

In this chapter I should like to compare and contrast some of the major points of Vico's and Kant's philosophies of history. I wish to do this in order to investigate more carefully their parallel development. This comparison has two objectives: (1) to show the fundamental differences of these two philosophies of history, and (2) to show the similarities of these philosophers' views on history due to their similar epistemological commitments.

There are in English only two papers which explicitly give a general comparison of Vico's and Kant's theories of knowledge. One is a paper by Eugene T. Gadol, "The Idealistic Foundations of Cultural Anthropology: Vico, Kant, and Cassirer," *Journal of the History of Philosophy*, 12 (April 1974):20-25. The other is a paper by Nathan Rotenstreich, "Vico and Kant," in *Giambattista Vico's Science of Humanity*, ed. Giorgio Tagliacozzo and Donald Phillip Verene (Baltimore, Maryland: The Johns Hopkins University Press, 1976).

As can be seen from the title, Gadol's paper includes a section on Cassirer and, therefore, is not exclusively devoted to a comparison of Vico and Kant. Nevertheless, Gadol has several important things to say concerning Vico, Kant, and our topic. Rotenstreich's paper, on the other

hand, goes directly to the heart of the matter by focusing on issues particularly relevant to our study.

My strategy in this chapter is twofold. First, I shall compare and contrast Vico's and Kant's views on the various points which Gadol and Rotenstreich take up in *their* papers. In this way, while I shall be able to offer my reasons as to why Vico and Kant hold either similar or *dissimilar* views in their respective philosophies of history, I shall at the same time be able to comment upon the merits of Gadol's and Rotenstreich's comparisons. Second, continuing the comparison, I shall offer some comments on Vico's and Kant's use of teleological explanation in their respective philosophies of history (which Rotenstreich and Gadol have not addressed themselves to).

Gadol

Let us begin with Gadol's paper. Gadol speaks to at least three important related points of special interest to our topic (maker's knowledge and teleology in Vico's and Kant's philosophies of history). *First*, he recognizes that *both* Vico and Kant use a "maker's-knowledge criterion" of truth which he refers to as the "dictum." *Second*, he points out that both philosophers rely upon the dictum to ground mathematics and physics. In fact, Gadol's strategy in his paper is to point out the *differences* between Kant and Vico by showing how the dictum is used differently by each philosopher in his application of it to geometry, physics, and history. *Third*, Gadol argues that Vico makes use of the dictum to attempt to ground history "metaphysically" and that Kant (while like Vico in reading history teleologically, was nevertheless unlike Vico in that he) took knowledge of history to be unadulterated with metaphysics or theology. Following Gadol's explanations, I shall comment on each of these three points.

Gadol begins by telling us that the central doctrine which Vico and Kant share is "Verum et factum convertuntur--to really know a thing, it is necessary to create or generate it. (This idea we shall henceforth call the *dictum*.)"[1] It is this central doctrine or "dictum," then, that Gadol feels provides the necessary link between Kant and Vico concerning "the nature of human creativity."[2] However, although both Kant and Vico see the dictum as central to their respective theories of knowledge, they nevertheless make quite different things of it.[3] These differences, Gadol argues, concern each philosopher's views of geometry, physics, and perhaps history.

We have seen in Chapters I and III that both Vico and Kant believe that it was only by making use of a "maker's-knowledge criterion" (Gadol's dictum) that one could justifiably answer the sceptic.[4] It is Gadol's view that:

> Vico simply *used* the dictum (1) to justify his sceptical conclusions regarding the possibility of genuine mathematical or physical knowledge, and (2) to ground or legitimize the claims of history as a genuine science. Kant [on the other hand] asked for its *meaning*. He offered a critical analysis of it for the first time in the history of ideas, and this for exactly the opposite reason: to demonstrate that the only knowledge we have (in the strictly scientific sense of "knowledge") is mathematics and physics.[5]

Gadol believes that Vico is really a *sceptic* when it comes to knowledge in the areas of mathematics and physics and that it is only in history that Vico leaves his scepticism and sees, because of the dictum's acceptability there, that genuine knowledge is really historical knowledge. Gadol says that although mathematics teaches appreciation of "delicate ideas of lines of geometry and numbers, . . . mathematics is not [for Vico] a genuine science." Further, Vico's

> . . . theory of metaphysical points sustaining matter had to make the world of physics a mirage. Vico's substantial concept of bodies, coupled with his notion of a transcendent conation which supports and moves them, led inevitably to scepticism as regards the possibility of obtaining real physical knowledge.[6]

In the area of history it turns out that Vico is not sceptical because he correctly observes that the dictum perfectly applies to:

> . . . one vital and complex insight: that the nature of man, as revealed in the common nature of nations, is to be understood only *via* an understanding of the growth and development of man's indigenous institutions.[7]

Man can have knowledge of history precisely because man had "made" the institutions which history is the story of. However, and this I take to be Gadol's major point, Vico does not really understand the *meaning* of the dictum with which he attempts to justify *even historical knowledge*. Vico:

> . . . needed the dictum and employed it without giving further thought to the problem of its metaphysical justification. He simply makes use of it without more explicit and detailed defense, save for declaring the poetry and myths of the ancients to have structures that we can really know.[8]

It is only with Kant and the "critical" philosophy that the real meaning of the dictum becomes clear because it is only with the critical philosophy that a distinction is drawn between phenomenon and noumenon, thus solving the seemingly insoluble realist problems of knowledge. Vico, Gadol argues, was then not only sceptical but also dogmatic. Vico asserted the creativity of man and the superiority of historical cognition over natural scientific or mathematical in a purely dogmatic fashion *as indeed he had to*, for the Copernican revolution which Kant was to introduce into philosophy and which was to critically justify a doctrine of creativity was still some years away. All pre-critical (pre-Kantian) formulations of the problem of knowledge were dogmatic in the sense that they entailed a

fundamental and *unquestioned* commitment to realism: a belief in the substantival existence of a subject (the knower) and its object (the known).[9]

Finally, when it comes to history, the application of the dictum by Vico results in a "metaphysical" grounding of history. For Kant, on the other hand, in his use of the ductum, "Knowledge of history as well as natural science is "possible" without metaphysics or theology."[10] Nevertheless, Gadol tells us that Vico and Kant share the notion of man's progress in history from mythos (poetry) to logos (reason). Yet for Vico, this progress is conceived as providential while for Kant it is thought of as natural.[11] This is not to deny that Kant holds that history should be read as teleological in character and that its meaning "constitutes the self-development of man's spirit . . ."[12]

What we are to say of Gadol's comparisons? First, he is right in supposing that because the distinction between phenomen and noumenon is absent in Vico's philosophy, the application of the dictum to nature by Vico may, *in one sense*, be thought of as resulting in a "kind" of scepticism concerning knowledge of nature. Concerning *this* point, I think that Gadol is right. However, concerning *most* of his other points, I think he is simply mistaken, and I shall comment *on three in particular*. But first, let us return to the first point about which Gadol is right.

The "kind" of scepticism mentioned above that Vico is guilty of is the kind that results from the belief that knowledge of nature can never be *absolutely certain* (as opposed to geometry and history which can be). Gadol is correct in pointing out that Vico did not see how the dictum could apply to "objects" in such a way as to render them *totally* "made." Knowledge of nature, i.e., physics, was possible for Vico, to be sure (because

of the dictum, i.e., "our making"). However, the "making" that is done in physics is *not* the creation of objects in the Kantian sense, but rather in the Baconian sense of "constructing" hypotheses and experiments with which we could then investigate nature. (See Chapter I for a discussion of this "making" in physics.) Put simply, for Vico we are able to gain knowledge of nature only because we "make" *experiments*.

The crucial difference then (which Gadol rightly points to) between Vico's use of the dictum and Kant's in relation to nature is that for Vico we do not "make" the *objects* of nature because the objects of nature are in some sense or other already given. It is God who makes the objects of nature. For Kant, on the other hand, we do make the objects of nature in that all of the essential "formal" aspects which transform the "given" into an object *are contributed by* the subject. In other words, we can have absolutely certain knowledge of nature for Kant because (or perhaps *only* because) the dictum is applied to a world of phenomena. On the other hand, we cannot have absolutely certain knowledge of nature for Vico because (and perhaps *only* because) the dictum is applied to a world of noumena.[13]

However, in acknowledging this difference between Vico's and Kant's use of the dictum vis-à-vis nature, we should not exaggerate Vico's scepticism. This, then, is the *first* point about which I believe Gadol is in error. It is worth remembering that it was precisely *Vico's* contention throughout *De Antiquissima* (and he nowhere withdrew it in *The New Science*) that there is only one way in which one can answer the sceptic, namely by use of the dictum.[14] In *De Antiquissima* the science which resulted in *knowledge of the world of nature* and which, therefore, must be secured from sceptical attacks were precisely the sciences of geometry and physics.

Vico was *not* sceptical about mathematical (geometrical) knowledge. Mathematical knowledge is made by us and, analogously, tells us something about the way nature is shaped. Vico "justified" this view by what he called a "metaphysical" hypothesis. It is true that he believed that the truths of geometry were abstract and not "real"; however, we should not infer from this that (as we have seen in Chapter I) geometrical entities or figures do not correspond to the "real" corporeal world. The purpose of Vico's "metaphysical hypothesis" (i.e., his doctrine of metaphysical points) was to show how geometrical entities that *we* completely create *do* correspond to the "real" world which God has completely created. The objects of the real world have been generated out of God's metaphysical points *just as* the objects of the geometrical "world" have been generated out of our geometrical points. Our geometry, therefore, applies to the natural world precisely because the natural world is "made" in an *analogous* manner to that of the geometrical world.[15]

Next, when it comes to physics, here too we see that Vico's *so-called scepticism* was not a scepticism concerning whether knowledge of nature was *genuine*. This is because the test of genuine knowledge for Vico was whether knowledge could be grounded by the dictum. In other words, Vico believed that *knowledge* of the "natural" world could be justified epistemologically and metaphysically by making use of the dictum and the doctrine of metaphysical points. However, because he had to make use of the dictum in an *analogical* manner, i.e., by thinking of it in an analogous way to that of God's knowledge, he was necessarily sceptical concerning the possibility of man's *absolute knowledge* of corporeal nature.

This is to say that man could not have a certain "kind" of knowledge (i.e., absolute knowledge) of corporeal nature as God does. This is because man has not "made" corporeal nature as God did. The best man could hope for in the area of corporeal nature was *probable knowledge*, and this he could achieve by relying on the experimental method.[16] This is *not* to say, however, that probable knowledge was not *genuine knowledge*. It is, rather, to say that it was necessarily *qualified* and, therefore, *limited* knowledge.

Therefore, while it is true that Vico came to hold the view that only in *history* could we have "absolutely certain (God-like) knowledge," it is an exaggeration to infer from it that Vico was ". . . led inevitably to scepticism as regards the possibility of obtaining real physical knowledge."[17] It is simply not true that Vico is a sceptic concerning knowledge of nature. What is true is that for Vico we do not make natural objects, whereas for Kant, in some sense, we do. Vico is not a sceptic in any sense but one, namely the one which acknowledges certain *limits* concerning knowledge of nature because of our inability to create the objects of nature. (These limits do not exist in the area of history.) What Gadol fails to see is that nature cannot be known for Vico *in the way that history can*, i.e., known in the same manner as God does.[18] It is because of this *limitation* of the dictum's applicability to nature that our knowledge of nature for Vico is possible but not certain. History, on the other hand, can be known in the same manner as God knows things, and it is, therefore, absolutely certain.

The second point that I think Gadol is mistaken about is related to the first and concerns history more directly. Gadol says that:

> Vico avoids the trap of scepticism inherent in his realistic position by simple fiat. [This is an interesting choice of words on Gadol's part.] He resolves, on the basis of a shaky critique of mathematics and natural science and a strong humanistic inclination, to eschew both domains. Without fully understanding the revolutionary repercussions of his position, he simply declares that the works of *culture* are the sole works upon which cognition can rely, for they have not merely a conceptually created, ideal or abstract being, but also a determinate concrete and historical being.[19]

My comment here is that it should be clear by now that it is false that Vico was ever in danger of the "trap of scepticism," and it is equally false that he eschewed the domains of geometry and physics.

Once again, what Vico did was to argue elaborately (not merely "declare") that only history could be an *absolutely true and certain science*, i.e., a science in which *both* "real" truth and complete certainty could be obtained by man. Whether his arguments for this claim are sound is a distinct issue, but that there *are* arguments is (as we have seen in Chapter II) unquestionable.

Finally, if our study has shown anything, it has shown that it is *not* the case that Vico merely uses the dictum arbitrarily with no idea of its meaning. Nor is it the case that Vico had to make some sort of choice between knowledge of nature and knowledge of history and, upon choosing, became a sceptic concerning the former and a dogmatist concerning the latter.[20] Vico was perfectly aware of the meaning of the dictum and its use (especially since he developed it and wrote on its epistemological, etymological, and metaphysical meaning. See, e.g., *De Antiquissima*, Sansoni, pp. 62-3), and he used it for *both* nature and history. What he found in the case of history was that man could attain *absolute, real,* and *certain* knowledge where he could not in physics and geometry.

The second point then is that Gadol is simply mistaken about Vico's "dogmatism" in history and also about his (Vico's) awareness of how the dictum operates in the areas of mathematics and nature. In fact, in his *Autobiography* Vico explicitly acknowledges his awareness of what he was doing:

> By this insight [i.e., the insight that enabled him to synthesize philosophy and philology] Vico's mind arrived at a clear conception of what it had been vaguely seeking in the first inaugural orations and had sketched somewhat clumsily in the dissertation *On the Method of Our Time*, and a little more distinctly in the *Metaphysics*.[21]*

The third point I wish to comment on concerns Kant. In an almost unintelligible paragraph** Gadol claims (among other things, I suppose) that, for Kant, *knowledge of history* is possible without metaphysics or theology. (I am assuming that Gadol means by "knowledge of history" a *philosophy of history*, i.e., a rational explanation of the possibility of history both as phenomenon and as a science; just as, for Kant, "knowledge of nature" means both of these things. This is clearly what Kant had in mind in, e.g., his Ninth Thesis in *Idea for a Universal History*. "A philosophical attempt to work out a universal history according to a natural plan . . ." (p. 23) If Gadol does not mean a philosophy of history, then I fail to see the relevance of comparing Kant with Vico.) I take it, therefore, that Gadol's point is one of *contrast*, i.e., that Vico gave history a metaphysical ground and Kant did not, *within* their respective

* The *Metaphysics* is Book 1 of *De Antiquissima*.

** But if metaphysics is "impossible," i.e., illusory, what about history? In Vico's mind, history, even though it was man's creation, was in need of metaphysical grounding. By thoroughly anthropomorphizing and by critically analyzing the concept of creativity in his doctrine of the synthetic a priori, Kant not merely dispensed with metaphysics, qua ontology, but with a metaphysically oriented concept of history as well. Knowledge of history as well as natural science is "possible" without metaphysics or theology. Both turn their back on the feasibility of grounding . . .

philosophies of history. My claim, of course, is that this is false; Kant did in fact give history a metaphysical *and* a theological ground. First of all, and less importantly, terminologically speaking Kant tells us in the first *Critique* that:

> Metaphysics, alike of nature and of morals, and especially that criticism of our adventurous and self-reliant reason which serves as an introduction or propaedeutic to metaphysics, alone properly constitutes what may be entitled philosophy . . .[22]

Second and more to the substance of the issue, we have seen in Chapter IV that, for Kant, history is possible *only* if the following conditions hold: One, we must be able to judge nature as having been produced by a non-human understanding whose very *idea* of, say, an organism results in the *existence* of the organism. *Only* in this way could nature be thought of as a purposeful unity. In other words for history to be possible, we must first be able to judge nature in such a way, i.e., reflectively, that "the history of mankind can be seen, in the large, as the realization of nature's secret plan . . ."[23] This calls for a *metaphysical assumption* of an understanding analogous to ours (although non-human) which can be responsible for the idea of the *physical* teleological make-up of things.

Two, for history to be possible we must view it as part of nature's purposeful plan. This means that we must view nature's creatures, specifically man, as being able to fulfill their purposes. History is the story of *man* fulfilling *his* purpose, i.e., developing his freedom. In order to "see" man in this way, i.e., as a *final* end, a *moral* teleology is required. "We must assume a moral world cause . . . if we are to set before ourselves a final end in conformity with the requirements of the moral law."[24] Therefore, to substantiate this claim Kant offers us a *moral* proof for the

existence of God (CJ 477). This proof is designed to exhibit how ". . . from the above moral teleology and its relation to physical teleology, reason advances to theology."[25] It is only by demonstrating that it is necessary to assume a moral teleology that Kant can show how history is possible. Hence, Gadol is wrong on this third point, i.e., it is false that Kant does not make use of metaphysics and religion to ground history.

We may summarize our comments on Gadol's paper as follows: (1) We agree with Gadol that Vico does not "make" the objects of nature in the same way that Kant "makes" the objects of nature. (2) We disagree with Gadol that Kant believed a philosophy of history is possible or could be grounded epistemologically without metaphysics. Kant's ground for the principle of reflective judgment, which is the only epistemological principle that can allow *knowledge* of history, is grounded squarely in metaphysics, i.e., a non-human understanding capable of intellectual intuition. (3) Finally, in the light of these comments we can see that although it is true that Vico and Kant apply the dictum differently to nature, there is nevertheless a fundamental similarity in the development of the dictum in each of their works. For example, both use the dictum to ward off scepticism. Both use it in geometry, physics, and history. Both see it as being applied in an analogous manner to a non-human understanding which is capable of intellectual intuition. Finally, both require that we think of this non-human understanding (and its use of the dictum) as somehow *appearing in history*, thus making history possible. Let us now turn to Rotenstreich's paper.

Rotenstreich

Rotenstreich tells us that he sets out to interpret "Vico in the light of Kant and to interpret Kant in the light of Vico"[26] because of a "possible affinity" of ideas. Like Gadol, Rotenstriech believes that the

two systems obviously have in common the notion of "human creativity" but that they vary in their elaboration of this theme.

As it turns out, Rotenstreich thinks that Vico and Kant *differ much more* than they agree, and he attempts to show this by examining their views on four separate but related issues: (1) the *Cogito* of Descartes; (2) creation and transubstantiation (i.e., the notion of ontological constitution in its relation to the maker's-knowledge thesis); (3) nature and history; and (4) Bonum-ipsum-Factum (i.e., maker's knowledge and the Good).

I shall concern myself here with only two of Rotenstreich's points of comparison. This is not to suggest that there are only two points of interest in Rotenstreich's paper, for that is not the case. I limit myself to only two points simply because I consider them especially relevant to my topic: the points that concern (1) creation and transubstantiation and (2) history and nature. I shall first summarize Rotenstreich's views and then comment on each of his points in turn.

Rotenstreich begins by saying that the presentation of the Copernican Hypothesis by Kant and the emphasis he lays on the relationship ". . . between knowing anything with a priori certainty and imposing the a priori concepts on the objects, is a variation on Vico's theorem of *Verum-factum*."[27] However, although both Vico and Kant use a variation of the verum-factum thesis, Kant, says Rotenstreich, applied it to physics ". . . while Vico tried to show precisely that that applicability is precluded, and the *formula* [my emphasis] can hold good for history and not for physics."[28]

Rotenstreich goes farther in his comparison of Vico with Kant than does Gadol in that he (Rotenstreich) gives a short analysis of how the

"dictum" works for Kant and Vico vis à vis the constitution of objects. He says that although neither Kant's nor Vico's position concerning nature amounts to the creation of objects *ontologically*, nevertheless Vico's claim is that ". . . the horizon of knowledge is the horizon of created objects, the orbit of history, as against the orbit of nature . . ."[29] Rotenstreich concludes that for Vico there can be no knowledge of nature.

For Kant, on the other hand, although the spontaneity at the base of man's creativity cannot totally create the object (something uncreated must always be "given") nevertheless ". . . it still can know the objects, though they refer to data which do not stem from the "tree" of knowledge."[30] In other words for Kant knowledge of nature is possible precisely because his use of the dictum allows for a *partial* creation of "objects." (This partial creation of objects is possible for Kant because of the conception of a "unifying form" which ". . . presupposes the to-be-united, or unified, manifold."[31] This is not the case with Vico says Rotenstreich because for Vico there is:

> . . . a kind of a realistic inuendo--knowledge has to follow the objects, and it can follow them only when there is an identity of the process bringing about the objects and the process, or procedure, formulated in the knowledge of the object.[32]

For Vico, then, there is no partial creation of objects. Creation, while not ontological, is either all or nothing. In the case of nature, since it is nothing, no knowledge is possible. For Kant, on the other hand, creation is not simply all or nothing; there is *partial* creation. Although it too is not ontological, it nevertheless does allow, in the case of nature, for the possibility of knowledge. Now, it is Rotenstreich's view that this *same relationship* holds for the two thinkers in

the area of mathematics. That is to say, for Vico mathematical objects are *completely* created by us, while for Kant they are *partially* created.

Thus far, Rotenstreich's argument may be summed up as follows: Kant applied the dictum (Rotenstreich refers to it as the "formula,", p. 227) to physics, i.e., nature, thereby showing how knowledge of nature is possible. Vico showed that the application of the dictum to physics is not possible, thereby showing that knowledge of nature is impossible. The reason that the dictum makes knowledge of nature possible in the one case and impossible in the other is that in the one case Kant's *partial* creation counts as justifying knowledge, whereas in the other (Vico's) *partial* creation *does not* count as justifying knowledge.

Ultimately, Rotenstreich believes that this difference amounts to the difference between a "contextual" concept of cause, which he assigns to Kant, and an emanatist concept of cause, which is Vico's. Vico's emanatist conception is realistic in that he takes "cause" to mean "to produce existence." For Kant, on the other hand, to cause means "to be dependent within a context of events against the background of time." Since knowledge is knowledge of causes, Kant can have knowledge of objects by "making," i.e., providing the form of objects, while Vico, on the other hand, cannot because Vico cannot "make" the object, i.e., provide its form and thus bring it into existence.[33] Rotenstreich emphasizes this point. ". . . Kant presented the view, which Vico could not present, that knowledge of amorphous data is possible. Data are not known as such, but only insofar as they are integrated in formal frameworks of relations."[34]

My comment on this point made by Rotenstreich is in two parts: first, we have seen in Chapters I and II and in my comments on Gadol's

paper that Vico *does not deny that knowledge of nature is possible.* On the contrary, in *De Antiquissima* he gives us the *only condition* by which knowledge of nature (i.e., physics) can be possible, namely by showing how the "maker's-knowledge criterion" justifies an *experimental method* ("Concludiamo infine osservando che non si deve introdurre nella fisica il metodo geometrico, ma la diretta dimostrazione sperimentale . . .. In questo modo la fisica puo progredire." Sansoni, p. 124; also see p. 68). *Knowledge* of nature is possible because and only because of experiment.

What Vico denies (twenty years later in *The New Science*) is that the "maker's-knowledge criterion" will apply to nature *in the same God-like way* that it does to history. History is the *only* area, and hence the only "science," in which man can be *God-like* in achieving *absolute truth and certainty*. Upon making this discovery Vico *then* asks why the *philosopher* should waste his time trying to achieve *absolute truth and certainty* in the world of nature which, since God made it, only God could achieve (N.S., #331).

Hence, Rotenstreich has made the same error as Gadol. He has failed to see that for Vico there are actually two "kinds" of knowledge. First, there is knowledge of the natural world (i.e., geometry and physics) which is either not "real" or not certain but in any case a kind of *knowledge* argued for in *De Antiquissima* (Sansoni, p. 68). Secondly, there is "God-like knowledge," i.e., knowledge which is of *absolute truth* and, therefore, "real" and *totally certain*. This second type of knowledge can be achieved by man only in history.

The second part of my comment on Rotenstreich's point is that, although Rotenstreich does center on a crucial difference between Kant and Vico in their respective theories of knowledge of nature (i.e., that for

Kant there is *partial* creation of natural objects while for Vico there is *not*), he does so by way of what I consider to be a misleading comparison. For example, nowhere in Rotenstreich's paper does he point out that it was *only* because of Kant's doctrine of phenomenon and noumenon that the "maker's-knowledge criterion" could be applied to nature (in the way that Kant applies it), thus securing knowledge of objects. (It may be that Rotenstreich nowhere points this out because of its obviousness. Yet, when one is *comparing* two distinct applications of the dictum or formula such as Vico's and Kant's, it would seem that Kant's appearance/reality distinction would be an important difference to take notice of.) Kant, e.g., never tires of telling us that it is *only because* of his doctrine of "appearance and things-in-themselves" that knowledge of nature's laws is possible. It is precisely *because* of the doctrine of appearance that these laws *must* agree with the understanding.

> . . . appearances do not exist in themselves but only relatively to the subject, . . . so the laws do not exist in the appearances but only relatively to this same being, so far as it has understanding.[35]

It is quite clear that Kant never thought for a moment (as Hegel never tires of reminding us) that his "maker's-knowledge criterion" could result in knowledge of nature when nature was considered to be the "real," i.e., a thing-in-itself.

Given that this is so, the question arises as to what can then be legitimately *compared*, in the cases of Vico and Kant, concerning their respective uses of the "maker's-knowledge criterion" in relation to "objects" of nature. If, on the one hand, we compare Vico's nature (i.e., the natural world) with Kant's, where "nature" means for Vico thing-in-itself

and where it means appearance for Kant, then we shall have to conclude (as does Rotenstreich) that, for Kant, man can create "objects" (in some partial sense) while for Vico, he cannot. That is to say, the other way round, that if we interpret Vico's "maker's-knowledge criterion" to mean that one can only have knowledge if one has created the "thing-in-itself," and Kant's criterion to say that one can only have knowledge if one has created the "appearance," then again, we must conclude that Kant can have knowledge of nature while Vico cannot. (This, of course, assumes that for Vico "knowledge of nature" comes about in the same way, i.e., that the "maker's-knowledge criterion" is applied to nature in the same way as it is to history. I have gone to some lengths to point out that this is an erroneous assumption.)

The question, then, is this: is it quite accurate to draw a comparison in the above manner? That is, doesn't Kant's *unique* doctrine of appearance/reality, in some very straightforward sense, count against, i.e., rule out, the comparison as a misleading one because of the equivocation on the term "nature?" (We might note here that while it is in some sense misleading to compare Vico's and Kant's use of the "maker's-knowledge criterion" in the area of nature without dwelling upon the different meaning of "nature" for each philosopher, when it comes to history, we are on much firmer ground. History for Kant is the narration of the appearances of the human will at large. The human will involves a "different kind of causality" from that of nature, namely that of freedom. Actions that are performed in accordance with freedom are not *merely* appearances but are appearances *known to be* grounded in the noumenal or intelligible world. Hence, to compare Vico's and Kant's "maker's-knowledge criterion" in the

area of history is to compare two *similar* things, i.e., both Vico and Kant are, *in this area*, dealing with the "real" or thing-in-itself.)

Concerning nature, I should think that a more accurate comparison would be this: let us compare Kant's and Vico's notions of nature where "nature" means the *same thing* for both thinkers. Since Vico nowhere puts forth a doctrine of "appearance" and since Kant did put forth the notion of "thing-in-itself," let us compare the applicability of the "dictum" to nature where "nature" means thing-in-itself. This is not as outrageous as it might at first seem, for both of them think of the "real" in this manner.

I am fully aware that Kant's "critical" philosophy is based upon *distinguishing* between appearance and reality, and therefore, in this sense, he would not allow the dictum to be applied to nature where "nature" means the real. However, surely this comparison would be *as accurate as* comparing the uses and application of the dictum by Vico and Kant to nature when they mean *different* things by "nature." Of course, the fairest in the land would be to make *all* of the above distinctions when drawing the comparison, and it is this that I hope to accomplish here.

If then we compare the applicability of the dictum to nature by both philosophers where both mean by "nature" thing-in-itself, we shall be able to see precisely how radically different the application of the dictum is in each thinker's case. Of course, what we find is that they are not different at all. That is to say, Kant no less than Vico considers it absurd to think that man could create (partially or otherwise) any object of the natural world when "nature" means the "real," i.e., the thing-in-itself. Further, for Kant there is no "knowledge" of any kind probable or certain of nature when nature is thought of as a thing-in-itself.

That there is a difference between the two thinkers in their application of the dictum to "nature" once again is beyond doubt. But it is crucial to see that this difference lies in the *absence* of a metaphysics of appearance and reality in one of the thinkers (Vico) and the *presence* of such a metaphysics in the other (Kant). Further, this absence (or presence) of an appearance and reality metaphysics entails a different meaning of "nature" for each philosopher, and it is because of this *different* meaning that the dictum is applied to "nature" differently in each case. To pick out precisely what the difference in applicability of the dictum is in each case depends upon the specific points one wishes to compare, and this choice in turn is not as clear-cut as one would like.

For example, if on the one hand we should compare Kant's "nature' as appearance with Vico's as thing-in-itself, the difference between the two is at best this: Kant has *certain* knowledge of nature while Vico has only *probable* knowledge of nature. Kant's certain knowledge is justified by the dictum in that it argues since man partially makes or creates nature, he can have knowledge of it. Vico's probable knowledge of nature is justified by the dictum in that it argues that since man makes or creates the *hypotheses* and *experiments* of physics, he can acquire probable knowledge of the content of those experiments.

On the other hand, if we compare Kant's nature as a thing-in-itself with Vico's nature as a thing-in-itself, the difference between the two is that Vico argues that we can have probable knowledge of nature justified by the dictum, whereas Kant argues that there can be no such knowledge, for the dictum can never justify knowledge of nature when nature is seen as noumenon. In neither case will Vico's or Kant's use of the dictum

justify the ontological creation of the object, and on *this point* I am in agreement with Rotenstreich.

Hence, Rotenstreich is right in a general way, i.e., there *is* a difference between the two thinkers in their application of the dictum to nature (physics). However, he is wrong in the specific difference that he cites, namely that "Kant applied the formula . . . to physics while Vico tried to show precisely that that application is precluded, and the formula can hold good for history and not for physics."[36]

In *De Antiquissima* Vico shows precisely how the formula *does* apply to physics*(Sansoni, pp. 68, 82, 114, 124, and 130), therefore, on this point Rotenstreich is mistaken. Secondly, and this may have been what led Rotenstreich to overlook Vico's application of the formula to physics, Rotenstreich has simply made a misleading comparison of the formula as Kant and Vico used it in physics. What Rotenstreich should have pointed out is that there are *two different meanings* of "nature" in these philosophic systems, and hence, the formula will function in *two different ways*. This is finally to say that if one's goal is to see how the "formula" or "dictum" applies or does not apply to "nature" in these two systems, one should

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* e.g., Sansoni, p. 68, Vico tells us:

> [opere 137]. . . in fisica nengono approvate quelle teorie cui corrisponda per similtudine qualache nostra operazione; e raggiungono la massima celebrità e consenso universale quelle idee sulla natura che siono confortate da esperimenti mediante i quali noi facciamo qualcosa di simile alla natura. . . . In physics those theories are proven which allow us [successfully] to operate something similar to them and the clearest and most commonly accepted reasonings about natural things are those supported by experiments in which we create (make) imitations of nature.

(Sansoni, p. 124), he tells us [opere]84]:

> Concludiamo infine osservando che non si deve introdurre nella fisica il metodo geometrico, ma la diretta dimostrazione sperimentale. Let us conclude finally that it is not the geometric method that should be used in physics but the experimental demonstration itself.

first be quite clear as to what it is that one is comparing when comparing each philosopher's respective notion. Hence, Rotenstreich's claim that the formula is for Kant applicable to physics, whereas for Vico it is not is in one sense false and in another misleading.

The second area of comparison of Vico and Kant made by Rotenstreich is that of history and nature. Rotenstreich indicates that there are at least two specific points which show how Kant and Vico differ in their views of history. First, Rotenstreich claims that while for Vico there is a fundamental distinction in terms of knowledge concerning ". . . the orbit of history as against the orbit of nature, . . . *for Kant there is no fundamental distinction* [my emphasis]. . . since both are penetrable for knowledge and its apparatus."[37] Second, in terms of Vico's and Kant's respective historical conceptions, Rotenstreich says that "Vico is more concerned with historical knowledge, while Kant is more concerned with the character of the historical process or with the historical objective."[38]

The first point is quite important to Rotenstreich, for it is in his view precisely because of this *lack* of a fundamental distinction between nature and history (in Kant) ". . . that Kant could not follow Vico vis-à-vis history . . ."[39] Before commenting upon this point, let us see exactly how Rotenstreich comes to hold it. We have seen that Rotenstreich believes that Vico cannot achieve knowledge of nature with his version of the "formula," whereas Kant can. This is because for Kant man can know objects even though the formula justifies knowledge vis-à-vis "partial creation." That is to say, man can know objects *even though he hasn't completely* created them--even when there is still something given.

For Vico, on the other hand (according to Rotenstreich), to have knowledge entails *absolute* creation, i.e., it is only when the object of knowledge is *totally* "adequate" that knowledge is justified by the formula.[40] Now, when the area of concern shifts from nature to history, Rotenstreich says that for Kant "There is, even in terms of history, *a substrate which is not created by man* [my emphasis] but is presupposed by him and taken advantage of by him in his strifes and aspirations: the substrate of nature."[41] Rotenstreich's point, I take it, is this: nature and history *both* presuppose a non-created substrate. Therefore, Rotenstreich thinks, nature is really not separate or different (essentially) from history. In other words, there is always something left over (i.e., a substrate) in *both* nature and history, which is not created by man. Knowledge of history, therefore, must be justified by the formula *in the same way* that knowledge of nature is.

Further, for Rotenstreich, it is fair to infer that if there were nothing left over in history, i.e., if there were no substrate given, then there *would* be a clear distinction between nature and history, just as there is in the case of Vico.

It is clear that Rotenstreich is led to the view that for Kant there is no fundamental distinction between nature and history, whereas for Vico there is by his (Rotenstreich's) prior view of how the "formula" is applied by the two philosophers in their respective philosophies of *nature*; namely that for Kant *partial creation* gives access to knowledge while for Vico only *total creation* gives access to knowledge.

Concerning Rotenstreich's view on the application of the formula, I have two comments. Consider first his claim that for Kant "in history

there is something presupposed, namely nature, which is *not* created by man but given, whereas for Vico everything in history is created by man." That claim is misleading, if not outright false. First, this view assumes that Vico's use of the formula does not justify knowledge of nature which as we have seen is false. But second, and perhaps more important, it assumes that Kant's nature (in the context of history) is *not* created by man but is merely a presupposed reality. Now "nature" for Kant in this context can mean one of two things, "appearance" or "reality." It is clear, however, that it cannot mean reality, for if it does, not only can Kant not follow Vico in his justification of historical knowledge, but historical knowledge would be impossible for Kant on any grounds.

However, Kant believes that history is possible. Further, it is possible, he believes, only if nature is assumed to have a purpose.[42] We have seen that nature can be assumed to have a purpose *only* if there is a nature to begin with which is to say that the "possibility" of history actually depends upon the "possibility" of *nature*. This is in effect to say that if nature were not possible, neither would history be possible. Now the possibility of nature depends upon the doctrine of appearance and reality in conjunction with the formula.[43] It seems straightforward enough, therefore, that if "nature" in the above context means reality and not appearance, it would follow that nature would be impossible to know and therefore, so too would history. Hence, our only other alternative is that "nature" means appearance. This, of course, is clearly Kant's meaning, and it is precisely at this point that our difficulty with Rotenstreich's view becomes apparent.

Since "nature" means appearance, what sense are we to make of the claim that history for Kant presupposes a non-created substrate, i.e.,

nature? Far from being a presupposed substrate (as the *Critique of Pure Reason* has taken great pains to show), nature as appearance is and can only be justified in that it is man's (non-presupposed) creation. Further, if Rotenstreich means to say that "nature" refers to the noumenal aspect rather than the appearance aspect of nature, then as we have seen above, history is going to be impossible. That is to say, if "nature" means noumena, then no *knowledge* of nature can be had, and therefore, the "secret plan" of nature would (in principle) forever remain a secret. It is not, therefore, the *noumenal* aspect of nature that Kant points to as manifesting a "secret plan" but the *phenomenal* aspect of nature.

The upshot is this: Rotenstreich is wrong on his grounds in arguing that "for Kant there is no fundamental distinction between nature and history." He is wrong *because* his argument presupposes that nature is to history as the given is to the object. It is precisely this relationship that I maintain does not hold. In the former case, i.e., "nature is to history," man creates *both* nature and history, whereas in the latter case, i.e., "the given is to the object," man creates only the object. Since Rotenstreich is mistaken on this point, it cannot be used to justify the claim that "Kant could not follow Vico vis-à-vis history." Perhaps it is true that Kant couldn't follow Vico (and it is clearer still that he didn't), but the reasons that he didn't are not those given by Rotenstreich.

One final comment concerning Rotenstreich's claim that for Kant there is no fundamental distinction between history and nature (p. 229). There is textual evidence to show beyond question that Kant draws a *sharp* distinction between nature and history. The distinction he makes is that between *a subjugation to instinct* vs. *the experience of freedom*, i.e., a

transition from an ". . . uncultured, merely animal condition to the state of humanity."[44] The text I have in mind where the distinction is drawn is the "Conjectural Beginnings of Human History." In this essay Kant offers a "philosophical explanation" to show how man generally developed from a natural, purely instinctive creature to a rational human being capable of morality. This process Kant sees as the development of freedom, and it is precisely the story of that development that constitutes history.

In the "Conjectural Beginnings" Kant points out four stages through which man develops himself into a rational being.[45] At each of these stages man leaves nature (characterized as the determined and instinctual) to become a rational and moral creature (characterized as an end in itself) in the realm of culture. Further, Kant tells us that once man had *chosen for himself* how to live (as opposed to being *directed* how to live by nature), ". . . it was impossible for him to return to the state of servitude (i.e., subjugation to instinct) from the state of freedom, once he had tasted the latter." (p. 56, C.B.)

In the state of culture man is a free creature because of his unique ability to reason. Human history is the story of man *making himself* a free creature by his autonomous use of reason. *There is no such autonomy in the state of nature.* Hence, the distinguishing characteristic that divides nature from history is man's rational "autonomy." In other words, we may distinguish nature from history by seeing that there is no "self-making" going on in nature. Because of man's rational "autonomy," he may view himself as a "self-maker" and, therefore, as a true end in himself.

> From this account of original human history we may conclude: man's departure from that paradise which his reason represents as the first abode of his species was nothing but the transition from . . . instinct to rational control--in a word, from the tutelage of nature to the state of freedom.[46]

The above departure once again is possible because of man's ability to reason.

> . . . reason considered not insofar as it is a tool to the satisfaction of his inclinations, but insofar as it makes him an end in himself. Hence this last step of reason is at the same time man's release from the womb of nature . . .[47]

Finally, if Rotenstreich were correct and there were no *fundamental* distinction between nature and history for Kant, it would follow that there would then be no *fundamental* distinction between judgments of value about nature and judgments of value about history. That is to say, to judge certain historical actions as good, bad, right, or wrong presupposes that these actions are not merely natural and thus determined according to the same causality as that of nature but that they are also free actions, following from choices for which man can justifiably be held accountable. Natural actions are, at the very least, neutral and for Kant, at best, all-good due to their having been designed by a benevolent deity. This, however, is not the case with historical actions. Kant believes that history shows some actions to be ". . . woven together from folly, childish vanity, even from childish malice and destructiveness."[48] Other actions, on the other hand, e.g., the French Revolution, point to ". . . the disposition and capacity of the human race to be the cause of its own advance toward the better . . ."[49]

If, therefore, there were no distinction between nature and history, we should not be able to find Kant pointing out a difference in judgments of value covering natural and historical actions. Kant re-emphasizes his point rather cryptically: "The history of nature therefore begins with the good, for it is the work of God, while the history of freedom begins with wickedness for it is the work of man."[50] It is clear,

then that for Kant there is a fundamental distinction between history and nature, and therefore, Rotenstreich is at best very misleading when he says that ". . . for Kant there is *no fundamental distinction* [my emphasis] between the orbit of nature and the orbit of history, since both are penetrable to knowledge." (p. 229) I wish now to conclude my comments on Rotenstreich's comparison by examining his second claim, that Vico is really more concerned with historical knowledge, while Kant is more concerned with "the historical objective."[51]

It would seem (at least in one sense) that Rotenstreich is correct in this claim. Obviously, one of Vico's chief aims in *The New Science* is to show not only that history can become a science, but also that history is indeed *the ultimate science*. In attempting to show this Vico must give an account of how historical knowledge is possible. Kant, on the other hand, nowhere in his writings claims that he is concerned with showing how history can be a legitimate science, much less that it is *the ultimate science*, therefore, Kant is not (unlike Vico) concerned with giving an explicit account of how historical knowledge is possible. However, it would be misleading to infer from this that Kant was not *concerned* with what constitutes "historical" knowledge, or that Vico, on the other hand, was not *concerned* with "the historical objective." I should like to comment on each of these points in turn.

Concerning the first point, we have seen in Chapter IV that while Kant never *explicitly* asked the question, "how is history possible as a science?", he nevertheless provided in his writings on history and teleology the material for the answer (or at least the beginning of an answer to such a question).

We saw in Chapter IV that history is possible for Kant only if it is first seen to evolve out of nature and secondly if it is judged as a purposeful moral unity. This requires, on the one hand, that nature be possible (which was shown to be the case by the arguments of the *Critique of Pure Reason*, relying on the revolutionary "maker's-knowledge" criterion of truth) and, on the other hand, that man's actions be judged as purposively contributing to his own being as an end in himself (this was shown to be the case by the arguments of the *Critique of Judgement* and various ethical and historical writings).

We saw that the epistemological apparatus that Kant offered to demonstrate the possibility of history consisted of, first, the "maker's-knowledge criterion" and, second, reflective (teleological) judgment, in *both* its "physical" and "moral" aspects. In light of Kant's use of these particular epistemological concepts in the area of history, we found that the knowledge derived from history was basically a "self-knowledge," which in turn pointed to the notion of "self-making." (This idea of "self-making," we saw, was derived from the "maker's-knowledge criterion" in a sense not too dissimilar from that of Vico's. See pp. 16-21, Chapter IV.) This is to say that for Kant man gained knowledge of himself in the area of history precisely because he had in that area "made" the object, which was *himself*. He did *not* gain this kind of "self-knowledge" in the area of nature (which he also came to know only because he had "made" the object there), for that which was "made" in nature, i.e., natural objects, was not *man* but something else, i.e., merely nature.

What can we conclude from this? We cannot conclude that Kant and Vico thought of the relationship of the concepts "self-making" and

"self-knowing" in *exactly* the same way; indeed I shall later argue that they did not. We can conclude, however, that there is a straightforward sense in which *Kant was concerned with historical knowledge* as a "special" kind of knowledge. The evidence for this concern is the use made of those epistemological concepts which we have examined in Chapters III and IV, i.e., the epistemological concepts that ground his view of history--maker's-knowledge and teleology. Upon examining these concepts quite closely we found that Kant has given an answer to the question, "how is historical knowledge possible?" (or at least indicated the epistemological basis for a science of history which Dilthey came to clearly recognize).

Therefore, in one sense (which I believe Rotenstreich would, upon reflection, agree with) Kant had to be concerned with historical knowledge in that, in treating history, he wished to justify his views by using the same kinds of epistemological concepts used in the critical philosophy. This attempt *to epistemologically ground history* (with these concepts) displays Kant's concern.

The success of Kant's attempt to ground history in these epistemological concepts is too large an issue to deal with here. But that there was an attempt is evident from Kant's writings on history. Finally, we saw that in his attempt to apply the "maker's-knowledge criterion" in a roundabout way to history, Kant was faced with the problem of explaining how the "self-knowledge" gained from history is qualitatively *different* from that of the "self-knowledge" gained from nature. It would seem that these two "kinds" of "self-knowledge" can actually be different only if there is a difference in the "objects" of which they are knowledge. This is indeed the case. But if so, it means that Kant *distinguished*

knowledge of nature from knowledge of history, at least implicitly, which in turn means that he *was* concerned with the problem of historical knowledge.

What about Vico and the so-called "historical objective?" On this point Rotenstreich is simply mistaken. While it is plausible to make some sort of case for the view that Kant was only *indirectly* concerned with the problem of historical knowledge, one cannot make a similar case for the view that Vico was only *indirectly* concerned with the "historical objective." Rotenstreich builds his case on one basic premise; namely that for Kant the historical process and its objective is based upon a *moral* process while for Vico it is not. He (Rotenstreich) says that:

> It is obvious that Kant takes the historical process as expressing an idea or an ideal of convergence between the ethical imperative and the factual process as it is. Vico is more empirical: he does not deal with history from the birds'-eye view of the moral principle but explores events and facts, though he structures them in cycles.[52]

Now, while it is true that Vico does not deal with history from a "birds'-eye view," we must ask whether it is also true that for Vico the historical process is not *essentially* "a moral process."

We have seen in Chapter II that Vico held that one of the principal elements of his "new science" was ". . . a rational civil theology of divine providence." (N.S. #341) This means, among other things, that *The New Science* would demonstrate "What providence has wrought in history . . . often against the designs of men, . . ." (342) Concerning the proof of this providence he tells us:

> In contemplation of this infinite and eternal providence our Science finds certain divine proofs by which it is confirmed and demonstrated. Since divine providence has omnipotence as

> minister, it must unfold its institutions by means as easy as the natural customs of men. Since it has infinite wisdom as counselor, whatever it disposes must, in its entirety, be institutive order. *Since it has for its end its own immeasurable goodness, whatever it institutes must be directed to a good always superior to that which men have proposed to themselves* [my emphasis].[53]

In Book 1, "The Elements," Vico tells us that "To be useful to the human race, philosophy must raise and direct weak and fallen man, not rend his nature or abandon him in his corruption."[54] He then tells us that from this axiom we will see that the Platonists were right all along in that they

> . . . agree with all the lawgivers on these three main points: that there is a divine providence, that human passions *should be moderated and made into human virtues* [my emphasis], and that human souls are immortal. Thus, from this axiom are derived the three principles of this Science.[55]

Finally, when speaking of the reason *why* men continue to live in a "social manner" rather than follow their individual self-interests, he says:

> . . . it is only by divine providence that he [man] can be held within these institutions *to practice justice* [my emphasis] as a member of the society, of the family, of the city, and finally of mankind. Unable to attain all the utilities he wishes, he is constrained by these institutions to seek those which are his due; and this is called *just* [my emphasis]. *That which regulates all human justice is therefore divine justice, which is administered by divine providence to preserve human society* [my emphasis].[56]

It is clear that for Vico fundamental to the very project of *The New Science* is his notion of a Divine Providence which is fundamentally a *moral process* and without which history (as Vico understands it) would be impossible. Where Vico and Kant differ, then, concerning history and the "historical objective" is *not* in its being or having a "moral" objective (for both see the Good to be in some sense the very "driving force" of history) but, rather, in their conceptions of the *attainment* of "the historical objective."

For Kant the historical process is such that it shows man to be progressing to a point where he will eventually, necessarily exist in a "perpetual peace." Further, there is *no* indication in Kant that man could from this point of perpetual peace *turn back* and have to begin the process (of striving toward and achieving his freedom) all over again. For Kant the notion of "cyclic" history is ruled out of court precisely because it does not seem to be compatible with *his* notion of attaining the historical objective.[57] We could say that the attainment of the historical objective for Kant, therefore, would be a once-and-for-all affair.

For Vico, on the other hand, this is not the case. Vico was alive to the idea that man's nature was such that, while he could achieve his historical objectivity (which is to live in a community as a ". . . human nature, intelligent and hence modest, benign, and reasonable, recognizing for laws conscience, reason, and duty"[58]), man could at the same time *lose* that objective. Once lost, man would return to a state of barbarism, thus having to repeat his struggle all over again.

Concerning this "return," two things are important to note here: first, if man does indeed return to the "barbaric" stage of development, this stage is not *pari passu* like the very "first" barbaric stage from which he originally developed. Rather, it is a *second* (or even third) barbarism, *qualitatively different from the first*. This is because it grew out of conditions that were qualitatively different from the first.[59] It would be misleading, therefore, to think of Vico's stages as cycles where "cycles" means the qualitatively *same* occurrences. Second, it would also be misleading to think of Vico's stages as cycles if one means by "cycles" those *logically necessary* recurrences that all nations *must* go through

eternally (this I take to be Kant's meaning of "cycles"). Vico nowhere says or implies that his stages are *logically* necessary in their recurrence. What he says is that, having reached the *third* stage, i.e., the fully "human" stage, it *may* happen, as was the case with Rome, that the popular state will become corrupt. *If* so, i.e., if the popular state becomes corrupt, then its philosophy will become corrupt, and it (the philosophy) will descend into scepticism. From this corruption will arise a ". . . false eloquence, ready to uphold either of the opposed sides of a case indifferently."[60] Because of this "intellectual" corruption, only power (as opposed to truth) will be desired, ". . . and as furious south winds whip up the sea, so these citizens [will have] provoked civil wars in their commonwealths and [would have thus driven] them to total disorder."[61]

Vico then goes on to argue that there are two possible *checks* on this destruction of the third stage. First, one may be fortunate enough to find a good monarch, e.g., like Augustus, who could put things right by ruling with a stern but fair hand. This would be *one* way in which a return to barbarism could be avoided. Second, a foreign power may conquer the commonwealth and thus also prevent it from returning to barbarism. However, *if* these *two remedies* fail, *then* providence will decree that ". . . through obstinate factions and desperate civil wars, they [the people in question] shall turn their cities into forests and the forests into dens and lairs of men." (1106 N.S.)

In other words the fact that men do return to a stage of barbarism and begin their struggle for humanity once again is a *contingent* state of affairs or at least *not a logically necessary* one. However, the history of the world thus far suggests to Vico that this is a well-worn cycle.

Therefore, it is *not* the case that Vico and Kant differ in their concern with the "historical objective," namely that history is the struggle for the true and the Good, rather, they differ in their conceptions of *attaining* the objective and keeping it.

This then ends our comparison of Vico and Kant (in light of Gadol's and Rotenstreich's papers). I should now like to offer a brief analysis concerning Vico's and Kant's use of the concept of teleology in their respective philosophies of history.

Teleology

The question I wish to examine here briefly is this: Why is the concept of teleology used by Vico and Kant in their philosophies of history? I believe the answer to this question is that they considered the concept of teleology to be the only concept that could be used for an adequate historical explanation in that it could give certainty to history. I shall give my reasons for this answer by first examining Vico's view and then Kant's.

As we have seen in Chapter II, Vico's notion of teleology is embedded in his idea of Providence. Vico believes that the various facts of history are in some sense *explained* by being instances of the workings of providence. It is clear that Vico thinks of providence as, among other things, a theory of historical causation, namely a *teleological* causation which differs radically from other theories. He tells us, e.g.:

> Hence Epicurus, who believes in chance, is refuted by the facts, along with his followers Hobbes and Machiavelli; and so are Zeno and Spinoza, who believe in fate. The evidence clearly confirms the contrary position of the political philosophers, whose prince is the divine Plato, who shows that providence directs human institutions.[63]

Vico's idea is that the Epicureans, who believe in chance, and the others (whom he refers to as the Stoics, #335), who believe in fate,

offer theories of historical causation which upon reflection are not adequate for the purpose of explaining historical facts.[64] The question naturally arises, why is it that the above theories are not adequate? Vico's answer takes two forms, one explicit and the other implicit. The explicit answer addresses each view in turn. He says that if we take the Stoics' theory of causality (Vico includes Spinoza in this group), we must hold that since one's action necessarily follows from the nature of a necessary being, men have no free will, and as a result, their actions cannot be explained (ultimately) by their ideas. I believe what Vico has in mind here, whether or not he adequately represents Spinoza's position, is the following:

Vico took Spinoza to be saying that everything follows necessarily from the nature of God, i.e., a necessary being. Since this is the case, the creation of society is actually *not* due to man's own free will but instead to the necessary being. Therefore, men's actions cannot in any ultimate sense be explained by *their ideas*. Their actions will instead be explained (ultimately) only in reference to a necessary being.

Now it is Vico's view that "Human choice, *by its nature most uncertain*, is made certain and determined by the common sense of men with respect to human needs or utilities which are the two sources of the natural law of the gentes. (N.S., #141) His argument with Spinoza then is that Spinoza *denies* that there is any contingency in human affairs. Vico believes, on the contrary, that if man has free will, there must be some contingency in man's affairs. This is the price one pays (i.e., contingency) if one wishes to believe that human beings can be held responsible (ultimately) for the creation of civil society.

Therefore, the historian's knowledge of the ideas of a certain group of people at a certain time (on Vico's view) will be an aid to him in explaining their actions. That is, if we assume that the *ideas* of the people in question have some direct link with their actions and further, if we assume that the people in question have free will to act according to their ideas, then their ideas will serve as a useful guide in *explaining* their actions. In order to verify the causes for certain human actions, we must assume that the "ideas" of the people in question had something to do with their actions. We must assume that the people have "free will." Only if these two assumptions are correct are we in a position to reconstruct the histories of the institutions of peoples and in light of those histories interpret their actions. That is to say, we must reconstruct the histories of various peoples by *examining the ideas* contained in their various artifacts, documents, poems, etc. Finally, for this reconstruction to be possible, man must have full authority for his actions, i.e., he must have free will. This "free will" even God cannot take *from man*.

> Upon this divine authority followed human authority in the full philosophic sense of the term; that is, the property of human nature which not even God can take from man without destroying him . . . This authority is the free use of the will, . . .[65]

On the other hand, *Vico's interpretation* of the Epicurean view of causality makes that theory unacceptable also. According to Vico, the Epicurean view implies that we *must hold* that every event that takes place happens merely according to chance. (Vico believes this, I take it, because Epicurus offers no *ultimate* explanation for the gathering together, or hitting, of the atoms.) Hence, all historical events are to be

explained (ultimately) as happen-stance. The claim here is that "the facts themselves" show that the Epicurean view is an unacceptable explanation. It is clear that while Vico wishes to avoid the determinism of the stoics he at the same time will not allow that "explanation" of historical facts be accomplished by appealing to the other extreme, i.e., pure chance. From his own historical investigations Vico believes he has found that *the same kinds* of historical consequences always seem to follow from *the same kinds* of historical conditions. This fact indicates to him that "something more" is involved in history than mere chance. ". . . it was not fate for they did it by choice; not chance, for the results of their always so acting are perpetually the same."[66]

Therefore, Vico cannot accept the Epicurean theory, so he attempts to steer a middle course between the pure "determinism" of the Stoics and the "pure chance" of the Epicureans. To this end he offers a third alternative, namely a *teleological causal* "explanation" of human affairs. Vico wished to recognize *some kind* of necessity in history, but his view is that the necessity in question must always involve man's own choices. This must be the case if human history and genuine historical explanation is to be possible.

Vico's alternative explanation, which is directly connected with his views concerning *certainty* in history, is that man must be thought of as fulfilling a divine providential role, i.e., a purpose. Man's purpose on earth is to survive in order that he may pursue the Good. In order for him to survive, God has given him free choice such that he (man) may choose the most natural and best means to accomplish that end. To accomplish the end (i.e., survival and pursuing the Good) necessitates the

development of his own *human* nature.[67] Finally, since human nature evolves, its development will be viewed as going through "stages." Each stage will then be seen as developing from an earlier stage and contributing to the development of a later one. The stages seen as a whole (i.e., the ideal eternal history) will constitute a unity and in Kantian language will ". . . be reciprocally cause and effect of each other's form." (CJ 65:373) This then is the "teleological notion" of causal necessity working in Vico's idea of providence.

Since Vico believes that human choice is free, he believes that it is not determined. On the other hand, he does not believe that it is merely capricious. Rather, it is influenced by man's commonsense views about his "needs" and "utilities" for survival.[68] Hence, man's particular choices are determined in the sense that he has a *purpose* to fulfill which is to develop his own humanity in order that he may pursue the Good. In this manner Vico gives a "philosophical" justification, i.e., a "teleological" causal explanation, to account for why it is that human beings exposed to the same historical conditions react in the same ways. It is because human beings have a *purpose,* namely to develop their humanity, that they necessarily attempt to survive. Further, their commonsense views of their needs and utilities *influence* their choices as to the various means available by which they may promote their own survival. As a result, various peoples establish the same kinds of institutions under the same kinds of conditions to accomplish similar tasks, and this is due again to the similar "common sense" attitudes toward their needs and utilities.

Hence, history is this story of Providence guiding man toward his humanity. The Epicurean and Stoic accounts of historical causation are explicitly rejected by Vico, for they cannot account for the historical facts. In their stead Vico offers a "teleological" theory of historical causation in order to do justice to the facts.

Implicit in Vico's notion of teleological explanation, i.e., in his notion of Providence, is the theoretical desire for history to become a *certain* science. This is to say that teleological explanation, as opposed to what may be thought of as the "mechanistic" explanation of the Epicureans, makes history a certain science by removing the feature of pure contingency from historical events while at the same time attempting to avoid an absolute determinism (such as that of the Stoics).

We might here ask, "How are we to think of *certainty*, via the notion of teleology, as achievable in historical explanation?" I think implicit in Vico's work is the following answer: to achieve certainty in historical explanation when that explanation involves a causal analysis, is to attempt to *eliminate contingency* from historical events. That is to say, if we find, e.g., that a group at a certain stage of their historical development have a certain form of government and religion and if we then wish to give a "certain" explanation as to why they have *that* particular kind of government and religion, we should like to be able to show that the occurrences of *those* forms of government and religions were *necessary* stages of the historical development of *that* society and not merely contingent occurrences.

Now, one way in which we could attempt to eliminate the contingency in our explanation would be to give a "mechanical" causal explanation

of the occurrences in question. That is to say, we could try to show that each event that occurred in the society occurred as the result of a prior cause which produced that event as an effect. Therefore, given a whole series of events, each will simply be determinable in accordance with some mechanical causal law(s) governing the series and the various conditions to which those laws apply. Because of these laws, we should thereby be able to know *for certain* why each event occurred as it did and thereby in this sense remove the contingency of the events taking place.

But, of course, the real question of contingency has not in this way been dealt with. Our problem, Vico would say, is not really the question why each particular event occurs; that we know is due to a prior cause. Our problem is, rather, why the various *series* of events, e.g., those causing *that* kind of government and *that* kind of religion, should occur *jointly* so as to form the character of *this* particular human society at *this* particular time. Our question then concerns the *joint occurrence* of the various series of events, and a satisfactory answer to *this* question cannot itself consist of mere (mechanical) causal explanations, for this would simply push the question back a step further. As Arthur Melnick puts it, "What is being called for [is] . . ., that the explanation not itself involve unexplained joint occurrences. We are calling for the complete removal of coincidence or accidental collocation."[69]

If, therefore, we wished to explain the structure of a certain historical society, we would not be able to eliminate contingency by merely giving a mechanical explanation of the particular events that occurred there (which, according to Vico, is what the Epicureans do). On the other hand, we could remove contingency by tracing the causes of each

series back to a *first* cause such as the Stoics insist upon, but then we should still find ourselves involved in the "free will" problem all over again.

Hence, Vico sees his only alternative as being to show that the society in question necessarily has a *purpose* immanent in its make-up. This "purpose" necessitates that the society develop a certain organic character, e.g., a Poetic character, or a Religious character, such that the very *structure* of the society causes (teleologically) the various *joint occurrences* in that society, i.e., it causes *those* particular institutions to occur at *that* time and *that* place in just *that* guise (see, e.g., #146-8, New Science).

It is in this manner that Vico uses the concept of teleology to reject the Epicurean notion of chance occurrence and the Spinozistic notion of complete determinism. Societies are to be viewed teleologically such that in our attempt to understand their various components we eliminate contingency from our explanations. It is only in this way that history can become a *certain* science. Because of its explicit doctrine of chance, Epicureanism fails to eliminate contingency. The Stoics eliminate contingency at the cost of sacrificing explanation altogether. Vico eliminates contingency by showing that Providence directs all societies (teleologically) to follow a certain "ideal" pattern of development. Therefore, the joint occurrence of any series of events of a given society can be explained with certainty because we have, in Vico's ideal pattern, a *model* which displays the particular purpose of that society at that point in its development. For Vico, there is no alternative to teleological explanation for "scientifically" explaining historical events. This is

finally to say that there is no other way by which one can make history "scientific," i.e., *certain* and thus intelligible, except by viewing it as teleological.

What of Kant? Epistemologically, Kant's concept of teleology does not function much differently *in his philosophy of history* from that of Vico in his philosophy of history. For Kant too, teleology is a kind of explanatory device which is used to eliminate contingency, thus providing a *necessary* unity for the phenomenon in question. History, to be intelligible, must have this necessary unity.[70] It is worth noting that Kant also thought of *his use* of teleological explanation as a *third alternative* to Epicureanism and Stoicism.[71] The Epicurean doctrine of chance was rejected as an unsatisfactory explanation because, Kant tells us, ". . . nothing is explained, not even the illusion in our teleological judgements, . . ."[72] The "Stoicism" of Spinoza, which Kant refers to as the system of fatality, also fails as an explanation, for it fails to explain what it itself intends.

> It intends to furnish an explanation of the final nexus of natural things, . . . and it refers us simply to the unity of the subject in which they all inhere. [But] . . . Even if all the things were to be united in one *simple* subject, yet each unity would never exhibit a final relation unless these things were understood to be, first, inner *effects* of the substance as a cause, and secondly, effects of it as a cause by *virtue of its intelligence*. Apart from these formal conditions all unity is mere necessity of nature, . . .[73]

As we have seen in Chapter IV, it was Kant's view that a philosophy of history could be possible only if we could see history to be, in part, the result of a "plan of nature." In order to view nature in turn as providing such a plan, it was necessary to judge nature "reflectively"--which meant among other things that we must judge nature teleologically. In

judging nature teleologically we explained natural phenomena according to a conception of ultimate ends. The connection of teleological judgment and history was then established by showing that *nature* must be judged teleologically in order to be understood systematically. *History*, in part, is the story of nature's purposeful plan for man; therefore, to have history requires teleological judgment.

Finally, there is one phenomenon of nature, namely man, whose activity, while necessarily being judged teleologically, is yet seen to be qualitatively distinct from other merely "natural" phenomena. This distinctness is due to man's uniqueness as a final end, i.e., an end ". . . to which entire nature is teleologically subordinated."[74] History then is seen to be grounded in the realization of nature's secret plan, and as a consequence of this plan it (history) can be *certain*.

Here we have once again the epistemological move to *eliminate contingency* in the area of history by offering a teleological explanation of historical (and natural) causation. Events in history can be explained and various historical facts understood with certainty precisely because history is seen not as a result of mere chance nor as absolutely determined but rather as a result of a telos in human nature. In a paragraph about the French Revolution Kant illustrates his confidence in the *plan of nature* in conjunction with the movement toward freedom.

> Now I claim to be able to predict to the human race--even without prophetic insight--according to the aspects and omens of our day, the attainment of *this goal*. That is, I predict its progress toward the better, which, from now on, turns out to be no longer completely retrogressive. For such a phenomenon in human history is not to be forgotten, because *it has revealed a tendency and faculty in human nature for improvement* such that no politician, affecting wisdom, might have conjured out of the course of things hitherto existing, and one *which nature and freedom alone, united in the human race in conformity with inner principles of right, could have promised* [my emphases].[75]

It is teleological explanation, therefore, which eliminates contingency, on the one hand, without ushering in fatalism on the other. Therefore, for Kant (as with Vico, i.e., because of its obvious merits), teleological explanation is used to reduce history to a certain unified "plan" in the absence of which history could not be made intelligible.[76]

It should be noted that the epistemological *ground* for Kant's concept is ultimately *judgment*. That of Vico's, on the other hand, is *Providence*. In this sense the transcendental turn so fundamental to the "Critical" philosophy is entirely foreign to Vico. Vico thought of teleology as simply being manifested in the "facts" of the historical world. On this issue, i.e., concerning teleology, Vico was decidedly "realist" in attitude. Kant, on the other hand, was the *radical subjective* idealist.

Nevertheless, both Vico and Kant use the notion of teleology in history for precisely the *same* ends, i.e., they use it to show that history is a necessary unity and can, therefore, be rendered intelligible.

In summary we may list the following points that have come out of our comparison in the light of Rotenstreich's paper. (For a similar list of points concerning Gadol's paper see p. 9 of this chapter.) First, we have found, contrary to Rotenstreich's view, that there is in fact a parallel lack of application of the dictum or formula to nature, only when nature is seen by both philosophers as a thing-in-itself. When it is not, then the parallel *lack* ends. Kant believes that one can "make" nature (i.e., appearance), and therefore, one can have knowledge of it. Vico holds that one can only "make" experiments and through *that making*, gain limited, probable knowledge of nature.

Second, we found, again contrary to Rotenstreich's views, that both Vico and Kant draw a sharp distinction between history and nature. Third and finally leaving Rotenstreich's paper, in our examination of the use made of the concept of teleology in each of these men's philosophy of history, we found that *both* use "teleological explanation" in history to give *certainty* to history in order to render it systematic and, therefore, intelligible.

NOTES AND REFERENCES

[1]"The Idealistic Foundations of Cultural Anthropology: Vico, Kant and Cassirer," *History of Philosophy Journal* 12 (1974 April):207-225 (see p. 211). For example, "In Kant the dictum lies at the heart of the Copernican revolution he introduced so self-assuredly into metaphysics."

[2]"Idealistic Foundations . . ." From here on referred to as IF. P. 208.

[3]"But the important point is not where he [Vico] or Kant got it, but what each of them made of it. The dictum is central to both, but in quite different ways." (IF, p. 216)

Also, compare: "The fundamental principle of the *Critique of Pure Reason*, that the object (be it real or ideal, concrete or abstract, inner or outer, etc.) accommodates itself to the subject, to his modes of cognition, did not occur to him [Vico]; and how, indeed, could it? To a realistically and substantively oriented mind, which would automatically misinterpret such a gambit as "subjectivism," this interpretation would have to be absurd." (p. 215)

[4]E.g., Vico says, "There is no other way by which scepticism can be overthrown than by holding that the criterion of truth is to have made it." (*De Antiquissima*, Sansoni, p. 74, and Flint, p. 106)

On the other hand, Kant tells us: ". . . all attempts to extend our knowledge of objects by establishing something in regard to them a priori . . . have . . . ended in failure. We must therefore make trial whether we may not have more success in the tasks of metaphysics, if we suppose that objects must conform to our knowledge." (*Critique of Pure Reason*, BXVL)

[5]IF, p. 217.

[6]IF, p. 211.

[7]IF, p. 214.

[8]IF, p. 215.

[9]Ibid.

[10]IF, p. 221.

[11]"But if for Vico man throughout his history carries out God's design, for Kant he becomes the instrument of nature's plan." (IF, p. 221)

[12]IF, p. 22.

[13]Gadol seems to conclude that because of the absence of the phenomenon-noumenon distinction in Vico, Vico believed in a "substantival" metaphysics, i.e., realism. Kant, on the other hand, did not. For example, Gadol tells us; "Vico still adhered to this ontic substantival '*Problemstellung*.' He had a *realistically* and *substantivally oriented mind* . . ." (IF, p. 215)

Kant's genius consists in uncovering what he took to be the fundamental defect of all previous efforts, namely the substantival outlook typical of *common sense* which believes that the object of knowledge is what it is, and that our cognition of it affects its being in no way." (IB, p. 217)

Here I think the following three comments are in order: (1) the doctrine of realism is not a "common sense" doctrine; (2) Kant's doctrine of phenomenon-noumenon and his "Copernican revolution" are used *to justify, not deny*, the substance-populated, causally efficacious world of the realist that was attacked by Hume. That is to say, the Critical philosophy does not question that the substantival outlook, or view, of the world is the correct one (as does, e.g., Hegel). Rather, it seeks (e.g., in the "Analogies of Experience") the epistemological grounds on which such a view can be justified; (3) Finally, it is commonplace that in *The New Science* Vico's *genetic* view of "natures," i.e., that nature is equivalent to nascence, is incompatible with a substantival (Aristotelian) world-view, i.e., that a nature *is what it is*, independent of its genesis. (See, e.g., #147-8, N.S. and for comparison with Aristotle, see Book Z, Metaphysics)

[14]See quotation above.

[15]As Flint puts it: "If mathematics were a human creation, divine creation might well be supposed to resemble it . . .

> (a) These [metaphysical] points belong not to the phenomenal but to the intelligible world . . .
> (b) At the same time, they are real in themselves and objective as regards finite minds. In this respect they are unlike mathematical points, which are abstractions . . .
> (c) The analogy of metaphysical to mathematical points lies in the likeness of the relationship between themselves and their products--the worlds generated by or from them." (Flint, p. 119)

[16]"Concludiamo infine osservando che non si deve introdurre nella fisica il metodo geometrico, ma la diretta dimostrazione sperimentale." (*De Antiquissima*, Sansoni, p. 124)

[17]IF, p. 211. I might add here that I am well aware of Vico's statement in *The New Science* concerning the philosophers who "waste" their energies studying nature, ". . . which, since God made it, He alone knows . . . (331)" However, I fail to see how this statement is incompatible with the claim in *De Antiquissima* (Sansoni, p. 82 and p. 124) that man can have *human* knowledge (which means limited, finite, and only probable knowledge) of nature. We can have this knowledge once again because we "make" the formula, i.e., the experiments, by which knowledge is obtained. "By requiring us to hold for true in nature only that the like of which we can make experiments, it serves the experimental physics which is now being cultivated to the great benefit of mankind." (Fisch's translation in "Pragmatism," *Vico Symposium*, p. 411. Sansoni, p. 130)

[18]See, e.g., #349, N.S. ". . . these proofs are of a kind divine and should give thee a divine pleasure, since in God knowledge and creation are one and the same thing."

[19]IF, p. 216.

[20]It is quite clear that Gadol thinks that Vico is, by his use of the dictum in geometry and physics, a sceptic and by his use of the dictum in history, a dogmatist. For example, he says: ". . . the sceptics, whether they come from the empirical camp, like Hume, or the dogmatic one, like Vico . . ." (p. 217).

"Vico asserted the creativity of man and the superiority of historical cognition over natural scientific or mathematical knowledge in a purely dogmatic fashion . . ." (p. 215)

". . . the latter's [Vico's] claim that knowledge of history is possible is not only indemonstrable, but exemplary of the kind of dogmatism which Kant meant to overthrow." (p. 217)

[21]*Autobiography*, pp. 155-56).

[22]*Critique of Pure Reason* B878/A850. Also see, "Its [metaphysics] sole preoccupation is wisdom; and it seeks it by the path of science, which, once it has been trodden, can never be overgrown, and permits of no wandering." (Ibid.)

". . . Metaphysics is also the full and complete development of human reason." (Ibid.)

[23]*Critique of Judgement* (459).

[24]Eighth Thesis, On History, 1ea.

[25]CJ (448).

[26]"Vico and Kant," *Vico's Science of Humanity*, Tagliacozzo and Verene, p. 221. From here on referred to as VK.

[27]VK, p. 227.

[28]Ibid.

[29]VK, p. 229.

[30]Ibid.

[31]VK, p. 230.

[32]Ibid., p. 229.

[33]"For Vico, existence is an outcome of the process of emanation, while for Kant existence is an involvement in network of relations." (VK, p. 225)

[34]VK, p. 240.

[35]*Critique of Pure Reason* B164. Kant goes on to say that "Things in themselves would necessarily, apart from any [human] understanding that knows them conform to laws of their own. But appearances are only representations of things which are unknown as regards what they may be in themselves." (B164)

It is clear that Kant thought of his idealism as unique in this respect. His was the only idealism that concerned itself with solving the problem of how we can have *a priori* cognition of the "objects" of experience. All other idealisms failed because they relied on a doctrine of intellectual intuition, e.g., Plato, which tried to account for the *necessity* in knowledge of objects, where objects were thought of as "things in themselves." Kant believes he has succeeded, however, where these other idealisms have failed, because he alone introduces the doctrine that the *senses themselves* intuit a priori. This idea together with the categories account for the necessary knowledge of objects when objects are thought of as *appearances*. (See the very important footnote in the Prolegomena, p. 152-53. Carus, edition. Also see pp. 123-4 and 133.)

[36]VK, p. 229. ". . . we cannot find in Kant a clear-cut separation between the rhythm of nature and the rhythm of history." (p. 233)

[37]VK, p. 229.

[38]VK, p. 235.

[39]VK, p. 232.

[40]"This is so on the divine level in the total sense: God can know the world because he created it. Man can know history because he created it." (p. 227)

[41]VK, p. 232.

[42]"The history of mankind can be seen . . . as the realization of nature's secret plan . . . (Idea for Universal History, p. 21)"

". . . it might be possible to have history with a definie plan for creatures [humans] who have no plan of their own." (Idea, p. 12)

[43]E.g., "For we do not know nature but as the totality of appearances, i.e., of representations in us, . . ." (Prolog., p. 80)

"But when we consider that this nature is not a thing in itself but is merely an aggregate of appearances, . . . we shall not be surprised that we can discover it only in the radical faculty of all our knowledge, in transcendental apperception . . ." (A114)

". . . the laws of appearances in nature must agree with the understanding and its a priori form . . ." (B164)

Also see A125, A 127, B160, and Prolog. 80-1, and 82.

[44]*Conjectural Beginnings of Human History* (hereafter called CB), pp. 56-60.

[45]The four stages are: (1) man's curiosity aroused by his imagination creates artificial desires (i.e., not natural) for man to pursue; (2) There is then a transformation of sexual desire, by a kind of sublimation; (3) Next, man's expectation of the future results in his experience of care (Sorge), and fear; and (4) Finally, the moral law makes man realize that he was the true end of nature.

This point, i.e., Kant's separation of history from nature, is treated by Emil Fackenheim's paper "Kant's Concept of History," *Kant-Studien* 48 (1957): 381-398. Fackenheim there argues quite cogently that Kant *distinguishes* history from nature. However, He (Fackenheim) concludes as I do not that Kant's concept of teleology in history is not actually an "explanatory" concept, but rather, one which is used only to show that facts have value. Since Fackenheim takes *this* to be Kant's project in historical construction, i.e., to show that facts have value, he concludes that Kant does not succeed and, therefore, his [Kant's] "entire enterprise lies in shambles." P. 398. I shall address this point in footnote #76.

[46]CB, pp. 59-60.

[47]Ibid.

[48]Idea for a Univ. Hist., p. 12.

[49]*An Old Question Raised Again: Is the Human Race Constantly Progressing?* p. 142.

[50]CB, p. 60.

[51]VK, p. 235.

[52]Ibid. "Kant differs from Vico because of what may be called the moralistic aspect of history."

[53]*The New Science* #343.

[54]N.S., #129.

[55]N.S., #130.

[56]N.S., #341.

[57]". . . a perpetually changing upward tendency and an equally frequent and profound relapse (an eternal oscillation, as it were) amounts to nothing more than if the subject had remained in the same place standing still." (An Old Question Raised Again, p. 139.)

[58]N.S., #918.

[59]These conditions Vico refers to as the "civil disease" of the cities which *reflective* man fell prey to because of his thinking of his own private self-interests. Vico distinguishes the two forms of barbarism in the following way: "In this way, through long centuries of barbarism, rust will consume the misbegotten subtleties of malicious wits that have turned them into beasts made more inhuman by the barbarism of reflection than the first men had been made by the barbarism of sense. For the latter displayed a generous savagery, against which one could defend oneself or take flight or be on one's guard; but the former, with a base savagery, under soft words and embraces, plots against the life and fortune of friends and intimates." (1106) N.S.

[60]N.S., 1102.

[61]Ibid.

[62]N.S., #1106.

[63]N.S., #1109. See also #129-30 and #340-42.

[64]It is just such a view that Vico criticizes in #340 as being inconsistent. He says: "But to impute conatus to bodies is as much as to impute to them freedom to regulate their motions, whereas all bodies are by nature necessary agents. And what the theorists of mechanics call powers, forces, conatus, are insensible motions of bodies, by which they approach their centers of motion, as modern mechanics has it." (N.S., #340)

[65]N.S., #388.

[66]N.S., #1109.

[67]See #342-44 for the "economy" of civil institutions in its relation to man's development and survival.

[68]"Human choice, by its nature most uncertain, is made certain and determined by the common sense of men with respect to human needs or utilities, which are the two sources of the natural law of the gentes." (N.S., #141)

[69]Arthur Melnick, *Kant's Analogies of Experience* (Chicago: The University of Chicago Press, 1973), p. 124.

[70]Thus, for example: ". . . a philosophical attempt to work out a universal history according to a natural plan . . ." (Idea, p. 23)

Once again, I should like to point out my indebtedness to Melnick's argument in his book *Kant's Analogies of Experience*. It should be noted, however, that Melnick is not at all concerned with history in the sections on teleological judgment. He is concerned instead with the Second Analogy. Nevertheless, I find what he has to say concerning teleological judgment directly relevant to history and most illuminating in general.

[71]"The system of *accidentality*, which is attributable to Epicurus or Democritus, is in its literal interpretation, so manifestly absurd that it need not detain us. On the other hand, the system of *fatality*, of which Spinoza is the accredited author, although it is to all appearances much older, rests upon some thing supersensible . . . Its conception of the original being is quite unintelligible." (CJ, pp. 391-2)

And again: "It [i.e., the thesis of Epicurus] denies that this causality is determined designedly . . . Blind chance is accepted as the explanation . . . Spinoza, as the representative of the other class, seeks to release us from any inquiry into the ground of the possibility of ends of nature . . . Unity . . . is ascribed nevertheless to things that we represent as outside one another, [as] blind necessity." (CJ, pp. 393-4)

[72]CJ, 393.

[73]Ibid.

[74]CJ, 436.

[75]An Old Question - History, p. 147.

[76]"Since the philosopher cannot presuppose any [conscious] individual purpose among men in their great drama, there is no other expedient for him except to try to see if he can discover a natural purpose in this idiotic course of things human. In keeping with this purpose, it might be possible to have a history with a definite natural plan for creatures who have no plan of their own." (Idea for a Univ. Hist., p. 12)

". . . this idea [i.e., the idea of history written in accordance with a plan or purpose] may still serve as a guiding thread for presenting as a system, at least in broad outlines, what would otherwise be a planless conglomeration of human actions." (Idea, p. 24)

"This then, is the lesson taught by a philosophical attempt to write the most ancient part of human history: contentment with Providence, and with the course of human affairs, considered as a whole. For this course is not a decline from good to evil, but rather a gradual development from the worse to the better." (Conjectural Beginnings, p. 68)

Emil Fackenheim, in an excellent article on Kant's philosophy of history, "Kant's Concept of History," *Kant-Studien* 48 (1957):381-398, has argued that for Kant "teleology is needed in history, not in order to explain historical events, but to show that they have value." (p. 393, footnote) While I agree with Professor Fackenheim that Kant wishes to show among other things that historical events have value, I disagree with him over the issue of teleological "explanation."

Fackenheim holds that the teleological concept, as Kant uses it in biology as well as history, as ". . . a heuristic, not an explanatory function. We use it as a mere guide, with the help of which we explain as far as we can. And all genuine explanation is mechanical." (p. 390)

". . . our purposiveness is a concept necessary to biology, its use does not prove the existence of purposiveness in nature. It proves something, not about nature, but merely about human knowledge. In investigating certain facts of nature, we must proceed as if a concept necessarily formed by us were applicable to nature without." (Ibid.)

My disagreement with Fackenheim rests on the following two points: first, Kant explicitly says in the *Critique of Judgement* that of the *two types of explanation*, one is teleological and the other is mechanical.

"All semblance of an antinomy between the maxims of the strictly physical, or mechanical, mode of explanation and *the teleological, or technical*, rests therefore, on our confusing a principle of the reflective with one of the determinant judgement." (CJ, 389) [my emphasis]

"Thus we should estimate nature on two kinds of principles. The mechanical mode of explanation would not be excluded *by the teleological* [my emphasis] as if the two principles contradicted one another." (CJ, 409) See also all of Section 78, CJ 410-415.

Second, if Fackenheim is suggesting by his use of "genuine" above that mechanical explanation is genuine whereas teleological explanation is not because mechanical explanation is thought to be constitutive of nature whereas teleological explanation is not, then I think that he owes us quite a bit of argument to establish this point.

So far as I can see, there is no reason to suppose that the mechanical method of explanation cannot (like the teleological method of explanation) also be thought of as a principle of *reflective* (as opposed to determinate) judgment. As Melnick has shown quite clearly in his book *Kant's Analogies of Experience*, the Second Analogy is compatible with

the mechanical method of explanation being thought of as a *regulative* principle. This is to say that simply by holding that "all events are caused" and in trying to eliminate contingency by tracing the causes of an event to a single cause, one has not *thereby* ruled out the notion that humanism is a regulative principle.

Further, as Kant himself explicitly points out, the mechanical method of explanation, and therefore the argument for time-determination in the Second Analogy, is compatible with the teleological method of explanation *in the sense that* we can ". . . subordinate one to the other, namely mechanism to designed technique. And on the transcendental principle of the finality of nature this may readily be done." (CJ, 414)

CHAPTER 6

CONCLUSION: A DIFFERENCE AND A SIMILARITY

We are now in a position to draw some conclusions concerning the parallel development of Vico's and Kant's philosophies of history . We are in a position to do this now, for we have come to see how certain epistemological concepts were used by each philosopher in his respective philosophy of history. The basis for each philosophy of history was the particular use made of the "maker's-knowledge criterion" of truth and the concept of teleological explanation.

We have seen that Vico and Kant by relying upon these two concepts came to hold (1) that it was possible to justify historical knowledge, or at least our "idea" of history; (2) that history could be viewed with *certainty* in that it was a purposeful activity; and (3) that history is the story of a unique "self-making," i.e., that of man making himself human.

We also saw that there were at least three similarities to be found in the use made by Vico and Kant of these two epistemological concepts. *First*, both philosophers because of their commitments to the above concepts held similar views concerning certain other philosophical issues. For example, both Vico and Kant developed a certain philosophical notion which we have referred to as a "God-man maker's-knowledge analogy" in order better to explain how human knowledge is possible. Once they had committed themselves to a "maker's-knowledge criterion" of truth, it seemed inevitable

that they should go on to point out the "limits" of man's knowledge (i.e., knowledge which comes about as the result of discursive knowing) by comparing man's "making" with a non-human "unlimited" intellect and its "making" (via its intuitive knowing).

This seemed inevitable precisely because once the issue of knowledge was thought of in terms of "making," the question naturally arises as to the very best kind of making (i.e., the most perfect attainment of knowledge) that could possibly occur.[1] Both Vico and Kant took this "best kind" of knowledge to be an *immediate, intuitive* kind of "knowing-making" which the human intellect was simply not capable of, in the area of the natural sciences at any rate. *Second,* both philosophers shared the philosophical view that Descartes' Cogito was unsuitable for the foundation of the sciences. Once again, this was because of their similar commitments to a "maker's-knowledge criterion" of truth. They argued that scepticism is not actually refuted as Descartes thought it was simply by showing that we have an indubitable awareness of self. The sceptic does not doubt awareness; he doubts, instead, that there is knowledge, and both Vico and Kant emphatically claim that awareness of the self is *not* knowledge of the self.[2] Therefore, they argued, Descartes' so-called foundation of knowledge is no foundation at all.

Third, Vico and Kant share the important philosophical view that nature and history are to be sharply distinguished. They held this view, once again, precisely because they saw that the "making" which is involved in nature (and thus the knowledge which results therefore) is of a different quality from the "making" which is involved in history. For both Vico and Kant, knowledge of nature is possible, but the content of that knowledge

is contingent and void of intrinsic value. Knowledge of history, on the other hand, is not only possible, but *certain*; further, it demonstrates that man's activity (when seen historically) has absolute value. To say this (i.e., that man's activity seen historically has absolute value) is simply another way of saying that Vico and Kant because of their epistemological commitments share the view (essential to the thesis of historicity) that "human being" is a "self-making" process.[3]

These developments from our perspective now seem rather obvious, and I shall, therefore, not dwell on them further. What I should like now to do instead is conclude by commenting on what I take to be, on the one hand, the *fundamental difference* between Vico and Kant (which also constitutes their respective unique achievements in the history of philosophy) and, on the other hand, what I take to be a *fundamental similarity* in terms of a commitment that each shares. The difference concerns their respective epistemologies in relation to nature and history. The shared commitment concerns their humanism. I shall begin with the difference.

We have seen in the previous chapters, and especially in Chapter V, that Vico and Kant share the notion that knowledge of history is possible if and only if we make use of a "maker's-knowledge criterion" of truth together with the notion of teleological explanation. Further, we saw in Chapter V that Gadol and Rotenstreich had overlooked in their respective comparisons that Vico did in fact apply his "maker's-knowledge criterion" to *nature* as well as history. We also saw, as they did not, that Kant's philosophy of history is grounded in *his* "maker's-knowledge criterion." However, while it is true that Kant grounds history epistemologically by the dictum (or formula), the use he makes of it is, unlike Vico's, *indirect*.

This is in effect to say that Kant could not see how the dictum could be *directly* used to "make" history, while Vico could not see how it could be *directly* used to "make" nature.

I should like to dwell on these differences for a moment, for I believe that it is precisely here that the *fundamental* difference in Vico's and Kant's philosophies of history occurs. It may help if we state these differences positively and negatively. Let us begin with the positive side.

Vico, by directly applying the "maker's-knowledge criterion" to history, was able to provide a comprehensive systematic answer to the question "how is history possible as a science?" This was possible because Vico saw that history is unique in that it is the sole area in which man can attain absolutely true *and* certain knowledge (i.e., this is the sole area where verum-factum applies absolutely).[4] This is because the historian himself is an *instance* of the *subject* that he is investigating. He is, therefore, at once the composer (i.e., the maker) and (thus) the knower of the material which historical knowledge has for its object. Further, being a man, he is also history's ultimate object. (The historian, as we've seen, is the ultimate composer of history in two different senses. In the first sense, it is because he himself is human that the ultimate object of his investigations, i.e., the actions of the original historical agents, will not be in any sense foreign to him. What he studies is man, of which he himself is an instance, thus giving himself a privileged position to study the "makings" of the original historical agents. Secondly, he has access to certain principles (given to him by Vico's "new science") by which he may re-create, i.e., re-make, in their *full* meaning the thoughts and intentions of the original historical agents by placing them in a wider and more intellible context than the original historical agents could have ever been

aware of themselves. That is to say (in this second sense) that it is the historian himself who "makes," i.e., creates, history. Of course, the historian's own "makings" will later become "makings" in the *first* sense, i.e., acts of an original historical agent. The result will be that these acts will later have to be "made" (i.e., re-made in the second sense) by another historian who will create the context for, say, Vico's *New Science*.)

It was because of his notion that only a "maker's-knowledge criterion" could justify knowledge and his profound awareness of its remarkable applicability to the "historical" world that Vico came to make the revolutionary and exciting contribution to the epistemology of history that constitutes *The New Science*. Something can be known with certainty only if it is "made" and, in the case of man, it is *history* that fulfills this requirement.

What of Kant? We have seen that Kant too believed that knowledge could be secured only by the "maker's-knowledge criterion." However, the critical philosophy's virtue was that for the first time in the history of philosophical thought, it demonstrated in a comprehensive and systematic way how a science of nature was possible a priori. Kant's genius lies in the fact that he saw that the "maker's-knowledge criterion" could be applied to nature (appearance), i.e., to "objects," even on the level of human (i.e., intuitively sensible and yet a discursive) understanding. No other philosopher had seriously entertained this profound idealistic possibility. That Kant *was* an idealist he never denied. However, the *kind* of idealism he offered he considered revolutionary. He says:

> . . . mine is solely designed for the purpose of comprehending the possibility of our cognition *a priori* as to objects of experience, which is a problem never hitherto solved or even suggested. In this way all mystical idealism falls to the ground for (as may be seen already in Plato) it inferred from our

> cognitions *a priori* (even those of geometry) another intuition different from that of the senses (namely, an intellectual intuition), because it never occurred to any one that the senses themselves might intuit *a priori*.[5]

Kant held that *sensible* objects can appear to us intuitively precisely because we "make" them. This is to say that *we* supply the forms, *even on the level of sensible intuition*, which allows the "object" to be intuited in the first place. We have seen that Kant argued that if the object was *not* "made," it could not be known. Further, we have seen that he held that there were only two levels on which the "making" of the object could take place, i.e., either the level of sense or the level of intellect. Now, concerning intuition, the view that an object could be intuitively "made" on the level of intellect (i.e., man's intellect) Kant (as well as Vico) considered absurd. To admit *intellectual* intuition on the part of man would be the same as admitting that simply by *thinking* objects man could bring them into existence. Hence, Kant reasoned, intuition cannot occur on the level of intellect but must, instead, occur on the level of sense. We can intuit sensible objects because we "make" them, which is to say we supply the forms (space and time) without which the object could not appear.

It was precisely because Kant could see (where others could not) that the "maker's-knowledge criterion" could be *directly* applied to nature, i.e., that the "objects" of nature might be "made" (via sensible intuition and discursive categories) in such a way that they accommodate themselves to the subject, i.e., to our human cognitive abilities, that he (Kant) could make the exciting contribution to an epistemology of nature that constitutes the *Critique of Pure Reason*.

However, to these positive contributions made by both Vico and Kant in their respective uses of the "maker's-knowledge criterion" correspond what may be termed *negative* limitations. It is clear, e.g., in the case of Vico, as we acknowledged in Chapter V, that there is a *sense* of scepticism pervading his treatment of nature vis-à-vis his "maker's-knowledge criterion."

Vico simply could not see how the "maker's-knowledge criterion" could be applied *directly* to nature. To apply it directly to nature, he thought, would amount to claiming that we in fact have created nature, i.e., that we have intellectual intuition of natural objects, and this, he thought, was obviously false.[6] However, we have seen that this was not the case for Kant. The reason is that Kant had ingeniously devised a doctrine of "appearance," thereby allowing him *direct* applicability of the "dictum" to nature. Therefore, for Kant we do in fact create nature. This distinction, i.e., the one between appearance and reality, I reiterate, was totally foreign to Vico's thought. For Vico the ultimate *metaphysical* ground for our knowledge of nature lies in his rather obscure doctrine of "metaphysical points."[7] Vico's *negative* limitation, then, lies in the fact that he could not in a satisfactory way apply the "maker's-knowledge criterion" *directly* to nature. That is to say, he could not envisage a full-fledged "Copernical revolution" when the "object" of knowledge was the natural world.

Kant, on the other hand, as Dilthey made clear a half-century later, had with the critical philosophy provided an epistemology of nature *as well as* the basis for a science of history. However, that it was *not* Kant but Dilthey who fully realized the critical philosophy's application to history is precisely Kant's *negative* limitation. Kant simply failed to

see that the "maker's-knowledge criterion" that he had so ingeniously applied to the natural world was particularly suitable for a theory of *Geisteswissenschaften*.

Kant never fully realized, then, that history is something unique to man in an important epistemological sense and that the knowledge of history, therefore, would be of a qualitatively different sort from that of nature. He never realized this precisely because he never saw exactly *how* the "maker's-knowledge criterion" could be applied uniquely (because of the identity of *man* and the object of study in history which is also *man*) to history. Therefore, Kant's *negative* limitation was that he could not clearly see that the "maker's-knowledge criterion" was particularly suitable for history, i.e., human activity, which is the "object" in the realm of the human spirit. Instead, it was Dilthey, a self-acknowledged Kantian, who later extended Kant's principles to the area of history and thereby finally pointed to this crucial difference (a difference already pointed out by Vico) between nature and history. When speaking of the "human" studies and history, Dilthey tells us:

> Their range is identical with that of understanding, and understanding has the objectifications of life consistently as its object. Thus, the range of the human studies is determined by the objectification of life in the external world. *The human spirit can only understand what it has created* [my emphasis]. Nature, the object (Gegenstand) of the natural sciences, embraces the reality which has arisen independently of the efficacy (wirken) of spirit. Everything on which man has actively impressed his stamp forms the object (Gegenstand) of the human studies.[8]

Perhaps the best way finally to state the fundamental difference between Vico and Kant on the subject of history is to say that Kant never developed an explicit epistemology of history, whereas Vico did. This is

not to say that Kant did not provide indirectly a basis for an epistemology of history. His own work in history shows not only that he did provide such a basis but that he was aware that the basis must be gounded epistemologically in a "maker's-knowledge criterion" of truth.

Further, as we have seen, that basis (although never explicitly developed by Kant) directly parallels similar notions that *were* developed by Vico in his new science. It is precisely because of *this parallel development* of Kant's ideas on history with Vico's that Dilthey's own statements concerning his lifelong project of effecting a "Critique of Historical Judgement" sound so completely Vichian. For example, Dilthey tells us that:

> The first condition for the possibility of a Geschichtswessenschaft [science of history] lies in the consciousness that I am myself a historical creature, that the one who examines history also makes history (Dilthey, p. 25).[9]

Thus, although the step to history, via the epistemological commitment to a "maker's-knowledge criterion," was never taken by Kant; it was, as Dilthey makes evident, only inches away. For Vico, on the other hand, this same step had been taken some sixty years earlier. The *fundamental difference* between Vico's and Kant's philosophies of history, therefore (epistemologically speaking), amounts to the absence in Kant of a *direct* application of the "maker's-knowledge criterion" to history.

This absence of a direct application of the criterion to history in Kant represents the "other side" of the same *limited* use of the criterion which occurred with Vico in the area of nature. The history of philosophy shows that later so-called "idealistic" philosophers could not rest with either of these limitations but would, instead, eventually overcome them. This is most evident, of course, in the philosophy of Hegel. Hegel,

though his doctrine of "estrangement," was able to overcome Vico's doubts concerning the "making" of nature; yet, at the same time, he (Hegel) could resist the trenchant subjectivity involved in Kant's doctrine. Further, by applying an *objective* "maker's-knowledge criterion" to culture, Hegel joined Vico in arguing that true objectivity was possible only in the realm of the historical (i.e., objective) spirit. Hegel was thus able to overcome Kant's doubts that history may be merely a subjective enterprise.

This, then, ends our comments on the fundamental differences between Vico's and Kant's philosophies of history. I should like now to conclude this study by commenting upon what I take to be the fundamental *commitment* shared by Vico and Kant in their respective philosophical works on history, namely their commitment to humanism.

The idea I should like to develop here is this: that from the examination of the concept "maker's knowledge" and "teleology" in the philosophies of history of Vico and Kant, it becomes apparent that these two philosophies of history announce in their own distinctive fashion a shared commitment to humanism. We have seen, e.g., that the concept which each philosopher had regarded as *central* to his respective philosophy of history was the concept of "self-making." What I should like to point out here is that within Vico's and Kant's particular concepts of "self-making" in history, there exist certain fundamental ideas which are woven throughout their philosophies of history. These fundamental ideas, I believe, are precisely those which are essential to the traditional notion of humanism. It is these "humanistic" theses, therefore, that I wish to draw out of Vico and Kant's philosophies of history.

Let us first of all note, then, what has been traditionally taken to be some of the fundamental ideas of humanism and, second, point out how Vico and Kant made use of these ideas (not necessarily in any conscious manner) via the concept that is central to their respective philosophies of history, i.e., "self-making."

The origin of Humanism as an explicit philosophical movement can be traced back to the beginnings of the Italian Renaissance and the writings of Petrarch (1304-74), Humanism's first great representative.[10] Generally speaking, this movement is characterized by its pointed protests against an overlogicized, rationalistic view of man and by its appeal for a "view" which would emphasize man's moral worth, his value, and his dignity. Because of this particular emphasis, the humanist's studies came to be known as the "humanities," indicating that they were interested in studying those areas that were of particular significance to "human" beings, e.g., morals, art, literature, and history.

There are several major ideas and themes that stand out in the development of the so-called humanist movement. One such theme is the exaltation of freedom found in many humanists' writings. The reason why freedom was such an essential idea to humanism was that freedom played an important role in justifying other ideas, e.g., those of autonomy and responsibility. That is to say that if one is to justify the notion that "man can, though his own natural gifts, work and transform his world into a world of his choosing," one must allow that he (man) has the freedom to do so. As Pico della Mirandola has God state it in his *Oration on the Dignity of Man*:

> I have given you, Adam, neither a predetermined place nor a particular aspect nor any special prerogatives in order that you may take and possess these through your own decision and choice. The limitations on the nature of other creatures are contained within my prescribed laws. You shall determine your own nature without constraint from any barrier, by means of the freedom to whose power I have entrusted you. I have place you at the center of the world so that from that point you might see better what is in the world. I have made you neither heavenly nor earthly, neither mortal nor immortal so that, like a free and sovereign artificer, you might mold and fashion yourself into that form you yourself have chosen.[11]

Other particularly humanistic themes concerned nature and culture, reason and autonomy, morality and history. It was the humanist ideal that man was to achieve his humanity *through* his natural and social nature. Further, nature had in a metaphorical sense "picked man out" from all other creatures to develop and inhabit a different world from the merely natural one. This "other" world was the "civil world" which, unlike nature, would be the locus for *culture.*

It was this notion of culture which designates among other things the proper, *human* way of developing one's natural talents and capacities that was held responsible for the development of man's humanity. To anthropomorphize a bit, it was as if nature somehow "knew" that she could not develop by herself the full potentialities and capacities in one of her creatures (i.e., man), and therefore, she called upon the "civil world" and culture to do it for her.

Now it is precisely here that man's reason and self-sufficient autonomy is called upon to complete this, *his* development. Since nature is helpless with her merely mechanical causation to effect man's development of his full potential and capacities, man is left to develop them himself via "a different kind" of causality. In other words man must effect his

own development independent of and oftentimes in spite of nature. That is to say, he must develop himself *freely* by his own *choices*, and it is just these choices for which he will ultimately be praised or damned. In this "civil world" man's choices, being free, will be "moral" choices which means that the causality which effects them will have the character of neither the absolute necessity of, say the Spinozist nor the "blind chance" of the Epicureans. They will, instead, have the character of a higher, moral necessity, i.e., a moral law, with which man is in tune.

Hence, the object of studies of the humanist becomes not the logical abstractions of the scholastics nor the investigations of natural causes of the empirical scientist but, rather, the moral and historical experience of man. With the humanists the notion of freedom becomes centered in man's spiritual activity which is itself possible only in a "civil world."

Vico's entire mature work, *The New Science*, is concerned precisely with this "civil world" and these humanistic themes. Further, it is in Kant's philosophy of history that we find these identical concerns announced.

Vico, finding himself at the end of a long humanistic tradition and in the midst of a new "scholasticism," that of Cartesian science, actively decided to take up once again the defense of humanism. To show that Vico was a defender of humanism and actively committed to its program requires little effort. Indeed, a cursory glance at just one of his works would make clear this point. For example, in his seventh inaugural oration, *On the Study Methods of Our Time* (*De Nostri*) Vico asks the traditional educator's question: "Which study method is finer and better, ours or the Ancients?"[12] And, although he gives no *explicit* answer to this question,[13] his comparison and contrast of the methods of the ancients with those of the

moderns clearly turns out to be a vindication of the primacy of the historical and social dimension of man. It is, as Elio Gianturco points out ". . . perhaps the most brilliant defense of the humanities ever written."[14] However, our explicit concern here is with Vico's commitment to humanism as seen in the context of his *philosophy of history*. Let us look, then, for a moment to his notion of "self-making" in history.

We have seen that Vico reacted against Cartesianism epistemologically (and humanistically) by rejecting the Cartesian "Cogito" as the basis of truth and substituting in its stead a "maker's-knowledge criterion." It was clear to Vico that one of the consequences of accepting the Cogito and the kind of "self-evident" awareness that it was supposed to demonstrate was that "scientific" truth would have to be thought of solely in terms of that self-evident certainty that is achievable by the Cogito.

As it turns out, the self-evident certainty in question is achievable only in those areas where one can *deduce* one proposition from another such as in mathematics. This, in turn, means that "scientific" truth can be legitimately arrived at only if *the method* used to achieve it is itself modeled after the mathematical sciences. It is, of course, precisely here that Vico reacts against Cartesianism on *humanistic* grounds. The Cogito, as a basis of scientific truth, clearly repudiates the claim that, e.g., *history* could in any way provide scientific truth. This is because there is and can be no clear method of *deducing* with mathematical rigor how and why certain events take place, much less what the correct historical description of them should be. Therefore, there is no way of establishing "historical" truth clearly and distinctly. The same holds for other humanistic studies, e.g., art, poetry, and rhetoric. These disciplines must, on

Cartesian grounds be systematically excluded from the area of "scientific" method and, therefore, be denied the ability to demonstrate "scientific" truths about man.

It was Vico's view, however, and one of the main theses of humanism that:

> The fundamentally human element consists in the fact that the forms of human behaviour must continually be sought and defined anew *and are therefore to be discovered in the historical role of man* [my emphasis] and in the elucidation of that role: it is history which differentiates the human being from the animal.[15]

This is to say that for the humanist (and Vico) one can arrive at the nature of a thing scientifically and thus conceive its truth only if one is in a position to know its origin, its nascence, i.e., its history. Vico tells us quite unabashedly that the nature of things ". . . is nothing but their coming into being (nascimento) at certain times and in certain guises."[16]

The result is that for the humanists in general and Vico in particular one can achieve scientific truth of man if one re-creates his history. In this re-creation one discovers that man's polity, his language, poetry, art, myths, and religion all serve as evidence of the particular kind of nature man has, or had, at a particular time. Hence, in order to discover the nature(s) of man and thus the "truth" about him, one must, of necessity, rely upon just those *humanistic* disciplines, e.g., philology, rhetoric, literary criticism, etc., that were systematically excluded by Cartesianism. For Vico, therefore, there are two aspects to his reaction to Cartesianism: one is an epistemological aspect concerning a criterion of truth; the other, a call to the defense of humanism against Cartesian scholasticism.

It becomes clear that because of Vico's use of his "maker's-knowledge criterion" in the area of history, these two aspects are in essense one. In applying the "maker's-knowledge criterion" to geometry, nature, and then history, Vico found it necessary to draw a sharp distinction between nature and history. The distinction was twofold: on the one hand history is made completely by man and nature is not; on the other hand, the knowledge gained in the area of history demonstrates that man is a self-maker," whereas the knowledge gained in the area of nature does not.

History, for Vico, can therefore be known with complete certainty, while *the essential philosophical fact* that one learns in gaining historical knowledge is that man is a creature which displays autonomous, moral, purposeful behavior. This is to say for Vico that man is a creature which is responsible for his own development though his own choices. Further, it is primarily through these choices that he has "made" the civil world, and it is through his culture that he has maintained it. By both making and maintaining the civil world, man has made and maintained himself.

History is to be seen, therefore, as a process of self-making, and it is precisely this pregnant notion of "self-making" that contains all of the seminal ideas of humanism. Autonomy, morality, judgment, reason, history, taste--all of these concepts are specifically "humanistic" concepts *built into* the notion of "self-making." As Gadamer points out when speaking of Vico's century:

> The idea of self-formation or cultivation (Begriff or Bildung), which became supremely important at the time, was perhaps the greatest idea of the eighteenth century, and it is this idea which is the atmosphere breathed by the sciences of the nineteenth century.[17]

That Vico accepts this notion of "self-forming" or "self-making" is obvious enough, but what is less obvious is the manner in which it is epistemologically justified by him. From our study we have seen that historical knowledge is justified for Vico by his "maker's-knowledge criterion" together with his concept of teleological explanation. It is these epistemic concepts that render history a science and in so doing point to a distinction between history and nature, historical knowledge and natural knowledge. In nature things are what they are; God made them, and hence, natural knowledge does not indicate a (human) "self-making." Natural knowledge, therefore, in no way justifies a "humanistic" viewpoint. It is in history, not nature, that *man's nature* is found to depend upon his institutions. Further, it is in history that *man* is seen to be the sole author of those institutions. Hence, man's history is the story of his own self-making. In this manner the notion of "self-making" places Vico squarely in the humanistic tradition, and that notion is finally epistemologically justified by his "maker's-knowledge criterion."

What of Kant? Here once again we come across the all-important distinction between nature and history. Further, Kant's distinction is also drawn on the basis of the "maker's-knowledge criterion" (although not in the same manner as that of Vico). For Kant, nature (i.e., appearance) is "made" by us and, interestingly enough, the knowledge of *how* it is made, Kant holds, results in a kind of "self-knowledge."[18] As we have seen, the question of an epistemology of history is never *explicitly* brought up by Kant; nevertheless, he does give us a "philosophical sketch" of how he thinks history is possible.

When we examined Kant's essays in the philosophy of history, we found that history is possible only if (1) *nature is possible*; (2) nature is teleological; and (3) man is distinguished from teleological, *physical* nature by the fact that he alone is its "final" end. This amounted to admitting that *man's* behaviour is governed by a *moral* teleology as well as a physical teleology. Having seen the manner in which these three things (i.e., nature, physical and moral teleology) are epistemologically possible, we came to understand both how it is that history is possible and what the essence of history is. That is to say, it was Kant's "maker's-knowledge criterion" and his concept of teleology (physical and moral) which allowed us (1) to "make" and therefore to know nature; (2) to know nature to be a teleological whole; and (3) to see history as the story of man as a "final" end.

Upon examining the notion of man as a final end, we found that Kant meant first that *only* man is an end in himself because he is the only creature capable of "practical" reason.[19] Second, we found that man for Kant:

> . . . should, by himself, produce everything that goes beyond the mechanical ordering of his animal existence, and that he should partake of no other happiness of perfection than that which he himself, independently of instinct, *has created by his own reason* [my emphasis].[20]

This is finally to say that history is a kind of demonstration and that what it demonstrates is the "worth" of man. This worth is not dependent on what man receives or enjoys Kant tells us.

> On the contrary it is the worth which he alone can give to himself, and which consists in what he does--in the manner in which and the principles upon which he acts in the *freedom* of his faculty of desire, and not as a link in the chain of nature.[21]

It is because of this distinction between nature and history, so sharply drawn, that we can see in Kant's philosophy of history (just as in Vico's) a commitment to humanism via the epistemological notion of "self-making." Once again, involved in this notion are the ideas of freedom, autonomy, culture, and morality, i.e., those same notions developed in Italian humanism and defended in Vico's philosophy of history.

At first sight, it might strike one as odd that such ideas would surface in Kant's philosophy of history. That is, it might be regarded as odd because the Enlightenment is normally thought of as, at least in some sense, antithetical to such ideas (those above); if so, why should Kant's philosophy of history contain them? The program of the Enlightenment seemed to suggest that man would establish once and for all the universally valid principles for all development and would, in general, throw out notions such as intuition, genius, spontaneity, etc. He (man) would prefer the ideas of reason, common sense, and calculated reflection to the humanistic notions (mentioned above). Therefore, there seems to be at least one straightforward sense in which the spirit of the Enlightenment was antithetical to the basic ideas of humanism, at least when humanism was seen in its more Romantic garb. Was this not, after all, the essence of Kant's disagreement with Herder's philosophy of history?

While there is a genuine issue here (i.e., the Enlightenment ideas and ideals versus those of the Romanticist--Humanist view of man and history), I believe that the apparent inconsistency of Kant (if indeed we think of it as being inconsistent) is a positive one. This is because Kant's thought because of its wide range often seems at odds with itself while, nevertheless, covering and speaking to many important, diverse problems

(sometimes at the expense of being inconsistent). This may be a bit clearer if we take notice of the particular position of his thought in the context of 18th-century German thought.

Kant wrote three Critiques, philosophies of history, morals, religion, and science, as well as other pieces--which have not been (and probably will never be) clearly shown to form one consistent whole. Nevertheless, because of his philosophical interests and deep insight into various fields of knowledge and because of his dedication to truth, Kant thought and wrote on these subjects with the view to understanding, first, their truth and secondly, to making them consistent with his other views. We need but consider how artificial the "architectonic" of the third Critique seems when justaposed with the sensitive analysis of aesthetic experience that one finds there. It is as if in an afterthought Kant made an attempt to unify the conclusions there with those of the first and second Critiques.

This is not to say that Kant didn't think of his work as an organic unity nor to say that he didn't attempt to bridge the theoretical and intelligible "worlds" with a book on Judgement. It *is* to say, rather, that Kant was not the kind of philosopher to be tied to a system or a movement such as the Enlightenment if it meant sacrificing the *particular truths* of a given area of study. For reasons such as these, I do not find it surprising that Kant's philosophy of history manifests ideas that are quite appropriate to the study of history as opposed to ideas that, while more consistent with the spirit of the Enlightenment, are not appropriate to the study of history (e.g., the Enlightenment's interest in mechanism, universal laws of nature, etc.). Further and perhaps more important, it should be noted that Kant lived at what may be termed the *end* of the Enlightenment,

or at least at the end of the radical emphasis on rationalism which characterized it as a movement. Wieland, Herder, Goethe, Schiller--all of these thinkers had "dared to know"also, but their inquiry came to involve a quite different revolution in thinking from that of the rationalists, particularly in the *human sciences*. These thinkers had demonstrated, among other things, that the human sciences are not to be thought of as inferior to the natural sciences. As Gadamer puts it:

> Possessed of the intellectual heritage of German classicism they developed the proud awareness of being the true heirs of humanism. The period of German classicism had not only brought a renewal of literature and aesthetic criticism which moved beyond the outmoded ideal of taste of the baroque and the rationalism of the enlightenment, it had also given to the idea of humanity, and to the ideal of enlightened reason, a fundamentally new content . . . and thus prepared the ground for the growth of the historical sciences in the nineteenth century.[22]

It is in the epistemological work of Kant that this ground was prepared for these thinkers. More specifically, in his philosophy of history. It is in this sense that we can appreciate Kant's far-reaching commitment to humanism. With Kant we see once again that a "maker's-knowledge criterion" of truth secures knowledge of nature and of history, while drawing an important distinction between them. The knowledge one gains from history is, when thought of philosophically, that man is a "final" end and that history is the story of his own *freedom*. History, in other words, is the story of man "making" himself free and thus human. It is precisely this notion, then, of "self-making" that displays Kant's humanistic commitment. As he himself tells us in the *Anthropology*:

> Man is destined by his reason to live in a society with men and in it to cultivate himself, to civilize himself, and *to make himself moral* [my emphasis] by the arts and sciences. No matter how strong his animal tendency to yield passively to the attractions of comfort and well-being, which he calls happiness, he is still destined *to make himself worthy* [my emphasis] of humanity.[23]

Hence, with Kant as with Vico we find that embedded in his philosophy of history (which is ultimately epistemologically grounded by a "maker's-knowledge criterion") is the humanistic concept of "self-making." It is precisely out of this concept that the ideas of Kant's humanism develop, and it is here in his philosophy of history that he is closer in spirit to Vico than to the spirit of the Enlightenment.

Let us here conclude our study with this question: "What *significance* do Kant's and Vico's epistemologies of history and their corresponding commitments to humanism have for *us*?" The answer divides itself into at least two further questions: first, concerning the philosophy of history and the other "human" sciences, exactly what epistemological grounds will best serve to justify knowledge in these areas? For example, shall our model be the "natural" sciences, or shall we instead seek out different grounds? Second, what of humanism? That is to say, ought we to take into account a humanistic view of man when we are considering the answer to the first question?

I realize that an adequate answer to either of these questions would entail an entire work itself. I shall, therefore, offer some *opinions* which, because of time and space, I shall not here try to defend in any systematic way. Nevertheless, I hope that this dissertation provides a context within which the opinions that I offer here will seem less arbitrary and dogmatic than they would without such a context.

As I see it, the question of the appropriate epistemological grounds for the "human" sciences lands us squarely in the middle of the debate between so-called "scientific" explanation and "other" kinds of explanation. Concerning this debate, my own view is the following: I reject

any view that states or implies that causal explanation of human action and creation can be reduced *in toto* to nonmental physiological responses to the physical environment. I reject any view that states or implies that all human action is *only* an expression of physical and somatic conditioning which, if understood, could prescribe the laws of all human behavior. Finally, I reject all views that argue that human action can be "explained" without reference to the subjectively constituted meanings and values that the actions in question have *for the agent and other men.* I reject these views, first, because there is simply no evidence in our lived experience to support them. But secondly, and perhaps more important, I reject them because they systematically exclude those things for which *there is evidence* for in our lived experience.

My point is simply this: if basing the human sciences on the premises of the natural sciences *means* that we *must adopt any* of the three views that I have rejected above, then I believe we should *throw out* the model of the natural sciences as a ground for the human ones. I believe that our lives are more subtle than such theories and models allow them to be.

Perhaps here one might object and point out that our argument with the "natural science model" as a ground for the human sciences is really pointless. It might be said that we are simply mistaken if we believe that a "scientific" model of explanation in the area of human action necessitates the kind of "reductionistic materialism" that we have been intimating. Therefore, by attacking the "scientific" model of explanation *as a ground* for the "human" sciences, we have simply been attacking a man of straw.

To this objection I can only reply that it is not my intention to attack a strawman, and it is not my intention to here argue that a "natural science model" *necessitates* materialism. I wish only to point out that *if* committing ourselves to the "natural science model" in the area of human action commits us to any of the three views that I have rejected above,

then we should not make the initial commitment. (Of course, if basing the human sciences on the model of the natural sciences *does not* commit us to any of the three views that I have rejected above, it would not *necessarily follow* that the model of the natural sciences should serve as our ground for the human ones.)

It is in this light, then, that what Vico and Kant have had to say with their "maker's-knowledge" idea becomes [perhaps urgently] important. That is to say, it is only when and if we see a need for a *different ground* of "explanation" for the "human" sciences (than the model of the natural sciences) that we can come to appreciate the "maker's-knowledge" option provided by Vico and Kant. The need I speak of is a need to philosophize once again about our *actual lives* as they are lived. In my view this "need" is apparent today, and I believe, therefore, that we should intelligently take into account what Vico and Kant have had to say.

And what of humanism--ought we ever give up its defense? Vico and Kant in their philosophies of history (and other writings) emphatically answered *no*. They instead diligently defended the autonomy and responsibility with which man must himself "make" his history and "social world." They saw fit to point out that this social world was not to be thought of as merely something "natural" or for that matter "divine." It was to be thought of as *human*. They argued that it was *man's* world, and in making it he makes himself. Hence, their emphasis on what *should* go into its making, i.e., morality, the arts, the sciences. Surely in this time of apparent decadence, of life focused around shopping centers, of conglomerate companies determining the fate of peoples in distant lands (I mean in *our* century), surely the ideal possibilities of life which humanism envisages are not to be ignored.

It seems clear that in this century we have lost our historical sense. However, we can and should reclaim it. History and our historicity are not dead things in a past, gone, forever past. History is our present. It is history, not nature, which displays our humanity. To take up and more importantly to "philosophically" clarify history is *necessarily* to take up and clarify our humanity. This is because the philosophy of history is *essentially* about man, his life, and its meaning. AS the great Ortega y Gasset has said:

> History is the systematic science of that radical reality which is *my life*. It is, then, a science of the present in the most rigorous and actual sense of the word. If it were not a science of the present, where would we encounter that past which one can ascribe to it as a theme? The opposite interpretation, which is customary, is the equivalent to making of the past an abstract, unreal thing that remained lifeless just where it happened in time, when the past is the live and active force that sustains our today. There is no *actio in distans*. The past is not there, at the date when it happened, but here, in me. The past is I--by which I understand, my life.[25]

Needless to say, I share the spirit of Ortega's view as do, I believe, Vico and Kant. The structure of human life as manifested in time and space is thoroughly historical. Our very being vis-à-vis our history must be "made." We are all "beings-in-the-making."

I hope this work has been able to suggest in the light of the epistemological foundations laid down by Vico and Kant how it is possible for us to begin a new philosophical examination of that "radical reality," history. The first step is again to think of man as "maker." In so doing, we shall also surely once again take up the not-unworthy defense of humanism.

NOTES AND REFERENCES

[1]For some objections to the "maker's-knowledge 'move'," see Prichard's *Kant's Theory of Knowledge* (Oxford: Clarendon Press, 1909), where he (Prichard) says, e.g. "The fundamental objection to this account of knowledge seems so obvious as to hardly be worth stating; it is of course that knowing and making are not the same. The very nature of knowing presupposes that the thing known is already made, or, to speak more accurately, already exists." (p. 235)

Also see *Practical Reason*, ed. Stephan Körner, pp. 103-112, where J. L. Mackie states and then argues for the following criticism: "The notion that there is a special sort of knowledge that we can appropriately call maker's knowledge, and that is superior to any other sort of knowledge, is, I think, mistaken. Making something--that is, bringing it about that something exists--does not in itself give the maker any knowledge of what he has made; the belief that it does seems to arise from the confusion of at least six distinct points or suggestions." (p. 103)

A close examination of these "objections" vis-à-vis our study should show that the "objectors" have missed the point.

[2]For example, Vico tells us "That I think is not the casue but the sign of my being a mind, and a sign is not a cause. A sceptic of sense and discretion will not deny the certainty of signs, but he will deny the certainty of causes." (Flint, p. 90; and *De Antiquissima*, ed. Sansoni, p. 68).

Also: ". . . for while the mind apprehends itself, it does not make itself, and because it does not make itself it is ignorant of the form or mode in which it apprehends itself." (Ibid.)

And Kant tells us: ". . . I am conscious of the existence of my soul in time, but this soul is only cognized as an object of the internal sense by phenomena that constitute an internal state, and of which the essence in itself, which forms the basis of these phenomena, is unknown." (Prolegomena, pp. 102-3). ". . . The consciousness of self is thus very far from being a knowledge of self." (B158 C Pure R.) "Cartesian idealism therefore does nothing but distinguish external experience from dreaming." (Prolegomena, pp. 102-3)

[3]See Fackenheim, *Metaphysics and Historicity*, for an excellent discussion of historicity. (The Aquinas Lecture, Marquette University Press, 1961)

[4]". . . and history cannot be more certain than when he who creates the things also narrates them." (N.S. #349)

[5]Prolegomena (Appendix, p. 153 footnote. Carus edition, Philosophical Classics Open Court, 1955).

[6]". . . were it possible for us to supply demonstrations of propositions of physics we would be capable of creating them ex nihilo . . ." *On the Study Methods of Our Time*, p. 23.

[7]For one discussion of this point, see Rickman's *Pattern and Meaning in History*, p. 148.

[8]Rudolf A. Makkreel, *Dilthey* (Princeton: Princeton University Press, 1975), pp. 306-7.

[9]*Dilthey*, p. 25.

[10]The development of Italian Humanism is traditionally thought to have begun with Petrarca 304-74. Also included are C. Salutati 1331-1406, A. Politianus 1454-94, through L. Valla 1407-57, culminating in the work of Vico 1668-1774.

[11]Howard Isham, "Humanism," *Encyclopedia of Philosophy* IV:70.

[12]*On the Study Methods of Our Time*, trans. Gianturco (Library of Liberal Arts, 1965), p. 5.

[13]What Vico explicitly says is that to avoid educating our youth in a warped and piecemeal manner he would ". . . suggest that our professors should co-ordinate all disciplines into a single system so as to harmonize them . . . In this way, a coherent body of learning having been established, it will be possible to teach it according to the genius of our public polity." (*On the Study Methods* . . ., p. 77)

[14]*On the Study Methods* . . ., translator's introduction, p. x.

[15]Ernesto Grassi, "Marxism, Humanism, and the Problem of Imagination in Vico's Works," *Vico's Science of Humanity*, eds. Tagliacozzo and Verene (Baltimore: Johns Hopkins University Press, 1976), p. 283.

[16]*The New Science* #147.

[17]See H. Gadamer's *Truth and Method* (New York: Seabury Press, 1975) for an illustration of this point (p. 10).

For example, Gadamer says "To some extent everything that is received is absorbed, but in Bildung what is absorbed is not like a means that has lost its function. Rather in acquired Bildung nothing disappears, but every thing is preserved. Bildung is a genuine historical idea and because of this historical character of "preservation" is important for understanding in the human sciences." (p. 12)

[18]See, e.g., p. 9, C Pure R. where Kant says it is ". . . a call to reason to undertake anew the most difficult of all its tasks, namely, that of self-knowledge, . . ." and p. 669 of the same Critique, ". . . to secure for human reason complete satisfaction in regard to that with which it has all along so eagerly occupied itself . . ."

[19]*Critique of Judgement* #454-55.

[20]*Idea of History*, third thesis, p. 13.

[21]CJ., #443.

[22]H. Gadamer, *Truth and Method*, p. 10. Also see Werner Kohlschmidt, *A History of German Literature, 1760-1805*, trans. Ian Hilton (Homes and Meier, Publishers, 1975), especially Parts V-VII.

[23]*Anthropology* #325, p. 186.

[24]For a discussion of this issue within the context of Dilthey and Vico, see Howard Tuttle's essay, "The Epistemological Status of the Cultural World in Vico and Dilthey," in *Vico's Science of Humanity* by Tagliacozzo and Verene (Baltimore, Maryland: Johns Hopkins University Press, 1976), pp. 241-250. Needless to say, since I have practically used his words verbatim, I am in complete agreement with Tuttle concerning this issue.

[25]Oliver W. Holmes, *Human Reality and the Social World, Ortega's Philosophy of History* (Amherst: University of Massachusetts Press, 1975), p. 138.

SELECTIVE BIBLIOGRAPHY

Books by or about Kant, Consulted in This Dissertation

Allison, Henry E. *The Kant-Eberhard Controversy*. Translated with supplementary materials by Henry E. Allison. Baltimore and London: The Johns Hopkins University Press, 1973.

Axinn, S. "A Study of Kant's Philosophy of History." Ph.D. dissertation, University of Pennsylvania, 1955.

Beck, Lewis White. *A Commentary on Kant's Critique of Practical Reason*. Chicago: The University of Chicago Press, 1960.

_____. *Proceedings of the Third International Kant Congress*. Edited by Lewis White Beck. Dordrecht, Holland: D. Reidel Publishing Company, 1972.

Cassirer, Ernst. *Rousseau, Kant and Goethe*. New York: Harper and Row, 1963.

Coleman, Francis. *The Harmony of Reason: A Study in Kant's Aesthetics*. Pittsburgh: The University of Pittsburgh Press, 1974.

Crawford, Donald. *Kant's Aesthetic Theory*. Madison: The University of Wisconsin Press, 1974.

Despland, Michel. *Kant on History and Religion*. Montreal: McGuill-Queen's University Press, 1973.

England, F. E. *Kant's Conception of God*, A Critical Exposition of Its Metaphysical Development Together with a Translation of the *Nova Dilucidatio*. New York: Humanities Press, 1968.

Fackenheim, Emil. *Metaphysics and Historicity*. The Aquinas Lecture. Milwaukee: Marquette University Press, 1961.

Galston, William. *Kant and the Problem of History*. Chicago: The University of Chicago Press, 1975.

Garnett, Christopher Browne, Jr. *The Kantian Philosophy of Space*. Port Washington, New York: Kennikat Press, Inc., 1965.

Hartnack, Justus. *Kant's Theory of Knowledge*. New York: Harcourt, Brace and World, 1967.

Heidegger, Martin. *Kant and the Problem of Metaphysics*. Bloomington: Indiana University Press, 1962.

Jaspers, Karl. *Kant*. Edited by Hannah Arendt. Vol. I: *The Great Philosophers*. Translated by Ralph Manheim. New York: Harcourt, Brace and World, Inc., 1962.

Kant, Immanuel. *Anthropology from a Pragmatic Point of View*. Translated with an Introduction and Notes by Mary J. Gregor. The Hague: Marinus Nijhoff.

_____. *Critique of Judgement*. Translated by James Creed Meredith. Oxford: The Clarendon Press, 1928.

_____. *Critique of Practical Reason*. Translated by Thomas Kingsmill Abbott. New York: Encyclopaedia Britannica, Inc., 1952.

_____. *Critique of Pure Reason*. Translated by Norman Kemp Smith. New York: St. Martin's Press, 1965.

_____. *The Doctrine of Virtue*. Part II of *The Metaphysic of Morals*. Translated by M. J. Gregor. New York: Harper and Row, 1964.

_____. *Education*. Translated by A. Churton. Ann Arbor: The University of Michigan Press, 1960.

_____. *First Introduction to the Critique of Judgement*. Translated by James Haden. Indianapolis, Indiana: Bobbs-Merill, 1965.

_____. *The Forms and Principles of the Sensible and Intelligible Worlds (1770)*. Cited as "Inaugural Dissertation." John Handyside. *Kant's Inaugural Dissertation and Early Writings on Space*. Chicago: Open Court, 1929.

_____. *Groundwork of the Metaphysic of Morals*. Translated by H. J. Paton. New York: Harper and Row, Publishers, 1964.

_____. *Introduction to Logic* and *An Essay on the Mistaken Subtilty Of The Four Figures*. Translated by Thomas Kingsmill Abbott. Westport, Connecticut: Greenwood Press, Publishers, 1972.

_____. *The Metaphysical Elements of Justice*. Part I: *The Metaphysic of Morals*. Translated by J. Ladd. New York: Bobbs-Merrill, 1965.

Kant, Immanuel (cont.) *Observations On The Feeling Of The Beautiful and Sublime*. Translated by John T. Goldthwait. Berkeley: University of California Press, 1960.

_____. *On History*. Edited by Lewis White Beck. Indianapolis, Indiana: Bobbs-Merrill, 1963.

_____. *Philosophical Correspondence, 1759-99*. Translated by A. Zweig. Chicago: The University of Chicago Press, 1967.

_____. *Political Writings*. Translated by H. Reiss. Cambridge: Cambridge University Press, 1970.

_____. *Prolegomena*. Edited by Dr. Paul Carus. La Salle, Illinois: The Open Court Publishing Company, 1955.

_____. *Religion within the Limits of Reason Alone*. Translated by Theodore M. Greene and Hoyt H. Hudson. New York: Harper and Row, Publishers, 1960.

_____. *Selected Pre-Critical Writings and Correspondence with Beck*. Translated and introduced by G. B. Derferd and D. E. Walford. With a contribution by P. G. Lucas. New York: Manchester University Press, Barnes and Noble, 1968.

Körner, S. *Kant*. New York: Penguin Books, 1955.

McFarland, J. D. *Kant's Concept of Teleology*. Edinburgh: The University of Edinburgh Press, 1970.

Melnick, Arthur. *Kant's Analogies of Experience*. Chicago: The University of Chicago Press, 1973.

Paton, H. J. *Kant's Metaphysics of Experience*. A Commentary on the first half of the *Kritik der reinen vernunft*. 2 vols. London: George Allen and Unwin; New York: Humanities Press, 1970.

_____. *The Categorical Imperative*. New York: Harper Torchbooks, 1967.

Prichard, H. A. *Kant's Theory of Knowledge*. Oxford: The Clarendon Press, 1909.

Rotenstreich, Nathan. *Experience and Its Systematization*. The Hague: Martinus Nijhoff, 1972.

Saner, Hans. *Kant's Political Thought*. Chicago: The University of Chicago Press, 1973.

Sherover, Charles M. *Heidegger, Kant and Time*. Bloomington: Indiana University Press, 1971.

Strawson, P. F. *The Bounds of Sense*. London: Methuen and Co. Ltd., 1973.

Werkmeister, W. H. *Reflections on Kant's Philosophy*. Gainsville: University Presses of Florida, 1975. (A collection of essays on Kant edited by Werkmeister)

Articles on Kant, Consulted in This Dissertation

Allison, H. E. "Kant's Non-Sequitur: An Examination of the Lovejoy Strawson Critique of the Second Analogy." *Kant-Studien* (1971): 367-376.

Aquila, Richard E. "Two Kinds of Transcendental Arguments in Kant." *Kant-Studien* (1976):1-19.

Beck. L. W. "Once More Unto the Breach: Kant's Answer to Hume, Again." *Ratio* IX, 1 (June 1967):33-37.

Brunton, J. A. "The Second Analogy and Levels of Argument." *Kant-Studien* (1971):378-391.

Esterhuyse, W. P. "From Plato to Kant: The Problem of Truth." *Proceedings of the Third International Kant Congress*, 281-287.

Fackenheim, Emil. "Kant's Concept of History." *Kant-Studien* 48 (1958): 381-98.

_____. "Kant and Radical Evil." *University of Toronto Quarterly* 23: 339-53.

Findlay, J. N. "Kant and Anglo-Saxon Criticism." *Proceedings of the Third International Kant Congress*. Edited by L. W. Beck. Dordrecht, Holland: D_ Reidel Publishing Company, 1972.

Gadol, Eugene. "The Idealistic Foundations of Cultural Anthropology: Vico, Kant and Cassirer." *History of Philosophy* 12 (1974 April).

Genova, A. C. "Kant's Three Critiques: A Suggested Analytical Framework." *Kant-Studien* 60 (1969):135-46.

Hancock, Roger. "A Note on Kant's Third Critique." *Philosophical Quarterly* 8-9 (1958-9):261-5.

Hintikka, Jaakko. "Transcendental Arguments: Genuine and Spurious." *Nous* 6 (1972 September):274-80.

_____. "Practical vs. Theoretical Reason--An Ambiguous Legacy." *Practical Reason*. Edited by Stephan Korner. Basil Blackwell, 1974: 83-101. (Also see rejoinder to Hintikka's article, in the same book, by J. L. Mackie, p. 103-112.)

Hofmeister, Heimo E. M. "The Problem of Truth in 'The Critique of Pure Reason.'" *Proceedings of the Third International Kant Congress*, pp. 316-321.

Jones, W. T. "Purpose, Nature and the Moral Law." *The Heritage of Kant*. Edited by George Whitney. New York: Russell and Russell, 1962.

Rollin, Bernard. "There is Only One Categorical Imperative." *Kant-Studien* (1976):60-72.

Rotenstreich, Nathan. "Vico and Kant." *Giambattista Vico's Science of Humanity*. Edited by Giorgio Tagliacozzo and Donald Phillip Verene. Baltimore, Maryland: Johns Hopkins University Press, 1976.

Schrader, George. "The Status of Teleological Judgement in the Critical Philosophy." *Kant-Studien* 45 (1953-54):204-35.

Skorpen, Erling. "Kant's Conception of the Autonomous Dual Self." *Proceedings of the Third International Kant Congress*. Edited by L. W. Beck. Dordrecht, Holland: D. Reidel Publishing Company, 1972.

Stroud, Barry. "Transcendental Arguments." *The Journal of Philosophy* LXV, 9 (May 2, 1968).

Wilkerson, T. E. "Time, Cause and Object: Kant's Second Analogy of Experience." *Kant-Studien* (1971):351-366.

Wilkins, Burleigh. "Teleology in Kant's Philosophy of History." *History and Theory* V, 2 (1966):172-85.

Books by or about Vico, Consulted in This Dissertation

Berlin, Isaiah. *Vico and Herder*. New York: The Viking Press, 1976.

Berry, Thomas M. *The Historical Theory of Giambattista Vico*. Washington, D.C.: Catholic University of America Press, 1949.

Brown, Norman O. *Closing Time*. New York: Random House, 1973.

Caponigri, Robert A. *Time and Idea*. Notre Dame, Indiana: University of Notre Dame Press, 1968.

Chambliss, Joseph James. "Vico: Poetic and Rational Metaphysics." *Imagination and Reason in Plato, Aristotle, Vico, Rousseau and Keats: An Essay on the Philosophy of Experience*. The Hague: Martinus Nijhoff, 1974.

Croce, Benedetto. *The Philosophy of Giambattista Vico*. Translated by R. G. Collingwood. London: Howard Latimer, Ltd., 1910.

Flint, Robert. *Vico*. Edinburgh: Blackwood, 1884.

Gianturco, Elio. *Joseph de Maistre and Giambattista Vico: Italian Roots of de Maistre's Political Culture*. Washington, D.C.: Murray and Heister, 1937.

Manson, Richard. *The Theory of Knowledge of Giambattista Vico: On the Method of the New Science Concerning the Common Nature of the Nations*. Hamden, Connecticut: Archon Books, 1969.

Pompa, Leon. *Vico, A Study of the New Science*. Cambridge: Cambridge University Press, 1974.

Tagliacozzo, Giorgio, ed. *Giambattista Vico: An International Symposium*. Baltimore, Maryland: The Johns Hopkins University Press, 1969.

Tagliacozzo, Giorgio and Donald Phillip Verene. *Giambattista Vico's Science of Humanity*. Baltimore, Maryland: The Johns Hopkins University Press, 1976.

Vaughan, Frederick. *The Political Philosophy of Giambattista Vico*. The Hague: Martinus Nijhoff, 1972.

Vico, Giambattista. *Vico Opere Filosofiche*. Sansoni Editore. Introduzione di Nicola Badaloni, testi, versioni e note a cura di Paolo Cristofolini. Copyright 1971 by G. C. Sansoni S.P.A., Firenze.

_____. *Vico Opere Giuridice*. Sansoni Editore. Introduzione di Nicola Badaloni a cura di Paolo Cristofolini. Copyright 1974 by G. C. Sansoni S.P.A., Firenze.

_____. *G. B. Vico*. Edited by G. Gentile and F. Nicolini in the *Scrittori d Italia* series, Laterza, Bari 1914. This is the standard edition of Vico's works. *La Scienza Nuova* was published in 1928 in this edition. This edition, however, was not used in this dissertation because of the difficulty in obtaining it.

_____. *The Autobiography of Giambattista Vico*. Translated by T. G. Bergin and M. H. Fisch. Ithaca, New York: Cornell University Press, 1963. Contains a long historical introduction which is still the best general account of Vico's thought. (Also for a guide to Vichian scholarship up to 1947 see Croce, B., and F. Nicolini. *Bibliografia Vichiana*. Naples: Riccardo Ricciardi, 1947-48.)

_____. *The New Science of Giambattista Vico*. Revised Translation by T. G. Bergin and M. H. Fisch. New Introduction by M. H. Fisch. Third Edition. Ithaca, New York: Cornell University Press, 1968.

Vico, Giambattista. *On The Study Methods Of Our Time.* Translated with an Introduction and Bibliography by E. Gianturco. From *De Nostri Temporis Studiorum Ratione.* Indianapolis, Indiana: Bobbs-Merrill Company, Inc., 1965.

For an excellent up-to-date bibliography of Vico's works and works on or about Vico (that have been published in the last 50 years), see the bibliography provided in *Vico's Science of Humanity* by Tagliacozzo and Verene. Baltimore, Maryland: The Johns Hopkins University Press, 1976.

Articles on Vico, Consulted in This Dissertation

Beckett, Samuel. "Dante . . . Bruno. Vico . . . Joyce." *James Joyce/ Finnegan's Wake, A Symposium.* New York: New Directions, 1929.

Collingwood, Robin G. "Anti-Cartesianism: Vico." *The Idea of History.* Oxford: Clarendon Press, 1946.

Croce, Benedetto. "Giambattista Vico." *Aesthetics, As Science of Expression and General Linguistic.* Translated by Douglas Ainslie. New York: Macmillan, 1909.

Edie, James M. "Vico and Existential Philosophy." *Giambattista Vico: An International Symposium* (1969).

Fisch, Max Harold. "Vico and Pragmatism." *Giambattista Vico: An International Symposium.* Baltimore, Maryland: The Johns Hopkins University Press, 1969.

Gadol, Eugene T. "The Idealistic Foundations of Cultural Anthropology: Vico, Kant and Cassirer." *Journal of the History of Philosophy* 12 (1974).

Gardiner, Patrick. "Vico." *Theories of History.* Glencoe, Illinois: The Free Press, 1959.

Grassi, Ernesto. "Critical Philosophy or Topical Philosophy? Meditations on the *De Nostri Temporis studiorum ratione.*" *Giambattista Vico: An International Symposium*, pp. 39-50.

_____. "Marxism, Humanism, and the Problem of Imagination in Vico's Works." *Vico's Science of Humanity.* Baltimore, Maryland: Johns Hopkins University Press, 1976..

Hampshire, Stuart. "Vico and the Contemporary Philosophy of Language." *Giambattista Vico: An International Symposium.* Edited by Tagliacozzo. Baltimore, Maryland: Johns Hopkins University Press, 1969.

_____. "Joyce and Vico: The Middle Way." *Giambattista Vico's Science of Humanity.* Edited by Giorgio Tagliacozzo and Donald Phillip Verene. Baltimore, Maryland: Johns Hopkins University Press, 1976.

Hodges, Herbert Arthur. "Vico and Dilthey." *Giambattista Vico: An International Symposium*, pp. 439-45.

Hughes, H. Stuart. "Vico and Contemporary Social Theory and Social History." *Giambattista Vico: An International Symposium*, pp. 319-26.

Hutton, Patrick H. "Vico's Theory of History and the French Revolutionary Tradition." *The Journal of the History of Ideas* (April-June 1976).

Kamenka, Eugene. "Vico and Marxism." *Giambattista Vico: An International Symposium*, pp. 137-43.

Lifshitz, M. "Giambattista Vico (1668-1744)." *Philosophy and Phenomenological Research* 8 (1947-48 March):390-414.

Löwth, Karl. "Vico." *Meaning in History: The Theological Implications of the Philosophy of History*. Chicago: University of Chicago Press, 1949.

Mazlish, Bruce. "Vico." *The Riddle of History: The Great Speculators from Vico to Freud*. New York: Harper and Row, 1966.

Meinecke, Fredrich. "Vico/Lafitau." *Historism: The Rise of a New Historical Outlook*. Translated by J. E. Anderson. New York: Herder and Herder, 1972.

Tuttle, N. Howard. "The Epistemological Status of the Cultural World in Vico and Dilthey." *Vico's Science of Humanity*. Baltimore, Maryland: Johns Hopkins University Press, 1976.

Other Works, Consulted in This Dissertation

Aristotle *The Works of Aristotle*. Great Books of the Western World. Robert Maynard Hutchins, Editor-in-Chief. Reprinted from *The Works of Aristotle*. Translated under the Editorship of W. D. Ross, by an Arrangement with Oxford University Press. University of Chicago Press. Encyclopaedia Britannica, Inc., 1971.

Gadamer, Hans-Georg. *Truth and Historicity*. The Hague: Martinus Nijhoff, 1972.

_____. *Truth and Method*. The Seabury Press, 1975.

_____. *Philosophical Herneneutics*. Translated and Edited by David E. Linge. Berkeley: University of California Press, 1976.

Gardiner, Patrick. *Theories of History*. Glencoe, Illinois: The Free Press, 1959.

Gentile, Giovanni. *The Theory of Mind as Pure Act*. Translated by H. Wildon Carr, D. Litt. London: Macmillan and Company, 1922.

Habermas, Jurgen. *Knowledge and Human Interests*. Boston: Beacon Press, 1971.

Hegel, G. F. W. *Hegel's Lectures on the History of Philosophy.* Translated by E. S. Haldane and Frances H. Simson. 3 vols. London: Routledge and Keagan Paul, 1974.

_____. *The Philosophy of History.* Translated by J. Sibree. New York: Dover Publications, 1956.

Holmes, Oliver W. *Human Reality and the Social World, Ortega's Philosophy of History.* Amherst: University of Massachusetts Press, 1975.

Husserl, Edmund. *The Crisis of European Sciences and Transcendental Phenomenology.* Translated with an Introduction by David Carr. Evanston, Indiana: Northwestern University Press, 1970.

Kelly, George A. *Idealism, Politics and History: Sources of Hegelian Thought.* Cambridge: Cambridge University Press, 1969.

Kohlschmidt, Werner. *A History of German Literature, 1760-1805.* Translated by Ian Hilton. Homes and Meier, Publishers, 1975.

Körner, Stephan. *Practical Reason.* Oxford: Basil Blackwell, 1974.

Makkreel, Rudolf. *Dilthey, Philosopher of the Human Studies.* Princeton: Princeton University Press, 1975.

Molesworth, Sir William, Bart., ed. *The English Works of Thomas Hobbes of Malmesbury.* London: Longman, Brown, Green, and Longmons, MDCCCXLV.

Plato. *The Collected Dialogues.* Edited by Edith Hamilton and Huntington Cairns. Bollingen Series LXXI. New Jersey: Princeton University Press, 1973.

Walsh, W. H. *Philosophy of History: An Introduction* New York: Harper Torchbooks, 1960.