INNATE IDEAS: HISTORICAL ROOTS AND CONTEMPORARY INTERPRETATIONS

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Submitted to the Faculty of Graduate Studies
and Research in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy
McGill University
March 1978

ABSTRACT

Over the years Noam Chomsky has made numerous references to the similarity between his twentieth century innatism regarding language acquisition and the innate idea doctrines of certain earlier writers, Descartes and Leibniz numbering among them. Despite considerable criticism from philosophers, he continues to do so. What seems to be at stake is not only the historical question of the degree to which Chomsky may fairly be seen as following in the tradition of these seventeenth century philosophers, but also the precise interpretation we are to give Chomsky's doctrines.

It is, accordingly, appropriate and worthwhile to explore in detail the basis for the innateness claims of Descartes and Leibniz in order to see to what extent such recent assertions of innateness by Chomsky bear a similarity, marked or otherwise, to the earlier doctrines. But it is hoped that such explorations have accomplished more than merely shed some light on this historical point. They indicate, I think, the lack of clarity of many aspects of the twentieth century version as well as emphasize the epistemological and metaphysical commitments of its author.

Résumé

Au cours des années Noam Chomsky a souvent porté à l'attention du lecteur la similitude entre sa théorie de l'innéité concernant l'acquisition du langage et les doctrines d'idées innées de certains penseurs qui l'ont précédé, Descartes et Leibniz entre autres. En dépit des critiques acharnées de la part des philosophes, Chomsky n'abandonne pas cette opinion. Ce qui est en jeu n'est pas uniquement la question historique de savoir jusqu'à quel point Chomsky s'insère dans la tradition de ces philosophes du dix-septième siècle, mais aussi l'interprétation précise qu'il faut donner aux doctrines de Chomsky.

En conséquence, il semble donc approprié et valable d'explorer en détail les fondements sur lesquels reposent les théories de l'innéité de Descartes et de Leibniz, de façon à déterminer dans quelle mesure les affirmations récentes de Chomsky concernant l'innéité s'apparentent effectivement, de façon plus ou moins marquée, aux doctrines antérieures. Mais nous espérons que ces explorations ont fait plus que simplement éclairer un point historique. Elles indiquent, nous croyons, le manque de clarté de plusieurs aspects de la version du vingtième siècle, tout en soulignant les engagements épistémologiques et métaphysiques de son auteur.

ACKNOWLEDGEMENTS

In writing this dissertation I have received considerable time and assistance from a number of people who have read it in its entirety or who have read and commented extensively on some very important chapters contained therein. In the first category I wish to thank my supervisor, Professor Harry Bracken, who has, over a number of years, devoted considerable time and effort in reading and commenting on all aspects of this thesis. He has, moreover, been a concerned friend as well as colleague ever since my arrival in Montreal.

I also wish to especially thank Professor John Trentman for his continued and very valuable help and encouragement throughout the summer of 1976, a period which resulted in the completion of this work. Professor Trentman not only read the dissertation in its entirety, but moreover spent many hours per week and several months of the summer discussing it chapter by chapter and argument by argument, and in the end assisted in the development of the conclusion. His insights and encouragement were instrumental in bringing this thesis to a close. In that same summer Professor Jim McGilvray examined the dissertation in its entirety and subsequently devoted considerable time to a revision of Chapter 5 in particular.

Several other people have also freely given help with specific chapters. I wish to single out Professor Noam Chomsky of the Massachusetts Institute of Technology as having had considerable impact on the final version of Chapter 4 of this work. Professor Chomsky not only commented at length and in great detail on an early draft of Chapter 4, but also read a revised version and subsequently devoted the good part of an entire day to a discussion of it with its author. He has, in addition, forwarded material related to this work, and has tendered further comments in personal correspondence.

Chapter 4 and related ideas have also been examined and commented on extensively by Professors Charles Travis of the University of Calgary, John MacNamara (Psychology) of McGill University, and Jim Ring of Dawson College. Furthermore, Chomsky's philosophical and psychological views in general have been discussed on numerous occasions with the forementioned, particularly with Charles Travis throughout several summers in Calgary, and with Jim Ring over a number of years. All of these discussions were greatly appreciated and of immeasurable assistance in the preparation of the final version of this work.

PREFACE

The original contributions to knowledge of this dissertation are primarily to be found in the arguments used in the development of its thesis that there is little in the way of substantial evidence to support the claim that significant parallels exist between Chomsky's form of innatism and those of the seventeenth century philosophers Descartes and Leibniz. Although such arguments, and other related and important ones, are scattered throughout the dissertation, they tend to cluster in Chapters 4 and 5 more than elsewhere. Some attempt has also been made to elucidate and draw out the epistemological and metaphysical commitments of Noam Chomsky's work, with the result that in the end he is seen by the author as espousing an alternative research model for the Social Sciences rather than bringing the long-standing Rationalist/Empiricist debate over innate ideas to a close.

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INTRODUCTION

Noam Chomsky has for some time explicitly urged that in seventeenth, eighteenth, and early nineteenth century literature there is to be found a certain "capital of ideas" that may be helpful to those with modern linguistic interests.[1] In particular, Professor Chomsky has periodically emphasized that both Descartes and Leibniz held innateness theories, and that in certain particular respects they bear a marked resemblance to his own 20th century linguistic version.[2] While this is undoubtedly true when the various theories are surveyed in broad outline form, the resemblance is considerably less striking when they are analyzed in depth. Moreover, as a number of the concepts developed in the specific doctrines are so very obviously deeply embedded in the metaphysical and epistemological views of the particular author, it is at least questionable whether any significant large-scale similarities

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[1]See, e.g., Noam Chomsky, Cartesian Linguistics (New York: Harper & Row, Publishers, 1966), "Introduction," pp. 1-3, especially p. 3.

[2]Perhaps most noticeably such references occur in Noam Chomsky, "Recent Contributions to the Theory of Innate Ideas," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), pp. 121-129, but they are also evident in his Aspects of the Theory of Syntax (Cambridge: The M.I.T. Press, 1965), pp. 47-59.

remain once the entire network of concepts is exposed.

Accordingly, I have in the following work made an attempt to examine particular key concepts in several innate idea doctrines of the seventeenth century as well as in Chomsky's modern version, with the intention of clarifying to what extent Chomsky can fairly draw on this period in expositing his contemporary views. My purpose in undertaking such an examination is two-fold. Although I believe it is of some historical importance to emphasize the differences between Cartesian and Leibnizian innatism on the one hand, and Chomskyan innatism on the other, this has not been my primary focus. Rather, by indicating such differences, I am hopeful that Chomsky's present theory will be clarified considerably and that much of the controversy that has attended its introduction will abate.

With these objectives in mind, Chapter I consists of an examination of Descartes' theory as well as of certain fundamental terms contained therein, ones which have a distinct Cartesian flavor even if not a precisely clear Cartesian meaning. Primary among these is the term "idea," sometimes used in conjunction with (if not identical to) a corporeal image, but perhaps more appropriately interpreted, especially in later Cartesian works, as referring to the contents of the mind in general.

Section II of Chapter I develops an early statement of Descartes' regarding the innateness of some ideas. Beginning with the latter half of Meditation II, I have made

explicit the thinking that underlies the Wax Argument and which, when fully developed in Meditation III, surfaces as an argument for the innateness of the idea of God. As weak as the argument may seem when clearly stated and exposed to some philosophical analysis, it nevertheless is representative of the very significant rationalist contention that all ideas can not be traced back to sense experience. The status of this contention is explored along with the meaning of certain other important Cartesian concepts such as "imagination," "conception," and "knowledge."

Having dispensed with the initial task of determining precisely how Descartes, as a proponent of innate ideas, is using the term "ideas" and is arguing for the innateness of some of them, I have in Section III developed Descartes' more mature views on the matter. Here especially one sees how the term "innate" is being used.

Subsequent to the "Meditations" (1641) Descartes wrote "Notes Directed Against a Certain Programme" (1647), therein attempting to clarify or expand upon the sense in which he understood ideas to be innate. In Section III, I have outlined this more detailed version of the Cartesian theory of innate ideas, and have indicated how it is entangled with the fundamental notions of Descartes' dualistic metaphysics. As a result I believe much of the strength of Descartes' position on innate ideas rests upon acceptance of his uncompromising dualism. It might be noted here, and will

be clarified later, that Chomsky's position is not in the same way tied to such a metaphysical outlook. (See in particular Chapter IV.)

Among major philosophers, it is not only Descartes that Chomsky sees as an important contributor to the "capital of ideas" from which he thinks contemporary theorists could learn a great deal. Leibniz also is to be considered. However, before embarking upon any critical analysis of Leibniz' position on the innateness of certain speculative and practical principles, I thought it propitious to examine Locke's position. This seemed especially advantageous--nay, virtually unavoidable--given the fact that Leibniz' position arises out of, and is rather fully developed within, a thorough chapter by chapter critique of Locke's Essay. Of particular importance, of course, are the three chapters of Book I that deal exclusively with Locke's statements and arguments against the existence of innate ideas or principles.

As a consequence Chapter II deals exclusively with Locke. Section I is especially important, I think, because it explores Locke's contention that there can be no innate knowledge in the mind if we are not aware of it:

> To say a notion is imprinted on the mind, and yet at the same time to say, that the mind is ignorant of it, and never yet took notice of it, is to make this impression nothing. No proposition can be said to be

> in the mind which it never yet knew, which it was never yet conscious of."[3]

Thus Locke, from the beginning, denies the possibility of unconscious knowledge and in so doing, I have argued, fails to deal with innateness theories in any but their weakest and crudest forms.

Section II begins with Locke's second major objection to there being any innate principles, viz., as there are no innate ideas, and no proposition can be considered innate if the ideas it contains are not innate, there are no innate propositions. This second argument, somewhat like the first, ultimately rests upon Locke's contention that there can be no ideas of which we are not aware. In subjecting this argument to critical analysis, I have included a number of specific references to assertions of Descates, Leibniz, and Chomsky, as well as some of my own observations and criticisms.

Continuing with Locke's position, the innateness of the ideal of God is examined in particular. Locke, of course, argues that the idea of God is not innate, but in so doing makes clear, I think, just how little his position differs from that of Descartes. Explicit agreement is prevented by their differing views as to the role of reason in innate knowledge: while Locke asserts that it can play no role,

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[3]John Locke, An Essay Concerning Human Understanding, collated and annotated by A.C. Fraser (New York: Dover Publications, Inc., 1894, pp. 40-41.

Descartes argues that it is only through thought that we can bring forth what is but implicitly known.

In addition Section II contains an analysis of Locke's arguments against the innateness of the idea of God, a critical examination of several analogies Locke employs in attempting to defeat innate idea theorists, some reflections on Locke's confinement of unconscious ideas to memory, and finally some criticism of Locke's remarks regarding the usefulness of supposedly innate speculative principles, the lack of self-evidence regarding supposedly innate practical principles, and the indistinguishability of either of these from some other truths not taken to be innate.

Leibniz' reaction to the Lockean position is to be found in Chapter III of this work. Part I begins with Locke's argument that even the "two celebrated speculative principles," whatever is, is, and that it is impossible for a thing to be and not to be at the same time, are not universally known, and in general evaluates Leibniz' reaction to Locke. This includes a consideration of "unconscious" knowledge, which plays an important role in Chomsky's theory (See Chapters IV and V), of "necessary truths," of "intellectual ideas" as well as ideas of sense, of general principles and enthymemes, and of "learning" as viewed by Leibniz. The section closes with some comments on the relative positions of Locke, Leibniz, and Chomsky.

While Leibniz' practical principles tend not to be self-

evident and are consequently less obviously innate, they nevertheless bear a stronger resemblance than the speculative ones to the linguistic principles Chomsky believes to be innate. Therefore, I have accorded to Section II an in-depth examination of Leibniz' comments regarding their being innate. Beginning with the observation that innate practical principles do not seem to be truths, this section critically analyzes Leibniz' claims that at least some "truly innate practical principles" (e.g., that all men desire happiness and are averse to misery) are "inclinations of the soul" rather than truths.

Section III is concerned with Leibniz' attempt to tie together some loose ends resulting from his discussion of innate speculative and practical principles. This entails some discussion of unconscious knowledge when Leibniz agrees with Locke that the ideas of an innate proposition must themselves be innate, but primarily concerns the innateness of the idea of God. The section closes with a brief discussion of the idea of substance and, again, of the mind's having ideas of which it is not aware.

It is in Chapter IV that one of the major contentions of this work is examined in greatest detail. Through repeated references to "the classical doctrine of innate ideas" (my emphasis), and to the writings of Descartes and Leibniz in particular, Chomsky has, I think, not surprisingly, led some philosophers to read him as believing he is at the end of a

tradition that began with the rationalists of the seventeenth century. In deference to Chomsky's statements to the contrary, this may well not be a true reflection of his intentions, but such a view seemed reasonably prevalent and important enough to warrant some further investigation. I have thus devoted most of this dissertation to a very detailed examination of the particulars of the innateness theories of Descartes, Leibniz, and Chomsky.

In introducing Chomsky's theory I have tried to give some indication in the first part of Chapter IV as to why, I think, it has at times been interpreted in a way that he apparently finds misleading. The theory itself is then presented. Unlike Descartes, with extensive discussion of the innateness of the idea of God and of certain principles, and similarly unlike Leibniz with his considerable discussion of the innateness of "necessary truths," Chomsky deals primarily with language-learning. He begins by noting that virtually all human beings are capable of understanding and speaking an infinite number of sentences that they have never encountered and which, he maintains, could not be understood or spoken had these persons not made use of certain linguistic principles that could not have been derived from the meagre empirical data to which they are subjected. Chomsky maintains that these principles result from the interaction of certain innate mechanisms with the presented data.

Accordingly, the problem Chomsky wishes to resolve with his innateness theory is vastly different from those of either Descartes or Leibniz. Descartes, in the later formulation of his theory of innate ideas, is primarily attempting to resolve the difficulty he sees in mind-body interaction: given their marked differences, how can the body possibly interact with the mind and produce non-physical ideas. Leibniz, for the most part, is concerned with the "fact" that the "necessity" of some general truths can never be established inductively by particular instances. And Chomsky, of course, is much more concerned with resolving a difficulty in language-learning than with either of these epistemological concerns. Thus the motivation (viz., the specific problem to be resolved) as well as the content of the contemporary innateness theory is markedly different from those of either of these two philosophers.

I have tried to emphasize this difference by labeling Descartes' and Leibniz' work as primarily "epistemological" in character, and Chomsky's as "psychological." In so doing I am not suggesting that the concerns of either of these two studies never cross; indeed, because philosophy and psychology were not distinct disciplines until the twentieth century, it is very difficult to disentangle these concerns in seventeenth century work. Nevertheless, given our perspective and present categorizations, it seems to me helpful to use them in

contrasting Chomsky's innateness theories with those of the earlier period.

I have also included in this chapter some specific references to Quine and Skinner, who have long been considered Chomskyan critics. Their positions, I believe, are not so radically different from that of Chomsky, and, in particular, neither denies some "innate" contribution by the organism to the data received from the environment. What differences remain, however, appear to me to be of scientific concern rather than philosophical (epistemological). Indeed, the main difference--are there or are there not general learning principles?--does not at the present time seem to be a question resolvable by the philosopher.

The final part of Chapter IV contains a brief discussion of what seem to be two distinct hypotheses in Chomsky's work, along with some closing remarks about the relevance of understanding seventeenth century innateness theories prior to understanding the contemporary linguistic one. I have, in addition, again emphasized via the labels "epistemological" and "psychological," that the bulk of Chomsky's contributions appear to me to belong to psychology rather than to philosophy. This is by no means to say it is any less important, but rather to emphasize once more that, considering the markedly differing approaches, it is doubtful that Chomsky has resolved the Rationalist-Empiricist dispute of the seventeenth century.

In general, it is easy to see that the explanatory or

predictive power of a theory plays a role in its acceptance over its competitors, and Chomsky's theory appears to present no exception. Still, it seems to me important to bear in mind precisely how explanatory power tends to support a theory, and I have therefore devoted Part I of Chapter V to this question. Of particular concern in this section is the relation between explanatory power and other types of evidence brought forth in support of the theory or of the existence of the theoretical "entities" which it postulates--in this case, innate knowledge. Finally, it has even been suggested that invoking "innateness" does not solve the problem of learning--namely, how it is that we come to "know" apparently non-empirical principles--and this question is examined in the final pages of Part I.

In Part II, I have concentrated on what may appear to be a minor linguistic point, but what in reality seems to me to present difficulties to a clear understanding of Chomsky's position. Were Chomsky's position merely that there is a contribution made by the mind in all language-learning, I doubt he would encounter much objection. In the previous chapter I have indicated that even one who emphasizes the control exercized by the environment as strongly as does Skinner, nevertheless allows for an innate <u>component</u> in the form of heredity.

But Chomsky's position, of course, is stronger than this. In emphasizing his debt to Descartes and Leibniz, Chomsky

maintains that not only is a contribution made by the mind, but that it has innate knowledge as well. It is this aspect of Chomsky's position that I find particularly disturbing. As a consequence, the second part of Chapter V contains some reflections on what seems to me a rather free and uncritical ascription of knowledge, on Chomsky's part, to birds, men, and, perhaps by implication, even to machines. The case is further complicated by the fact that the knowledge ascribed is of the unconscious variety.

Finally, it seems to me desirable to examine what I take to be an epistemological difficulty in Chomsky's view that we ascribe to individuals a knowledge of linguistic principles of which they are unaware. Accordingly, Part III explores the notion of unconscious knowledge. The issue here is not, of course, unrelated to Part II, but the analysis here with its emphasis on the unconsciousness of our knowledge is sufficiently different, I believe, to warrant further treatment in this separate and succeeding section. Thus, Part II deals with the interplay of the concepts of knowledge and innateness, whereas Part III treats Chomsky's notion of knowledge insofar as it is of the unconscious variety. In completing this analysis I have included some relevant material from Schwartz's article "On Knowing a Grammar."[4]

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[4]Robert Schwartz, "On Knowing a Grammar," in Sidney Hook, Language and Philosophy (New York: New York University Press, 1969), pp. 183-190.

CHAPTER I

INNATE IDEAS: DESCARTES

Part I: The meaning of the term "idea" in Cartesian Epistemology

As the notion "idea" lies at the very foundation of Descartes' version of innateness, it is unfortunate that one must admit, in pursuing his theory, that there is considerable ambiguity in his use of the word. It has been suggested that part of the difficulty stems from the fact that in the seventeenth century the word "idea" generally meant "mental image," and that Descartes, when under the pressure of philosophical difficulties, many times tended to extend it to encompass all thought, including the unimaginable.[1] Even this, however, is not clear. Nevertheless, if we are to examine his theory of innate ideas, some attempt must be made to clarify his use of this term.

In his earlier writings Descartes seems to use the term "idea" to refer to images in the brain, but even at this stage there is already some question as to whether or not it may also be used in referring to things which we know

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[1] J.O. Urmson, "Ideas," in Paul Edwards (ed.), The Encyclopedia of Philosophy (New York: The MacMillan Company and The Free Press, 1967), Vol. IV, p. 119.

but of which we have no corporeal image, notwithstanding assertions to the contrary. Thus, statements such as the following find more clarity in Descartes' early position than I think we can fairly attribute to it:

> It is in Descartes' early work, the Regulae, that we find most clearly worked out the conception of all knowledge as the vision or intuition of an immediately present object. Reasoning is but a continuous series of intuitions. At this stage in his use of the term an 'idea' is for Descartes an image in the brain, impressed upon it in the same way as the figure of the seal is impressed upon the wax, and this, he warns us, is to be taken literally and not metaphorically. It was to this image or figure, immediately present to it, that the understanding 'applied' itself when it was seeing, touching, or imagining corporeal things. For spiritual things, however, the understanding had no images, for 'it is impossible,' he said 'to construct any corporeal idea which shall represent to us what knowing is, what doubt is, and likewise what the action of the will is which it is possible to term volition.'[2]

Descartes himself seems considerably less clear:

> Our second assertion is that those things which relatively to our understanding are called simple, are either purely intellectual or purely material, or else common both to intellect and to matter. Those are purely intellectual which our understanding apprehends by means of a certain inborn light, and without the aid of any corporeal image. That a number of such things exist is certain; and it is impossible to construct any corporeal

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[2]Robert McRae, "'Idea' As a Philosophical Term in the Seventeenth Century," Journal of the History of Ideas, Vol. 26, April, 1965. The quotation at the end is from Descartes, "Rules for the Direction of the Mind," collected in Elizabeth Haldane and G.R.T. Ross (translators), The Philosophical Works of Descartes (Cambridge: The University Press, 1968), Vol. I, p. 41. (AT, X, 419) "Rules for the Direction of the Mind" will hereafter be referred to as the "Regulae."

> idea which shall represent to us what the act of knowing is, what doubt is, what ignorance, and likewise what the action of the will is which it is possible to term volition, and so with other things. Yet we have a genuine knowledge of all these things, and know them so easily that in order to recognize them it is enough to be endowed with reason.[3]

What Descartes explicitly denies here is not that we have no idea "representing to us what the act of knowing is, what doubt is," etc., but that it is possible to construct any corporeal idea with such representations. Whether or not Descartes at this stage in the development of his epistemology believes that there is knowledge, but are no ideas, "of all these things," is not clear in this passage from the "Regulae."

In the "Meditations" Descartes clearly defines "idea" so as to exclude thoughts which are not also "images of things" (les images des choses):

> Of my thoughts some are, so to speak, images of the things, and to these alone is the title, 'idea' properly applied; examples are my thought of a man or of a chimera, of heaven, of an angel, or [even] of God.[4]

However, when pressed by Hobbes, who recognizes an idea, or image, of man, of a chimera, and of the heavens, but who

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[3]Descartes, "Regulae," in Haldane and Ross, Vol. I, op. cit., p. 41. (Regula 12, AT, X, 419)

[4]Rene Descartes, "Meditations on First Philosophy," Meditation III, collected in Elizabeth S. Haldane and G.R.T. Ross (translators), The Philosophical Works of Descartes (Cambridge: The University Press, 1968), Vol. I, p. 159. "Meditations on First Philosophy" will hereafter be referred to as the "Meditations." (AT, IX, 29) (AT, VIII, 37)

argues that he has no similar image or idea corresponding to an angel or to God, Descartes replies:

> Here the meaning assigned to the term idea is merely that of images depicted in the corporeal imagination; and, that being agreed on, it is easy for my critic to prove that there is no proper idea of Angel or of God.[5]

Descartes, then wishes to distinguish the corporeal image formed in the imagination from the mental image perceived by the mind. He seems to agree that there is no image of God in the corporeal imagination, but nevertheless believes that we do have an idea of God. This is seen even more clearly in Descartes' reply to Hobbes' further objection that there is no idea of the soul, and that we only "infer by means of the reason that there is something internal in the human body, which imparts to it its animal motion, and by means of which it feels and moves; and this, whatever it be, we name the soul, without employing any idea"[6]:

> When it is said further that we have no idea of the soul but that we arrive at it by an inference of reason, that is the same as saying that there is no image of the soul depicted in the imagination, but that that which I have called its idea, nevertheless, exists.[7]

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[5]See Elizabeth S. Haldane and G.R.T. Ross (translators), The Philosophical Works of Descartes (Cambridge: The University Press, 1967), Vol. II, "Objections III with Replies," p.67, (AT, IX, 141) (AT, VII, 181)

[6]Ibid., p. 69, (AT, VII, 183)

[7]Ibid., pp. 69-70 (AT, VII, 183)

Accordingly, whether or not one feels at this point that Descartes can consistently assert that ideas are "images of the things" and at the same time claim that there are ideas of God and the soul seems in part to depend upon whether or not he can make sense of the notion "non-corporeal" (mental) image" as distinct from corporeal images. That Descartes wishes to speak this way at least some of the time is clear. In the definitions accompanying the replies to objections collected by Mersenne, for example, Descartes writes:

> And thus it is not only images depicted in the imagination that I call ideas; nay, to such images I here decidedly refuse the title of ideas, in so far as they are pictures in the corporeal imagination, i.e. in some part of the brain. They are ideas only in so far as they constitute the form of the mind itself that is directed towards that part of the brain.[8]

But the problem of how we are to make this notion intelligible is by no means easily resolved, for it remains unclear what an <u>image</u> of God is, whether this be in the corporeal imagination <u>or</u> in the perceiving mind. Surely the import of Hobbes' objection is not simply that his corporeal imagination cannot form an image of an angel or of God, but that he is unable to

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[8] <u>Ibid.</u>, Arguments drawn up in geometrical fashion," appended to "Reply to Objections II," p. 52. (AT, IX, 124) (AT, VII, 160-161)

form any image at all.[9] To this objection Descartes does not address himself, for after making the distinction between corporeal images and images in the mind and then allowing that there are no images of God or souls in the imagination, he fails to deal with Hobbes' claims that there is no image at all corresponding to these words. We thus can not be sure when Descartes denies that ideas are images that he is at the same time denying that ideas are mental images in the sense of pictures in the "mind's eye."[10]

In all fairness to Descartes it is perhaps misleading to speak of pictures in the "mind's eye" when referring to "mental images." From such usage it is easy, but most certainly incorrect, to suppose that this "mental image" is some kind of picture that somehow duplicates the physical image,

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[9]Hobbes writes "But, when one thinks of an Angel, what is noticed in the mind is now the image of a flame, now that of a fair winged child, and this, I may be sure, has no likeness to an Angel, and hence is not the idea of an Angel." (My emphasis) Haldane and Ross, Vol. II, op. cit. "Objections III with Replies," p. 67. (AT, VII, 179) Note that although Hobbes was a materialist for whom mind was composed of matter, the difficulty that faces him is not how matter can form an image, but that he notices no image. His objection has to be read, I think, as the claim that he (and by implication, we) is simply unable to form any image of God and souls. (AT, IX, 140)

[10]See Anthony Kenny, Descartes: A Study of His Philosophy (New York: Random House, 1968), pp. 106-107.

but is itself non-corporeal. Indeed, even the corporeal image need not be a "picture" if this picture is interpreted as a visual representation. It is better to think of images as simply "representations," thus following Descartes and allowing for "images" of sounds and scents and pain as well as colors.[11]

In any event, Descartes' writings at other times suggest that he may be extending the word "idea" to encompass all thought.[12] Indeed, when Gassendi has difficulty with the idea of himself,[13] Descartes quite forwardly asserts just that:

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[11]"But I am in the habit of imagining many other things beside this corporeal nature which is the object of pure mathematics, to wit, the colours, sounds, scents, pain, and other such things, although less distinctly." Descartes, "Meditations," Meditation VI, in Haldane and Ross, Vol. I, op. cit., p. 187. (AT, IX, 58)

[12]Descartes was not the first writer to use the word "idea" for the contents of human thought. His chief innovation in the use of the term seems to have been in employing it for human thoughts that are purely intellectual--for human "ideas" that are not "images des choses qui sont cogneues par les sens," but which are wholly non-sensuous and non-imaginative. See Ralph M. Blake, "Note On the Use of the Term Idée Prior to Descartes," in The Philosophical Review, XLVIII, September, 1939, pp. 532 and 534.

[13]Haldane and Ross, Vol. II, op. cit., "Objections V," p. 162. (AT, VII, 291-292)

"you restrict the term idea solely to the images depicted in the fancy, while I extend it to whatever is thought."[14] And there are places where Descartes does seem to use the word "idea" with this definition in mind. In defining "idea" in his reply to the second set of objections, for example, Descartes says:

> ...when understanding what I say, I can express nothing in words, without that very fact making it certain that I possess the idea of that which these words signify.[15]

It is important to note at this point that Descartes can be interpreted as extending the term "idea" in two ways, not just one. On the one hand he is saying that he does not limit the word "idea" to only that which is imaginable, but extends it to encompass operations of the intellect that do not involve the imagination. Remembering Descartes' distinction between

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[14]Descartes, "Reply to Objections V," in Haldane and Ross, Vol. II, op. cit., p. 217. (AT, VII, 366) Moreover, "'Thought' is a word that covers everything that exists in us in such a way that we are immediately conscious of it. Thus all the operations of will, intellect, imagination, and of the senses are thoughts." (Descartes, "Arguments drawn up in geometrical fashion," appended to "Reply to Objections II," collected in Haldane and Ross, Vol. II, op. cit., p. 52.) (AT, VII, 160) A very similar definition is given in "The Principles of Philosophy" (hereafter referred to simply as the "Principles"), viz., "By the word thought I understand all that of which we are conscious as operating in us. And that is why not alone understanding, willing, imagining, but also feeling, are here the same thing as thought." (Descartes, "Principles," Principle IV, collected in Haldane and Ross, Vol. I, op. cit., p. 222.) (AT, VII, 28)

[15]Descartes, "Arguments drawn up in geometrical fashion," appended to "Reply to Objections II," collected in Haldane and Ross, Vol. II, op. cit., p. 52. (AT, VII, 160)

the imagination and pure intellection,[16] it now seems that he is willing to apply the term "idea" even when the mind is not contemplating a corporeal form. Indeed, he asserts in his replies to Gassendi that "...in thinking, the mind employs itself alone, but in imagining it contemplates a corporeal form."[17] If this is so, Descartes is apparently willing to use the term "idea" for whatever is thought, regardless of whether or not there are corresponding images.

It is in this extended sense, I believe, that Descartes can most consistently speak of the idea of God. It will be remembered that in Meditation III Descartes asserts that "by the name of God I understand a substance that is infinite [eternal, immutable], independent, all-knowing, all-powerful..."[18] This God, however, is not imageable, for there can be no corporeal

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[16] "...if I desire to think of a chiliagon, I certainly conceive truly that it is a figure composed of a thousand sides, just as easily as I conceive of a triangle that it is a figure of three sides only; but I cannot in any way imagine the thousand sides of a chiliagon [as I do the three sides of a triangle] nor do I, so to speak, regard them as present [with the eyes of my mind]. And although in accordance with the habit I have formed of always employing the aid of my imagination when I think of corporeal things, it may happen that in imagining a chiliagon I confusedly represent to myself some figure, yet it is very evident that this figure is not a chiliagon, since it in no way differs from that which I represent to myself when I think of a myriagon or any other many-sided figure...." (Descartes, "Meditations," Meditation VI, collected in Haldane and Ross, Vol. I, op. cit., pp. 185-186. (AT, VII, 72)

[17] Descartes, "Reply to Objections V," in Haldane and Ross, Vol. II, op. cit., p. 229. (AT, VII, 385)

[18] Descartes, "Meditations," Meditation III, in Haldane and Ross, Vol. I, op. cit., p. 165. (AT, VII, 45)

idea of the divine being:

> ...it is worthy of you alone, O flesh, to think that the idea of God, of an Angel, and of the human mind, are corporeal, or after the fashion of the corporeal, derived forsooth from the human form, and from other very subtle, simple and imperceptible objects, such as air or aether. For whosoever thus represents God or the mind to himself, tries to imagine a thing which is not imageable, and constructs nothing but a corporeal idea to which he falsely assigns the name God or mind. For, in the true idea of mind, nothing is contained but thought and its attributes, of which none is corporeal.[19]

On the other hand, when Descartes says that, in understanding what he says, he can express nothing in words without possessing "the idea of that which these words signify," he seems to extend the term "idea" not only to words which have no image corresponding to them, but also to phrases and sentences which express a thought. This is quite significant, for it is this definition of "idea" that seems to fit best with Descartes' belief that certain common notions, e.g., that "things which are equal to the same thing are equal to one another,"[20] are innate ideas.

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[19]Descartes, "Reply to Objections V," in Haldane and Ross, Vol. II, op. cit., p. 230. (AT, VII, 385)

[20]Descartes, "Notes Against a Programme," in Haldane and Ross, Vol. I, op. cit., p. 443. (AT, VIII, 359)

Part II. The Wax Argument and Meditation III: An Introduction to the Theory of Innate Ideas.

In this section I want to examine the so-called Wax Argument of Descartes' Second Meditation as precursory of his theory of innate ideas; in addition I want to examine Meditation III as an argument for the same. For this purpose I believe it will be convenient to view the Wax Argument as taking place in three distinct steps, the first presumably showing that at least one of our ideas can not be given to us by the senses, the second that this idea also cannot come to us from the imagination, and the third explaining how, then, it is that we come to have this particular idea at all. It is this third step that I believe can be interpreted as Descartes' introduction to the theory of innate ideas which he puts forth more explicitly in Meditation III.

The Wax Argument begins with an examination of a particular piece of wax which has a certain color, odor, and taste, and moreover is hard and cold. The wax is then brought close to a source of heat and all these sensible properties change: the odor and taste are lost, the color changes, and the previously solid cold mass becomes soft and hot. All of the properties by which we formerly recognized this wax as wax have changed, and yet Descartes asserts that no one denies that the same wax remains after this change. His first

conclusion is that whatever it is in this bit of wax that we recognize with so much distinctness cannot be anything that is observed by means of the senses, "since all these things which fall under taste, smell, sight, touch, and hearing, are found to be changed, and yet the same wax remains."[21] Thus Descartes completes what I have termed the first step of his argument.

I believe it will be fruitful to pause at this point to examine this step carefully, for it seems to me that several points may already cause some difficulty. Primary among these is Descartes' dogmatic assertion that the same piece of wax remains in spite of all the changes he notes to have taken place. This claim, I believe, is difficult enough to establish independent of what has been said in Meditation I, where virtually all assertions are subject to some degree of uncertainty, but in the context of Descartes' writings it is even more remarkable. For, if we are to take Descartes' skeptical arguments of the first Meditation seriously, it is indeed difficult to see what right Descartes has to make the assertion that we must all admit that the same piece of wax remains. At this point Descartes seems to have slipped in a "truth" which is independent of the "Cogito" and which he nevertheless does not stop to question.

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[21]Descartes, "Meditations," Meditation II, collected in Elizabeth Haldane and G.R.T. Ross, The Philosophical Works of Descartes (Cambridge: The University Press, 1968), Vol. I p. 154. (AT, VII, 30)

But even apart from the "Dream Argument" and the "Deceiver Argument" of the first Meditation I believe Descartes is on somewhat shaky grounds when he makes this assertion. If the fragrant odor and sweet taste of the wax have disappeared, the color has changed, and all the sensible characteristics by which we formerly recognized the piece of wax as wax have also changed, why must we say we have the same substance? The implication seems to be that with changes as significant as these, if this material were again cooled, it would not regain the odor of flowers, the taste of honey, and the original coloring. To many this might seem to indicate that the wax has indeed become a different substance, and no doubt as a result of the heating and melting, and not of the cooling process. Perhaps, then, in dealing with the heating and melting of wax, some people may very well want to deny that the same piece of wax remains, for perhaps we really should no longer call this material wax at all. (We do, of course, speak of "molten wax," indicating that we do suppose that this liquid is in some way "connected with" the solid that preceded it, but the grounds for this judgment may very well be derived from the senses even though each sensible property has changed. I will hope to make this clear in a subsequent paragraph.)

In Descartes' behalf one may wish to argue that it is not the argument that is faulty here, but rather that the example is ill-chosen. That is, if we use the case of ice instead of

wax, although the changes are much less spectacular, upon re-freezing a portion of matter which is presently in the liquid stage (water), many more people might be willing to admit that we have the same piece of material (now in the form of ice). But the advantages here gained by employing a material (H_2O) which might more readily be accepted as the same substance in its liquid state (water) and its solid state (ice), are outweighed by the fact that the example is less spectacular. That is, no longer is there a change of color, of odor, or perhaps even of taste, and from these very unchanging sensations one may want to conclude that in this case the substance has not been replaced by a different one, but merely has been transformed from one state into another. Or, as Körner puts it, "the melting of ice into water which at first may appear as a transubstantiation is conceived or explained, as a mere 'transreification,' in which the same substance, say H_2O, has successively two properties or is successively in two states."[22] One, then, might conclude that whatever is in this bit of matter (H_2O) that makes us say it is the same substance when a liquid and when a solid, is "observed by means of the senses": that because many sensible qualities remain unchanged we assert that we are beholding the same substance. It need not be maintained that

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[22] S. Körner, "Substance, II," The Aristotelian Society, Supp. Volume XXXVIII (1964), pp. 88-89.

"sameness" is perceived by the senses, but merely that our senses are involved in our belief that a substance remains unchanged through certain transformations.

I believe there is another sense in which our senses are involved in judgments about a particular piece of wax being the same, one which Descartes himself could hardly deny. If we do say that a certain mass of molten material is the same substance as the solid mass before it was brought near the fire, it seems to me that it is partly because we have continuously observed it (or made certain suppositions about it not being switched for another, and thus presume it to have undergone a continuous transition) as it slowly changed from a solid to a liquid and lost its odor and taste. Indeed, if we had not continuously observed this process, the question of this liquid mass being the same substance as the solid mass that preceded it might conceivably arise. The question involved here is that of a "continuous transition," a notion which Korner only mentions in passing[23] and to which I also will only allude by means of an example.

Suppose that before retiring one evening I place in my window sill a wax carving that I have just finished that day. My window happens to be above my radiator. Upon awakening I note that there is a liquid mass on the sill, and probably, under these circumstances, would usually conclude that my carving had melted and that the same wax is now in the form of liquid. But I need not necessarily arrive at this conclusion.

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[23] Ibid., p. 89.

Suppose, for example, that I knew I had turned my radiator off the night before and I remembered that my brother, who is fond of playing practical jokes, is staying with me that weekend. It then might cross my mind that he has switched the solid piece (the carving) for some other wax that he has melted down. What is in question here is not just the change of one material substance into another, but, in fact, the replacement of one substance by another.[24] But this question, at least, would not have arisen had I continuously observed the carving on the window sill throughout the entire night. It may be, then, that although no particular quality of the wax remains the same as observed by the senses, nevertheless the senses are involved in our assertions that a particular "piece" in a liquid form is the same as that of a previously observed solid piece.

In the second step Descartes decides that this wax was neither that sweetness of honey, that odor of flowers, that color nor that sound, but simply a body "appearing" to his senses under these forms and others.[25] He then further decides that his conception of the wax is not achieved by the faculty of imagination:

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[24]See Körner on the distinction between changes of material objects and changes of substance, pp. 88-90.

[25]Descartes, "Meditations," Meditation II, in Haldane and Ross, Vol. I, op. cit., p. 154 (AT, VII, 30)

> Let us attentively consider this, and, abstracting from all that does not belong to the wax, let us see what remains. Certainly nothing remains excepting a certain extended thing which is flexible and movable. But what is the meaning of flexible and movable? Is it not that I imagine that this piece of wax being round is capable of becoming square and of passing from a square to a triangular figure? No, certainly it is not that, since I imagine it admits of an infinitude of similar changes, and I nevertheless do not know how to compass the infinitude by my imagination, and consequently this conception which I have of the wax is not brought about by the faculty of imagination.[26]

And as for extension, Descartes continues:

> What now is this extension? Is it not also unknown? For it becomes greater when the wax is melted, greater when it is boiled, and greater still when the heat increases; and I should not conceive [clearly] according to truth what wax is, if I did not think that even this piece that we are considering is capable of receiving more variations in extension than I have ever imagined. We must then grant that I could not even understand through the imagination what this piece of wax is....[27]

While Descartes apparently sees little or no difficulty with this part of the argument, I think he has again made some statements that need further examination. It should be noted that Descartes thinks of the imagination in terms of a faculty that "staples" things together, and that for this reason flexibility and mobility are eliminated as being the result of the action of the imagination: as a body is <u>capable of</u> assuming an infinite number of shapes and an infinite number of locations, flexibility and mobility cannot be grasped by the imagination. However, I believe Descartes has, accidentally

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[26] <u>Ibid</u>., pp. 154-155. (AT, VII, 30-31)

[27] <u>Ibid</u>., p. 155. (AT, VII, 31)

or for the sake of argumentation, hidden some difficulties here by his choice of words.

First, I want to draw attention to the lack of parallel construction in the argument, which may perhaps be nothing more than a grammatical slip: while "flexibility" and "mobility" are dispositional properties, "extension" is a non-dispositional property.[28] But Descartes then goes on to describe the difficulties of imagining extension as if he had meant it to be taken in a dispositional sense: "Is it not also unknown? For it becomes greater when the wax is melted, greater when it is boiled, and greater still when the heat increases; and I should not conceive [clearly] according to truth what wax is, if I did not think that even this piece that we are considering is capable of receiving more variations in extension than I have ever imagined."[29] It is for this reason that some may prefer to look upon the use of the non-dispositonal term "extension" as a grammatical slip rather than as a flaw in argumentation.

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[28]The relevant passage in Latin (Oeuvres des Descartes, edited by Charles Adam and Paul Tannery (Paris: Leopold Cerf, 1897-1913), Vol. VII, p. 31) reads:

. . .nempe nihil aliud quàm extensum quid, flexibile, mutabile.

The relevant passage in French (Oeuvres de Descartes, edited by Charles Adam and Paul Tannery (Paris: Leopold Cerf, 1897-1913), Vol. IX, p. 24) reads:

Certes il ne demeure rien que quelque chose d'estendu, de flexible & de muable.

[29]Descartes, "Meditations," Meditation II, in Haldane and Ross, Vol. I, op. cit., p. 155. (AT, VII, 31)

It should be added here that perhaps Descartes found it even desirable to have a non-dispositional property among these three, for it is quite questionable what it would mean to say that the essential qualities of a piece of wax are all dispositional. He no doubt felt that a universe of dispositional properties was meaningless, and therefore may have consciously included a non-dispositional one. But even if this is the case, his treatment of the property in the argument appears to be totally that of one that is dispositional.

There is, however, a difficulty in the argument itself that is of a similar nature, but which cannot be so easily disposed of. In dealing with the various sensible properties, Descartes rejects them as not being essential to the nature of wax because no specific quality (redness, odor of flowers, taste of honey, etc.) is apparently essential to its nature. It will be remembered that all of the sensible properties of the wax have changed as a result of the application of heat. But this seems to have several consequences, neither of which Descartes would find acceptable: 1) What has been shown is that specific colors, odors, and tastes are not essential to the nature of wax, not that generic coloredness is not essential to it; and 2) according to Descartes' own example of the piece of wax, the piece has no size, shape, and location that is essential to its nature, and yet he does not therefore eliminate extension, shape, and location as not being part of the essential nature of the piece of wax. With regard to this second point, instead of eliminating

extension, flexibility, and mobility in the way he has eliminated coloredness, fragrance, and taste, he asserts that they are comprehended by another power. (See "Step 3" below.) While it must be admitted that it is unclear in the "Wax Argument" exactly what is essential to the nature of wax, it is nevertheless quite clear that Descartes is treating extension, flexibility, and mobility in a very different manner than that in which he treated sensible properties such as color, smell, and taste.

The third step in the argument is positive rather than negative, for having decided that the nature of wax is neither observed by the senses nor comprehended by the imagination, he asserts that "it is my mind alone which perceives it."[30] And he then adds that perception is thus not a vision, a touch, nor an imagination, but is solely an inspection by the mind.

The main difficulty with what I have termed the "positive" aspect of the argument is that it is very unclear what Descartes wants to get across here. And his analogy to the men or automata "seen" from a window raises more problems than it solves:

> ...I am almost deceived by the terms of ordinary language. For we say that we simply judge that it is the same from its having the same colour and figure. From this I should conclude that I knew the wax by means of vision and not simply by the intuition of the mind; unless by chance I remember that, when looking from a window and saying I see men who pass in the street, I really do not see them, but infer that what I see is men, just as I say that I

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[30] Ibid. (AT, VII, 31)

> see wax. And yet what do I see from the window but hats and coats which may cover automatic machines? Yet I judge these to be men. And similarly solely by the faculty of judgment which rests in my mind, I comprehend that which I believed I saw with my eyes.[31]

But how are we to make sense of this analogy? Presumably we only say we see the piece of wax when we actually make a judgment based upon(?) its sensible properties, just as we say we see men, when in fact we see cloaks and hats and actually make a judgment based upon this observation. But the difficulty with the analogy is that we can verify our judgments regarding automata by looking under the cloaks and hats and seeing if actual men are there. But how does one look under the color, the odor, and taste in order to see if the actual wax is there? If only we could get beyond this color and this taste and get beyond these appearances to the wax itself.[32]

Notwithstanding these problems of interpretation and Descartes' subsequent and explicit statements that what follows is that he can be certain of his own existence and that, contrary to what he formerly thought, he knows mind better than body,[33]

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[31] Ibid., pp. 155-156. (AT, VII, 32)

[32] For a similar argument against this analogy, see J.J.C. Smart, "Descartes and the Wax," The Philosophical Quarterly, I, 1, October 1950, pp. 55-56.

[33] "For if I judge that the wax is or exists from the fact that I see it, it certainly follows much more clearly that I am or that I exist myself from the fact that I see it. For it may be that what I see is not really wax, it may also be that I do not possess eyes with which to see anything; but it cannot be that when I see, or (for I no longer take account of the distinction) when I think I see, that I myself who think am nought. So if I judge that the wax exists from the fact that I touch it, the same thing will follow to wit, that I am...." Descartes, "Meditations," in Haldane and Ross, Vol. I, op. cit., p. 156. (AT, VII, 33)

there is implicitly in this final stage of the Wax Argument, Descartes' theory of innate ideas. Because the idea of extension cannot be gotten through the senses, and because it also cannot be constructed by the imagination, apparently the only alternative of which Descartes can conceive is that it is innate in the understanding. The implication, of course, is that some of our ideas are not innate, and although this seems to conflict with certain other writings of Descartes, we shall not here pursue this matter.

Before turning to Descartes' more fully developed theory, we might note, however, that were we to consider the above an argument for the existence of an innate idea (it should be kept in mind that at this point it is by no means clear that Descartes meant it as anything more than an indication that some ideas might be innate), it is very weak and open to a criticism quite similar to that which Putnam subjects what he takes to be Chomsky's claim (pejoratively termed the "What else?" argument) that only innateness can explain the complex skill of initial language acquisition,[34] viz., that it is questionable just how impressed we should be with the failure of alternatives (in

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[34]In all fairness to Chomsky, the closest I can see that Chomsky ever comes to asserting this in the works Putnam quotes is as follows: "It seems to me that the relative suddenness, uniformity, and universality of language learning, the bewildering complexity of the resulting skills, and the subtlety and finesse with which they are exercised, all point to the conclusion that a primary and essential factor is the contribution of an organism with highly intricate and specific initial structure." Clearly Chomsky's claim is weaker than Putnam's formulation of it. See Chomsky, "Explanatory Models in Linguistics," in E. Nagel, P. Suppes, and A. Tarski, Logic, Methodology and Philosophy of Science (Stanford: Stanford University Press, 1962), p. 536.

Putnam's case, current learning theories) to account for what is to be explained (again, in Putnam's case, complex learning processes such as those involved in the learning of language.[35]) At this point Descartes has, even more clearly, I think, failed to establish the disjunction (that our ideas are either derived from the senses, contrived by the imagination, or innate in the understanding) that would allow him to assert that the idea of extension is innate in the understanding even if he could eliminate derivation from the senses and construction in the imagination as possibilities.

In Meditation III the classification of ideas is made explicit. After stating that error can not result if one considers ideas only as modes of thought, without attempting to relate them to anything "outside of me," Descartes says "But among these ideas, some appear to me to be innate, some adventitious, and others to be formed [or invented] by myself...."[36] This tripartite classification of ideas parallels that of the Wax Argument at the end of Meditation II, but now Descartes clearly states he has as yet no grounds for asserting that the

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[35]Hilary Putnam, "The 'Innateness Hypothesis' and Explanatory Models in Linguistics," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), pp. 136-137.

[36]Descartes, "Meditations," Meditation III, in Haldane and Ross, Vol. I, op. cit., p. 160. (AT, VII, 37-38)

origin of his ideas is what it appears to him to be: "But again I may possibly persuade myself that all these ideas are of the nature of those which I term adventitious, or else that they are all innate, or all fictitious: for I have not yet clearly discovered their true origin."[37] While the classification of ideas here may be termed "provisional,"[38] it nevertheless represents an important premise of an argument for the existence of innate ideas that is to come later in the Third Meditation.

After concluding that neither his strong inclinations to believe that objects of which he has ideas within him exist outside of him, nor his knowledge that certain ideas do not depend on his will, constitute a sufficiently strong and convincing "proof" that objects that resemble his ideas do indeed exist outside of him, Descartes proceeds with another method calculated to yield the desired proof, viz., that of taking ideas not merely as certain modes of thought, but instead as images. Making use of certain maxims of scholastic philosophy (e.g., that "there must at least be as much reality in the efficient and total cause as in its effect"[39]) and his belief in a God who is infinite and perfect, Descartes presents

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[37] Ibid. (AT, VII, 38)

[38] See Anthony Kenny, Descartes: A Study of His Philosophy (New York: Random House, Inc., 1968), p. 101.

[39] Descartes, "Meditations," Meditation III, in Haldane and Ross, Vol. I, op. cit., p. 162. (AT, VII, 40)

his cosmological argument for the existence of God.[40] Although the specific details of the argument are of little concern in this paper, the concluding remarks are quite significant:

> It only remains to me to examine into the manner in which I have acquired this idea from God; for I have not received it through the senses, and it is never presented to me unexpectedly, as is usual with the ideas of sensible things when these things present themselves, or seem to present themselves, to the external organs of my senses; nor is it likewise a fiction of my mind, for it is not in my power to take from or to add anything to it; and consequently the only alternative is that it is innate in me, just as the idea of myself is innate in me.[41]

Thus we have Descartes' explicit form of the argument that seemed to underlie much of his thinking in the Wax Argument. The argument was presented in an earlier work, though perhaps not so succintly, where Descartes argued:

> And having remarked that there was nothing at all in the statement, 'I think, therefore I am' which assures me of having thereby made a true assertion, excepting that I see very clearly that to think it is necessary to be, I

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[40] It may seem that there is some question as to whether there are one or two proofs of God's existence in Meditation III, for although most authors find only one, it is not impossible to cite works which explicitly put forth two. See, e.g. Melvin Rader, The Enduring Questions (New York: Holt, Rinehart and Winston, 1956), pp. 80-81. But also see Kenny, op. cit., p. 142, where the "second" argument is clearly viewed as a subsidiary of the "first" and only proof. The latter reading appears to be more accurate and the one intended by Descartes. When he later states that "...all the arguments which I have adduced in this matter [providing the existence of God] can be subordinated to two," he then goes on to give his version of the Ontological Argument, followed by "The other argument by which I proved the existence of God." See Descartes, "Notes Against a Programme," in Haldane and Ross, Vol. II, op. cit., pp. 444-445. (AT, VII, 361-362)

[41] Descartes, "Meditations," Meditation III, in Haldane and Ross, Vol. I, op. cit., p. 170. (AT, VII, 51)

came to the conclusion that I might assume, as a general rule, that the things which we conceive very clearly and distinctly are all true--remembering, however, that there is some difficulty in ascertaining which are those that we distinctly conceive.

Following upon this, and reflecting on the fact that I doubted, and that consequently my existence was not quite perfect (for I saw clearly that it was a greater perfection to know than to doubt), I resolved to inquire whence I had learnt to think of anything more perfect than I myself was; and I recognised very clearly that this conception must proceed from some nature which was really more perfect. As to the thoughts which I had of many other things outside of me, like the heavens, the earth, light heat, and a thousand others, I had not so much difficulty in knowing whence they came, because, remarking nothing in them which seemed to render them superior to me, I could believe that, if they were true, they were dependencies upon my nature, in so far as it possessed some perfection; and if they were not true, that I held them from nought, that is to say, that they were in me because I had something lacking in my nature. But this could not apply to the idea of a Being more perfect than my own, for to hold it from nought would be manifestly impossible; and because it is no less contradictory to say of the more perfect that it is what results from and depends on the less perfect, than to say that there is something which proceeds from nothing, it was equally impossible that I should hold it from myself. In this way it could but follow that it had been placed in me by a Nature which was really more perfect than mine could be, and which even had within itself all the perfections of which I could form any idea--that is to say, to put it in a word, which was God.[42]

It should be clear, I think, that this is at best a weak argument for innateness of the idea of God. Not only is it unclear, as I have tried to show, that the idea of God can not in some manner be "derived" from the senses or perhaps even constructed by the imagination, but also the disjunction that there are only three possibilities has not been established.

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[42]Descartes, "Discourse on Method," Part IV, in Haldane and Ross, Vol. I, op. cit., p. 102. (AT, VI, 33-34)

Part III. The sense in which an idea can be said to be innate: a more detailed version of the theory.

In the foregoing argument there is, I think, less difficulty encountered with the notion of innateness than with the term "idea," for thus far only a rather unsophisticated notion of the former has been presented. We may feel that the notion is far from clear, but as yet not enough has been said about innateness to make us feel that Descartes may be using it in several and ambiguous ways. Thus, apparently an idea is innate in us (or, alternatively, "it comes to me from no other source than myself"[43]) in the sense that it has neither been received through the senses nor constructed by the mind as a fiction. Moreover, at least in the case of the idea of God, it was placed within us (by Him) as a mark of the workman:

> . . .one certainly ought not to find it strange that God, in creating me, placed this idea within me to be like the mark of the workman imprinted on his work.[44]

One must be careful at this point not to suppose, as Locke quite evidently did (as will be seen in Chapter II), that this "mark of the workman" must always be present before a conscious mind. Quite obviously we all have ideas of which we are not always conscious, for our minds cannot concentrate

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[43]Haldane and Ross, The Philosophical Works of Descartes, Vol. II, op. cit., Objections II, p. 33. (AT, VII, 133)

[44]Haldane and Ross, The Philosophical Works of Descartes, Vol. I, op. cit., Meditation III, p. 170. (AT, VII, 51)

upon all our ideas at any one moment. Consequent to this, I think it is not unreasonable to presume that there were times when Descartes was not conscious of the idea of God, even if we allow that he did have this idea. Some attempt must be made, then, to distinguish between having (presently) an idea of God and having, in the sense of being able to construct it from no other source than oneself, an idea of the divine being.

In the Second Objections we find the roots of such a distinction. There we find Descartes not only makes it quite clear that the idea of God is constructed by the mind, but also that he believes it could not have been so constructed if we had not been created by God:

> I admit that we could form this very idea, though we did not know that a supreme being existed, but not that we could do so if it were in fact non-existent, for on the contrary I have notified that the whole force of my argument lies in the fact that the capacity for constructing such an idea could not exist in me, unless I were created by God.[45]

Leaving aside the question of our creation by a divine source, Descartes' words above indicate that at least one idea, viz. that of God, is to be considered innate in the sense that we have the capacity to construct it from no other source than ourselves. While Descartes insists that this is no more than

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[45]Haldane and Ross, The Philosophical Works of Descartes, Vol. II, op. cit., Objections II, p. 33. (AT, VII, 133)

what is said in Meditation III, it seems more likely that a slight refinement of his initial position has occurred. Perhaps Descartes is only making his view more explicit. However that may be, his reply to an objection collected by Father Mersenne adds to what he (Descartes) said in Meditation III, notwithstanding his words to the contrary:

> . . .when you say that in ourselves there is a sufficient foundation on which to construct the idea of God, your assertion in no way conflicts with my opinion. I myself at the end of the Third Meditation have expressly said that this idea is innate in me, or alternatively that it comes to me from no other source than myself.[46]

In a somewhat later work (1647), "Notes directed against a certain Programme," Descartes continues in this vein, but is considerably more explicit about the mind's role in "acquiring" innate ideas. He attributes to the mind the "faculty of thinking" and argues that he never concluded that the mind required innate ideas which were in any sense different from this faculty. Arguing against Regius, Descartes writes:

> . . .he appears to dissent from me only in words, for when he says that the mind has no need of innate ideas, or notions, or axioms, and at the same time allows it the faculty of thinking (to be considered natural or innate), he makes an affirmation in effect identical with mine, but denies it in words. For I never wrote or concluded that the mind required innate ideas which were in some sort different from its faculty of thinking; but when I observed the existence in me of certain thoughts which proceeded, not from extraneous objects nor from the

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[46] Ibid. (AT, VII, 133)

> determination of my will, but solely from the faculty of thinking which is within me, then, that I might distinguish the ideas or notions (which are the forms of these thoughts) from other thoughts adventitious or factitious, I termed the former 'innate.'[47]

However, when Descartes then goes on to give an example of the sense in which ideas are said to be innate, he seems to extend the meaning of "faculty of thinking." The innateness of ideas is likened to the "disposition" that certain families have towards generosity and the "propensity" that others have for contracting disease:

> In the same sense we say that in some families generosity is innate, in others certain diseases like gout or gravel, not that on this account the babes of these families suffer from these diseases in their mother's womb, but because they are born with a certain disposition or propensity for contracting them.[48]

Leaving aside the perhaps moot point of generosity being innate in the same sense as certain diseases, a further shift, or "refinement," as the case may be, seems to have occurred in Descartes' original position. Attributing a capacity to someone (a "faculty of thinking") is weaker than saying he is disposed towards or has a propensity for thinking some idea. Presumably all human beings have the "capacity" for contracting most any disease, but a considerably smaller propotion of the population has a disposition or propensity for contracting it.

Despite the more frequent use of the term "thought" (rather than "idea"), the form of the argument in the foregoing is quite

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[47]Descartes, "Notes Directed Against a Certain Programme," in Haldane and Ross, Vol. I, op. cit., p. 442 (AT, VII, 357-358)

[48]Ibid. (AT, VII, 357-358)

similar to that described in Meditation III (Part II of this chapter). Because there exist in us certain thoughts that proceed from neither extraneous objects nor from the determination of the will, there apparently must be an innate aspect to our having such thoughts. What is innate are certain ideas or notions which are "the forms of these thoughts." Nevertheless, there is an important difference between this argument and that presented in Meditation III; to see this we must first make a further observation regarding Descartes' use of the term "idea."

In his preface to the "Meditations" Descartes remarks that there is something equivocal in the term "idea," for "it may either be taken materially, as an act of my understanding. . .or it may be taken objectively, as the thing which is represented by this act."[49] In the "Meditations" he takes the latter reading, for not only does he wish to attribute more perfection to certain ideas than to himself (and, he appropriately notes, it is only with regard to the second usage that ideas may be said to be more perfect than himself[50]), but he also wants to proceed in Meditation III with a method that takes ideas not merely as certain modes

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[49]Descartes, "Meditations," "Preface to the Reader," in Haldane and Ross, Vol. I, op. cit., p. 138. (AT, VII, 8)

[50]Ibid. (AT, VII, 8)

of thought, but instead as images.[51] However, in the present argument, if "innate ideas" and "faculty of thinking" are taken to be synonymous, it seems Descartes is using the term here to designate the act of understanding rather than the "thing which is represented by this act." Thus, the argument in "Notes Directed Against a Certain Programme" arises from Descartes' dualism and the emphasis is, accordingly, on the impossibility of external objects transmitting ideas to our minds. Continuing his argument against Regius, Descartes writes:

> 'For this reason,' he says (i.e. because the mind has no need of innate ideas, but the faculty of thinking of itself is sufficient), 'all common notions, engraven on the mind, owe their origin to the observation of things or to tradition'--as though the faculty of thinking could of itself execute nothing, nor perceive nor think anything save what it received from observation or tradition, that is, from the senses. So far is this from being true, that, on the contrary, any man who rightly observes the limitations of the senses, and what precisely it is that can penetrate through this medium to our faculty of thinking must needs admit that no ideas of things, in the shape in which we envisage them by thought, are presented to us by the senses. So much so that in our ideas there is nothing which was not innate in the mind, or faculty of thinking, except only these circumstances which point to experience--the fact, for instance, that we judge that this or that idea, which we now have present to our thought, is to be referred to a certain extraneous thing, not that these extraneous things transmitted the ideas themselves to our minds through the organs of sense, but because they transmitted something which gave the mind occasion to form these ideas, by means of an innate faculty, at this time rather than at another. For nothing reaches our mind from external objects through the organs of sense beyond certain corporeal movements, as our author himself affirms. . .taking the doctrine from my Principles; but even these movements, and

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[51] Descartes, "Meditations," Meditation III," in Haldane and Ross, Vol. I, op. cit., p. 162. Also see the latter half of Part II of this chapter. (AT, VII, 40)

> the figures which arise from them, are not conceived by us in the shape they assume in the organs of sense, as I have explained at great length in my Dioptrics. Hence it follows that the ideas of the movements and figures are themselves innate in us. So much the more must the ideas of pain, colour, sound and the like be innate, that our mind may, on occasion of certain corporeal movements, envisage these ideas, for they have no likeness to the corporeal movements. Could anything be imagined more preposterous than that all common notions which are inherent in our mind should arise from these movements, and should be incapable of existing without them? I should like our friend to instruct me as to what corporeal movement it is which can form in our mind any common notion, e.g. the notion that 'things which are equal to the same thing are equal to one another,' or any other he pleases; for all these movements are particular, but notions are universal having no affinity with movements and no relation to them.[52]

More specifically, then, the argument is that not only are all common notions innate, because it is preposterous to imagine that, with their being universal, they should arise from particular corporeal movements, but that also the ideas of pain, color, sound, "and the like" are innate, for there is no likeness of them to be found in corporeal movements. Accordingly, Descartes' later position is that there is a sense in which all ideas are innate, viz., because external objects are never more than the occasion for the mind to form certain ideas, the mind must have within itself the faculty for constructing whatever ideas it comes to have.

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[52]Descartes, "Notes Directed Against a Certain Programme," in Haldane and Ross, Vol. I, op. cit., pp. 442-443. (AT, VII, 358-359)

CHAPTER II

LOCKE AND THE ATTACK ON INNATE IDEAS

Part I: The Argument From Universal Assent

Before examining Leibniz' position on innate ideas we had best look at Locke's two major arguments against innate principles. While Locke is famous, perhaps even infamous, for his attacks on a crude version of innatism that was espoused by no eminent advocate, it is nevertheless his position that is criticised by Leibniz in the presentation of a sophisticated theory in the New Essays Concerning Human Understanding.[1] Thus, it is well worth-while to review the position under attack and the arguments presented in its behalf. Moreover, while the primary purpose of this section, then, is to examine Locke's views insofar as understanding them is prerequisite to understanding Leibniz' arguments, it will also be interesting and relevant, I think, to observe whether or not Locke's arguments in any way affect Descartes' position. Indeed, there is even some evidence that suggests the possibility that although Descartes is nowhere mentioned by name in

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[1]Gottfried Leibniz, New Essays Concerning Human Understanding, translated by Alfred Langley (New York: The MacMillan Company, 1896). Hereafter Leibniz' New Essays Concerning Human Understanding will be referred to as his New Essays.

the Essay,[2] it may very well have been his name that came to Locke's mind first when he began to think about innatism.[3]

It is important to note that in Book I of his Essay Locke clearly draws a distinction that Descartes made only obscurely: he speaks separately of innate speculative principles (Chapter 1), innate practical principles (Chapter 2), and innate ideas (Chapter 3). It will be remembered that Descartes did speak of principles as well as ideas, for we find him not only describing the idea of God as innate in him,[4] but also suggesting that certain "eternal truths" (principles) are innate when he says that such propositions as "ex nihilo nihil fit" and "It is impossible that the same thing can be and not be at the same time" are common notions or axioms which have their "seat in our mind."[5] However, Descartes tends to refer to

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[2]Here and elsewhere, John Locke's An Essay Concerning Human Understanding, collated and annotated by A.C. Fraser (New York: Dover Publications, Inc., 1894), will be referred to simply as his Essay.

[3]In an early lecture on moral philosophy an erasure indicates that Locke first wrote". . .in eo laborat acutissimus Cartesius. . . nascentium hominum animus aliquid esse praeter rasas tabulas," later replacing the underlined words by "laborarunt multi." See Jonathan Barnes, "Mr. Locke's Darling Notion," The Philosophical Quarterly, Vol. 22, No. 88, July, 1972, p. 194.

[4]Descartes, "Meditations," Meditation III, collected in Haldane and Ross (translators), The Philosophical Works of Descartes (Cambridge: The University Press, 1968), Vol. I, p. 170. (AT, VII, 51)

[5]Descartes, "Principles," Part I, XLIX, in Haldane and Ross, Vol. I, op. cit., pp. 238-230. (AT, VII, 23-24)

both the former and the latter as "innate ideas," whereas Locke proceeds to deal with "ideas" and "principles" separately, dividing the latter into practical (generally moral) as well as speculative (generally logical) principles.

Locke begins Chapter I and his discussion of innate principles, both speculative and practical, with a paragraph that seems little at odds with the Cartesian view:

> It is an established opinion amongst some men, that there are in the understanding certain innate principles; some primary notions,. . .characters, as it were stamped upon the mind of man; which the soul receives in its very first being, and brings into the world with it. It would be sufficient to convince unprejudiced readers of the falseness of this supposition, if I should only show (as I hope I shall in the following parts of this Discourse) how men, barely by the use of their natural faculties, may attain to all the knowledge they have, without the help of any innate impressions; and may arrive at certainty, without any such original notions or principles.[6]

However, as will be brought out more clearly below, Locke's understanding of "stamped upon the mind of man" is such that discussion of anything but a very crude form of innatism is made impossible. While it is true that Descartes did at times speak of certain ideas being stamped on our minds (e.g., when he says that God, in creating him, "placed this idea /of God/ within me to be like the mark of the workman imprinted on his work"[7]), he nevertheless indicated at other times, as we have

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[6]Locke, Essay, op. cit., Book I, Chapter I, pp. 37-38.

[7]Descartes, "Meditations," Meditation III, in Haldane and Ross, Vol. II, op. cit., p.170. (AT, VII, 51)

seen, that these ideas were innate in him in the sense that they came "from no other source than myself."[8] Moreover, Descartes, in replying to a criticism by Regius that only a faculty of thinking is needed to explain the mind's having certain ideas, and not innate ideas, asserted Regius "appears to dissent from me only in words," for

> . . .when he says that the mind has no need of innate ideas, or notions, or axioms, and at the same time allows it the faculty of thinking (to be considered natural or innate), he makes an affirmation in effect identical with mine, but denies it in words. For I never wrote or concluded that the mind required innate ideas which were in some sort different from its faculty of thinking. . . . In the same sense we say that in some families generosity is innate, others certain diseases like gout or gravel, not that on this account the babes of these families suffer from these diseases in their mother's womb, but because they are born with a certain disposition or propensity for contracting them.[9]

And finally, even more explicitly:

> . . .when I say that an idea is innate in us /or imprinted in our souls by nature/, I do not mean that it is always present to us. This would make no idea innate. I mean merely that we possess the faculty of summoning up this idea.[10]

Clearly, then, Descartes' most developed formulation of innateness is considerably more sophisticated than the version upon which Locke commences his attack.

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[8]Descartes, Objections II," in Haldane and Ross, Vol. II, op. cit., p. 33. (AT, VII, 133)

[9]Descartes, "Notes Against a Programme," in Haldane and Ross, Vol. I, op.cit., p. 442. (AT, VIII, 357-358)

[10]Descartes, "Objections III With Replies," in Haldane and Ross, Vol. II, op. cit., p. 73. (AT, VII, 189)

Locke's first argument against innate principles, practical as well as speculative, is that they are not, as is "commonly taken for granted," universally agreed upon by all mankind.[11] That Locke should take universal assent as a major argument for innateness, despite the fact that most of the major seventeenth-century innate idea theorists either had nothing to say about it or specifically rejected it,[12] is interesting. At a time when he himself espoused the innateness hypothesis with regard to moral principles, he did so on just these grounds: "There are some moral principles which the whole of mankind recognizes and which all men in the world accept unanimously; but this could not happen if the law were not a natural one."[13]

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[11]Locke, Essay, op. cit., p. 38.

[12]See Charles Travis, Innate Ideas (UCLA dissertation, 1967), and Descartes, "Rules for the Direction of the Mind," in Haldane and Ross, Vol. I, op. cit., p. 6: "Further, supposing now that all were wholly open and candid, and never thrust upon us doubtful opinions as true, but expounded every matter in good faith, yet since scarce anything has been asserted by any one man the contrary of which has not been alleged by another, we should be eternally uncertain which of the two to believe. It would be no use to total up the testimonies in favour of each, meaning to follow that opinion which was supported by the greater number of authors; for if it is a question of difficulty that is in dispute, it is more likely that the truth would have been discovered by few than by many. But even though all these men agreed among themselves, what they teach us would not suffice for us." (AT, X, 367)

[13]Locke, first lecture, Essays on the Law of Nature, quoted in Jonathan Barnes, "Mr. Locke's Darling Notion," The Philosophical Quarterly, Vol. 22, No. 88, July, 1972, p. 196.

Accordingly, Locke's first argument against innate principles is that none can be found to which all men assent. Specifically, Locke argues that universal consent, far from showing that there are innate principles, demonstrates that there are none. Even if we take the principles which have "the most allowed title to innate," the speculative principles "Whatever is, is," and "It is impossible for the same thing to be and not to be," we find that there is a great part of mankind to whom they are not even known. It is "evident," for example, that all children and idiots do not have the "least apprehension or thought of them."[14]

The unfortunate aspect of this, of course, is that underlying the argument against universal assent is the apparent belief that innateness doctrines must construe "imprinting on the mind" as conscious knowledge of these speculative principles. Locke writes that it seems to him

> . . .near a contradiction to say, that there are truths imprinted on the soul, which it perceives or understands not: imprinting, if it signify anything, being nothing else but the making certain truths to be perceived. For to imprint anything on the mind without the mind's perceiving it, seems to me hardly intelligible. If therefore children and idiots have souls, have minds, with those impressions upon them, they must unavoidably perceive them, and necessarily know and assent to these truths; which since they do not, it is evident that there are no such impressions. For if they are not notions naturally imprinted, how can they be unknown? To say a notion is imprinted on the mind, and yet at the same time

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[14]Locke, Essay, op. cit., pp. 39-40.

> to say, that the mind is ignorant of it, and never yet took notice of it, is to make this impression nothing. No proposition can be said to be in the mind which it never yet knew, which it was never yet conscious of. For if any one may, then, by the same reason, all propositions that are true, and the mind is capable ever of assenting to, may be said to be in the mind, and to be imprinted: since, if any one can be said to be in the mind, which it never yet knew, it must be only because it is capable of knowing it: and so the mind is of all truths it ever shall know.[15]

Locke's difficulty with innateness as he construes the doctrine, then, is that such theories are unable to distinguish between the capacity we have for knowing certain truths that are labelled "innate," and the capacity we have for knowing any other truths that are not given such status. That certain truths or principles might underly one's thoughts and might be presupposed by the mind in all its judgments, does not seem to occur to him. Instead, he seems unable to view truths as being innate in any sense other than consciously so, and can make no sense of discussions of our capacity to come to know certain truths and principles other than that they are in some sense learned. Thus he finds that

> If. . .these two propositions, 'Whatsoever is, is' and 'It is impossible for the same thing to be and not to be,' are by nature imprinted, children cannot be ignorant of them: infants, and all that have souls, must necessarily have them in their understandings, know the truth of them, and assent to it.[16]

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[15] Ibid., pp. 40-41. Moreover, conscious knowledge is implied in other statements, e.g., ". . .that a truth should be innate and yet not assented to, is to me as unintelligible as for a man to know a truth and be ignorant of it at the same time." (P. 58)

[16] Ibid., p. 42.

Although Locke admits that to avoid the difficulty that children and infants are, in fact, ignorant of these speculative principles, "it is usually answered, that all men know and assent to them, when they come to the use of reason,"[17] in examining this phrase he asserts that it can mean only one of two things, and finds neither possibility indicative of the innateness of these principles. Considering his second alternative first, it can mean that "as soon as men come to the use of reason these supposed native inscriptions come to be known and observed by them."[18] That is, reason is not used by children to discover these principles, but rather they simply arise in their minds at the same time that reason comes to them.

Against this position Locke argues that it is simply false. He cites as counterexamples the facts that children employ rational thought long before they come to know a principle such as "That it is impossible for the same thing to be and not to be," and that "a great part of illiterate people and savages pass many years, even of their rational age, without ever thinking on this and the like general principles."[19] Moreover, argues Locke, even if it were true

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[17] Ibid.

[18] Ibid.

[19] Ibid., p. 45.

that men assented to these principles at the precise time of their coming to the use of reason, this would not prove them innate. In brief, Locke asserts:

> I agree then with these men of innate principles, that there is no knowledge of these general and self-evident maxims in the mind, till it comes to the exercise of reason: but I deny that the coming to the use of reason is the precise time when they are first taken notice of; and if that were the precise time, I deny that it would prove them innate.[20]

Locke is correct, of course, in asserting that even if all men assented to certain principles at the time they came to the use of reason, this would not prove them innate. As has already been noted, however, universal assent was not the argument employed by Descartes; nor, for that matter, was it even an acceptable form of argument for the founder of modern philosophy. Rather, innateness was the only theory that Descartes found to have the explanatory power to deal with the "fact" that certain ideas arise in our minds that could not have gotten there through movements of corporeal bodies. Locke does not deal with this latter issue at all.

Locke finds only one other interpretation that can be given to the statement that all men know and assent to the speculative principles when they come to the use of reason, viz., that by the use of reason men may discover these principles. Against this position Locke argues not only that "by this means

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[20] Ibid. p. 47

there will be no difference between the maxims of the mathematicians and theorems they deduce from them,"[21] but also that "That certainly can never be thought innate which we have need of reason to discover; unless, as I have said, we will have all the certain truths that reason ever teaches us, to be innate."[22]

Regarding the first of these arguments, although Locke probably states his case a little more strongly than he is entitled to, I think he has touched upon a weakness of the Cartesian doctrine. As we have seen in Chapter 1, Descartes never did make precise his notion of our having a certain "disposition" or "propensity" for the ideas which he took to be innate, and there is, as a consequence, some difficulty to be encountered when one attempts to distinguish some ideas classified as "innate" from some others, equally "self-evident," that are not so considered. This is not, however, to say that such a distinction is impossible to make or incoherent to maintain, as Locke here implies.

Locke's second argument against the contention that all men know innately and assent to certain speculative principles by using reason to discover them when they have attained rationality is particularly striking when compared with Descartes' position

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[21] Ibid., pp. 42-43.

[22] Ibid., p. 43.

on innateness. Locke argues that as a consequence either all certain truths discovered by reason then become innate or none of them do, and he is strongly inclined towards the second alternative. In particular, he seems to think that a truth cannot be innate <u>if</u> one must use reason to discover it:

> . . .to make reason discover those truths thus imprinted, is to say, that the use of reason discovers to a man what he knew before: and if men have those innate impressed truths originally, and before the use of reason, and yet are always ignorant of them till they come to the use of reason, it is in effect to say, that men know and know them not at the same time.[23]

This position is remarkably similar to that of Descartes provided that one ignores the difficult question of to what extent reason may be employed to elicit a truth presumed to be innate. Descartes allows for considerable use; Locke, none at all.

Furthermore, continues Locke, with his own account of the acquisition of knowledge, it is only by degrees that the mind comes to be furnished with general ideas after the senses have let in <u>particular</u> ones. As the mind grows familiar with particular ideas and attributes names to them, it abstracts them and comes to the more general ideas. Continuing his argument against a doctrine of innateness that attempts to find universal consent for its innate propositions by maintaining that all men know and assent to them <u>when they come to the use of reason</u>, Locke asserts that

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[23] <u>Ibid</u>.

> . . .though the having of general ideas and the use of general words and reason usually grow together, yet I see not how this any way proves them innate. The knowledge of some truths, I confess, is very early in the mind; but in a way that shows them not to be innate. For, if we will observe, we shall find it still to be about ideas, not innate, but acquired; it being about those first which are imprinted by external things, with which infants have earliest to do, which make the most frequent impressions on their senses. In ideas thus got, the mind discovers that some agree and others differ, probably as soon as it has any use of memory; as soon as it is able to retain and perceive distinct ideas. But whether it be then or no, this is certain, it does so long before it has the use of words; or comes to that which we commonly call 'the use of reason.' For a child knows as certainly before it can speak the difference between the ideas of sweet and bitter (i.e. that sweet is not bitter), as it knows afterwards (when it comes to speak) that wormwood and sugarplums are not the same thing.[24]

Locke's arguments here are, I think, somewhat confused. Presumably an innate idea theorist speaks of all men knowing and assenting to certain propositions <u>when they come to the use of reason</u> in order to explain how it is that children and infants do not know, in any explicit sense, these principles that he takes to be innate. Even Locke, when he commences his discussion of this issue, notes this.[25] But now we find him in the passage quoted above arguing that the mere concurrence of our acquisition of general ideas and the use of general words and reason (that is, their "usually grow[ing] together") in no way proves these general ideas innate. No doubt Locke is correct

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[24] <u>Ibid</u>., p. 49.

[25] See Locke's <u>Essay, op. cit</u>., p. 42.

in his assertion here, but surely this attempt to attain universal consent by arguing that men assent to certain propositions when they come to the use of reason never was meant to be a "proof" of innate ideas. Instead, it was intended to be a possible explanation for why it is that, although certain propositions are innately known by everyone, in many cases the imprinting upon the mind is by no means obvious.

Secondly, Locke argues--or rather, states that it is certain--that the mind knows the difference between the ideas of sweet and bitter (i.e., that sweet is not bitter) long before it has the use of words or comes to the use of reason, and he thinks this shows that knowledge that sweet is not bitter is not innate. Again Locke appears to be somewhat confused. He argues against the innateness of the proposition that sweet is not bitter on the grounds that we know it long before we come to the use of reason, apparently presuming that the argument for the innateness of this proposition is that it does indeed come to be known at precisely the time the mind begins to reason. Thus, not only does he misconstrue the argument, which is not nearly so concerned with the precise time at which we may be said to have certain ideas as Locke seems to think, but he also, as we shall see, argues against the innateness of a proposition that even his "adversary" Leibniz does not take to be innate.

Thus convinced that this "evasion" (that all men know and

assent to supposedly innate propositions when they come to the use of reason) of objections to universal consent fails, Locke considers another possibility, viz., that certain "maxims" are generally assented to as soon as they are proposed and the terms in which they are proposed in understood: "seeing all men, even children, as soon as they hear and understand the terms, assent to these propositions, they think it is sufficient to prove them innate."[26] Locke is probably right here, given that universal assent is taken as a proof of innate principles. Assuming someone did take universal assent to be a "proof" of innate principles, he would then seem to be committed to holding that assent "upon first hearing and understanding the terms" is a "certain mark of an innate principle." Locke subsequently proceeds to argue that, as a result, all propositions which are generally assented to as soon as heard must be allowed to be innate; to argue otherwise, according to Locke, is to urge in vain that general assent is a "proof" of innate principles.[27]

However that may be, one should keep in mind that, in point of fact, no major philosopher ever held that the mark of an innate principle is its being readily assented to as soon as heard and understood, though several have argued that everyone

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[26] Ibid., p. 51.

[27] Ibid.

does indeed assent to innate principles even if initially this may not seem to be the case. A child, for example, may withhold assenting to ∼(P.∼P) because of a lack of understanding of symbolic logic, but he may at the same time agree that a proposition cannot be both true and false at the same time when taken in the same sense. But it must be kept in mind that this regress to "assent as soon as proposed and understood," although it represents an attempt to achieve universality as an accompanying characteristic of innate principles, is not intended to be taken as a defining "mark" of them.

An important question, however, does remain: Can one, in fact, distinguish innate principles from certain other "self-evident" ones once he employs the above explanation to achieve universal assent? Locke argues that he cannot. However, although it is true that Descartes never did supply the criterion by which this distinction could be clearly made, it is not clear that such a criterion can never be found. As we shall see, for example, rightly or wrongly, Leibniz singles out "bitterness is not sweetness" from Locke's partial list of the "million" propositions (including "two bodies cannot be in the same place," "it is impossible for the same thing to be and not to be," "white is not black," and "a square is not a circle") that "meet with assent as soon as they are understood," and claims that it is not innate.

In any event, Locke asserts that despite the assent which is granted at first hearing to particular self-evident propositions such as "one and two are equal to three" and "green is not red," they are not "received as the consequences of those more universal propositions which are looked on as innate principles.[28] His reason is that these and similar less general propositions

> . . .are certainly known, and firmly assented to by those who are utterly ignorant of those more general maxims; and so, being earlier in the mind than those (as they are called) first principles, cannot owe to them the assent wherewith they are received at first hearing.[29]

What is at issue, however, is not whether some general propositions are apprehended sooner than certain corresponding particular ones, but whether such propositions may not be presupposed by reason and thus be logically prior to specific instantiations of them. The point (regarding the unimportance of the temporal consideration) is especially made clear by one of Locke's pupils, Lord Shaftesbury, who remarks that "innate" is a word that Locke "poorly plays on." The "true question" is not the time[30] at which one is aware of certain ideas that are of

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[28] Ibid., p. 53.

[29] Ibid., pp. 53-54.

[30] Note especially Locke's concluding remarks to Chapter 1: "But that I may not be accused to argue from the thoughts of infants, which are unknown to us, and to conclude from what passes in their understandings before they express it; I say next, that these two general propositions are not the truths that first possess the minds of children, nor are antecedent to all acquired and adventitious notions: which, if they were innate, they must needs be." (See Locke's Essay, op.cit., p. 59)

universal extent in their application, but rather "whether the constitution of man be not such that, being adult and grown up, the ideas of order, and administration of a God, will not infallibly and necessarily spring up in consciousness."[31]

It is interesting to note that we do not find Locke reacting negatively to the above question. On the contrary, in the "Preface to Second Edition" to the Essay Locke writes:

> That there are certain propositions which, though the soul from the beginning, when man is born, does not know, yet, by assistance from the outward senses, and the help of some previous cultivation, it may afterwards come either self-evidently, or with a demonstrable necessity, to know the truth of, is no more than what I have affirmed in my First Book.[32]

It is also interesting to note how close we have come to approximating the more-developed Cartesian doctrine. Certainly neither Descartes (nor Leibniz, as we shall see later), nor any other major philosopher, ever held that certain ideas or principles were "imprinted on the mind(s)" of all in any of the senses that Locke here attributes to this phrase. It will be remembered that Descartes, for example, in replying to a criticism by Regius that only an innate faculty of the mind is needed to explain certain ideas, and not innateness of idea, asserted Regius "appears to dissent from me only in words," for

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[31]Lord Shaftesbury, quoted in Frazer in the introduction to his collated and annotated edition of Locke's An Essay Concerning Human Understanding (New York: Dover Publications, Inc., 1959), Vol. I, p. lxxii.

[32]Ibid., pp. lxxii-lxxiii.

> . . .when he says that the mind has no need of innate ideas, or notions, or axioms, and at the same time allows it the faculty of thinking (to be considered natural or innate), he makes an affirmation in effect identical with mine, but denies it in words. For I never wrote or concluded that the mind required innate ideas which were in some sort different from its faculty of thinking....[33]

Thus considered, the question of the existence of innate ideas seems to hinge on whether or not one can speak of certain ideas arising as a result of the use of reasoning or a "faculty of thinking," and at the same time assert that these ideas are innate.

It is unfortunate, however, that Locke does not pursue this aspect of the issue; he seems instead to be most interested in the consciously- possessed ideas rather than in those that may be implicit in what we say or know. Thus, in reply to Thomas Burnet, who argues for unconscious innate ideas with an analogy urging that it is not sufficient to argue that there is no sun in the sky because its light is obscured on cloudy days or is not seen in foggy areas, Locke writes "though the sun be in the heaven, those yet are in the dark, who do not guide their steps by it, and show that his light is not innate in them.[34] The interesting question, whether or not men do "guide their steps" by the sun as a result of its light being in them innately, but implicitly, thus remains untouched.

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[33]Descartes, "Notes against a Programme," in Haldane and Ross, Vol. I, op. cit., p. 442. (AT, VIII, 357)

[34]See introduction to Locke's Essay, op. cit., p. lxxii.

As is perhaps obvious by now, Locke's failure to come to grips with this issue is the result of his failure to find any distinction between principles which are "imprinted on the mind" and of which we are aware, and those which may be unconsciously present in us as principles presupposed in all our thoughts. And it is in the second way that philosophers such as Descartes and Leibniz assert the existence of innate ideas. Indeed, as we shall see, Leibniz argued that there is nothing illegitimate about claiming that certain truths are in our minds even when we are not conscious of them, for "we have an infinite amount of knowledge of which we are not always conscious, not even when we need it."[35] Furthermore, not all philosophers think that the temporal ordering of our awareness of principles must parallel the logical ordering of principles; neither Descartes nor Leibniz, for example, believed that everyone is aware of certain (innate) principles such as "whatever is, is," although these simple principles were at least universally, if unconsciously, presupposed by all people as soon as they begin to think. Moreover, whereas Descartes failed to make explicit the criterion by which innate principles could be classified as distinct from certain other very evident propositions, Locke, by failing to examine any of the more sophisticated versions of innateness theories, never seriously dealt with

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[35] Leibniz, New Essays, op. cit., p. 77.

the problem at all.

Locke's difficulty with "imprinting on the mind" is not, however, limited to the time at which such imprinting takes place. He also has considerable difficulty with the notion itself:

> But we have not yet done with 'assenting to propositions at first hearing and understanding their terms.' It is fit we first take notice that this, instead of being a mark that they are innate, is a proof of the contrary; since it supposes that several, who understand and know other things, are ignorant of these principles till they are proposed to them; and that one may be unacquainted with these truths till he hears them from others. For, if they were innate, what need they be proposed in order to gaining assent, when, by being in the understanding, by a natural and original impression, (if there were any such,) they could not but be known before? Or doth the proposing them print them clearer in the mind than nature did? If so, then the consequence will be, that a man knows them better after he has been thus taught them than he did before. Whence it will follow that these principles may be made more evident to us by others' teaching than nature has made them by impression: which will ill agree with the opinion of innate principles, and give but little authority to them; but, on the contrary, makes them unfit to be the foundations of all our other knowledge; as they are pretended to be.[36]

Again Locke is, I think, in taking such a strong stand, unfair to his opposition, whoever they may be. Surely "assenting to propositions at first hearing and understanding their terms" does not "suppose" that several, who understand and know other things, are ignorant of these principles till they are proposed to them.[37] No doubt we know many propositions that we do not know we know. One's behavior, for example, might in some cases

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[36] Locke, op. cit., pp. 54-55.

[37] Ibid.

be taken as an indication of a person's knowing P even if he explicitly denies knowing P. As we shall see, this is a fundamental element of Chomsky's contemporary version of innateness.

In any event, it should be kept in mind that the primary purpose of attempting to gain assent to certain principles by explaining the terms in which they are encouched is not to decide by unanimous vote which principles are innate, but rather to indicate that these principles were known all along. After all, one can not really be expected to assent to a proposition like "deux et deux font quatre" if he does not understand the terms (in this case, the French words), but he may very well know the underlying mathematical truth. Thus, rightly or wrongly, assent is intended to indicate prior knowledge of these principles, and it is achieved by observing that people do indeed universally agree to certain propositions once they understand them. In a sense proposing certain principles may "print them clearer in the mind than nature did" and a man may subsequently know them better "after he has been thus taught them than he did before"[38] if this is taken to mean merely that something which was once known only implicitly is now known explicitly.

Locke's reaction once again is that so-called innate principles remain undifferentiated from many others that should,

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[38] Ibid., p. 55.

accordingly, be granted the same status:

> If it be said, the understanding hath an implicit knowledge of these principles, but not an explicit, before this first hearing (as they must who will say 'that they are in the understanding before they are known,') it will be hard to conceive what is meant by a principle imprinted on the understanding implicitly, unless it be this,--that the mind is capable of understanding and assenting firmly to such propositions. And thus all mathematical demonstrations, as well as first principles, must be received as native impressions on the mind; which I fear they will scarce allow them to be, who find it harder to demonstrate a proposition than assent to it when demonstrated. And few mathematicians will be forward to believe, that all the diagrams they have drawn were but copies of those innate characters which nature had engraven upon their minds.[39]

Locke's argument here, however, is considerably weaker than before. Whereas previously he asserted that it seemed to him "near a contradiction to say, that there are truths imprinted on the soul, which it perceives or understands not,"[40] and that

> . . .to make reason discover those truths. . .imprinted, is to say, that the use of reason discovers to a man what he knew before: and if men have those innate impressed truths originally, and before the use of reason, and yet are always ignorant of them till they come to the use of reason, it is in effect to say, that men know and know them not at the same time[41]

he now says that it is only "hard to conceive" what is meant by a principle being imprinted (implicitly) on the understanding ("unless it be this--that the mind is capable of understanding and assenting firmly to such propositions"[42]). In order to see the weakness of Locke's position at this point, it is only

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[39] Ibid., p. 56.

[40] Ibid., p. 40.

[41] Ibid., p. 43.

[42] Ibid., p. 56.

necessary to note that to say that something is "hard to conceive" is not to say that it is impossible of conception. The criterion by which innate principles may be enumerated and distinguished from all others may not have been given, but this is not to say that no such criterion exists.

In conclusion, there are two important aspects to Locke's discussion of universal assent that I wish to mention before bringing this section to a close. First, there is the question as to whether or not Locke has, in fact, demonstrated that there is not universal consent. It may be the case that children and idiots are bad reporters--that they have the knowledge and ideas, but that they don't know how to tell us that they have them.[43]

Perhaps of even greater significance is that even if we accept Locke's objection to universal assent--i.e., that because children and idiots "have not the least apprehension or thought of"[44] certain propositions taken to be innate, there is no universal consent and thus no proof here that these propositions are indeed innate--it is of considerably less interest when we realize that no major philosopher argued for innate ideas on these grounds. In particular, as we have seen, Descartes dismisses universality as an argument, and, as we will see later, Leibniz argues for innateness on grounds other

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[43]See Charles Travis, Innate Ideas (UCLA dissertation, 1967).

[44]Locke, op. cit., p. 40.

than assent by all mankind. The really interesting aspects of anything but crude innatism are, as a consequence, left untouched by Locke's discussion of universal assent.

Part II. The Argument From Innate Ideas

In Chapter III of his Essay Locke formally presents his second argument against innate principles. The argument made its first appearance elsewhere,[45] though it was not developed and did not receive a thorough examination. In an early presentation of his argument, where he deals with implicit knowledge, Locke is concerned that men are taught a number of things before they come to understand and assent to certain propositions termed innate. They have, for example, learned the terms:

> But this is not all the acquired knowledge in the case: the ideas themselves, about which the proposition is, are not born with them, no more than their names, but got afterwards. So that in all propositions that are assented to at first hearing, the terms of the proposition, their standing for such ideas, and the ideas themselves that they stand for, being neither of them innate, I would fain know what there is remaining in such propositions that is innate. For I would gladly have any one name that proposition whose terms or ideas were either of them innate.[46]

Although Locke here speaks of terms as well as ideas, his second major argument against innate principles, when more fully developed in Chapter III, is primarily concerned with ideas:

> Had those who would persuade us that there are innate principles not taken them together in gross, but considered separately the parts out of which those

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[45] See, for example, Locke, op. cit., pp. 48-51 and pp. 56-58.

[46] Ibid., pp. 56-57.

> propositions are made, they would not, perhaps, have been so forward to believe they were innate. Since, if the ideas which made up those truths were not, it was impossible that the propositions made up of them should be innate, or our knowledge of them be born with us. For, if the ideas be not innate, there was a time when the mind was without those principles; and then they will not be innate, but be derived from some other original. For, where the ideas themselves are not, there can be no knowledge, no assent, no mental or verbal propositions about them.[47]

Locke's position, then, is that no proposition can be considered innate if the ideas which it contains are not innate, and he finds no innate ideas. In considering new-born children he argues that there is particularly little reason to think that they bring into the world with them the ideas which make up universal propositions that are termed innate:

> If we will attentively consider new-born children, we shall have little reason to think that they bring many ideas into the world with them. For, bating perhaps some faint ideas of hunger, and thirst, and warmth, and some pains, which they may have felt in the womb, there is not the least appearance of any settled ideas at all in them; especially of ideas answering the terms which make up those universal propositions that are esteemed innate principles.[48]

Acceptance of Locke's second major argument against innate principles rests, of course, upon acceptance of his characterization of propositions as composed of ideas, and this is unfortunate. Not only is the crucial term "idea" insufficiently examined and thus left vague, but also no

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[47] Ibid., p. 92.

[48] Ibid., pp. 92-93.

attempt is made to explicate the even more complex relationship that is assumed to exist between propositions and ideas.

As with his first argument, the question of the innateness of certain ideas is soon seen to revolve about the crucial question of what is to count as the criterion for the possession of such ideas. In this argument, as throughout the Essay, Locke is inclined towards awareness of such ideas on the part of those presumed to have them. As new-born children are generally presumed to have few ideas in this sense, let alone such general and abstract ones as "impossibility" and "identity,"[49] Locke is confident that consequently they may be said to possess no innate ideas. But is this underlying criterion of awareness fair to the innate idea doctrine?

It seems to me that it is a commonplace that one may not always be the best judge of what he knows and what he does not, particularly when complex issues are involved. In such cases many times a person's actions may be taken to betray a certain knowledge or lack of it, notwithstanding his claims to the contrary. This is, in fact, what Chomsky takes to be the case when it comes to language. We all "know" the rules of the grammar of a language that we speak fluently, though very few of us will ever be able to enumerate them. Moreover, because they are so complex, few of us would

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[49] Ibid.

recognize the rules should they ever be formulated and presented to us. Nevertheless our actions, in this case utterances, indicate that we do follow certain very specific grammatical rules even though we may not be aware of them--it seems to make sense to say we know these rules even though we can not enumerate them and may not even recognize them when they are presented to us.

Behavior may similarly be used as evidence for the attribution of knowledge to human beings who may not be conscious of their possession of it. Locke's "new-born children" may very well employ the law of contradiction in their thinking, although they may not be able to recognize this themselves until years later. Expressed awareness of a certain principle, then, is not the only criterion according to which one may be said to know a particular proposition--one's actions, judgments, and assertions may indicate unconscious knowledge of a certain principle he is not explicitly aware of.

Locke's criterion of innateness, however, includes even more than awareness. In his discussion of the principle "It is impossible for the same thing to be, and not to be," a principle he claims is innate "if there be any such," Locke argues that this principle can be innate only if our ideas of "impossibility" and "identity" are innate. But he demands more than that these ideas are such as all mankind have and bring into the world with them: he requires that they be

the first in children, and antecedent to all acquired ones:

> 'It is impossible for the same thing to be, and not to be,' is certainly (if there be any such) an innate principle. But can any one think, or will any one say, that 'impossibility' and 'identity' are two innate ideas? Are they such as all mankind have, and bring into the world with them? And are they those which are the first in children, and antecedent to all acquired ones? If they are innate, they must needs be so.[50]

Such a demand is surely much stronger than it need be. As has been noted previously, what is important is that principles or ideas termed "innate" be in the mind logically prior to certain adventitious ones, not that they be temporally prior to them. It will be remembered that Descartes, for example, in asserting the innateness of God, does not demand that the new-born child be aware of God at birth, but merely that the idea come "to me from no other source than myself."[51] Thus, we may have many ideas temporally before we have the idea of God, and these other ideas may even be prerequisite to our idea of a supreme being, but this in no way affects the innate status of such an idea.

Contrary to Descartes, Locke does not find that the idea of God is innate. Locke grants that if any idea can be imagined innate, it is the idea of God, for "it is hard to conceive how there should be innate moral principles, without

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[50] Ibid., p. 93.

[51] Descartes, "Objections II," in Haldane and Ross, Vol. II, op. cit., p. 33. (AT, VII, 133)

an innate idea of a Diety."[52] Given his rejection of innate moral principles, however, Locke does not feel compelled to argue for the innateness of the idea of God. Instead he argues that because there are "whole nations" that have been found where there is no notion of God or religion, the idea of God can not be innate.[53] He adds that perhaps there is reason to fear that even "in more civilized countries" many people have no "very strong and clear impressions of a Diety upon their minds, and that the complaints of atheism made from the pulpit are not without reason."[54]

His first argument against the innateness of the idea of God, however, is at best dubious. It is by no means obvious that everyone must have a clear impression before the idea of Him can be considered innate. Again Descartes, for one, argued that the question of the innateness of the idea of God is not even dependent upon everyone having any clear idea of God in Locke's sense; rather, he must simply have the "capacity for constructing such an idea,"[55] or, according to his later writings, the "disposition" or "propensity" for doing so.[56] Descartes

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[52]Locke, op. cit., pp. 95-96.

[53]Ibid., pp. 96-98.

[54]Ibid., p. 98.

[55]Descartes, "Objections II," in Haldane and Ross, Vol. II, op. cit., p. 33. (AT, VII, 133)

[56]Descartes, "Notes against a Programme," in Haldane and Ross, Vol. I, op. cit., p. 442. (AT, VIII, 358)

thus would be neither surprised nor perturbed to find that there are "whole nations" that have no notion of the Diety--that is, such a fact has no bearing on his argument.

Although Locke thus finds that everyone's having a strong and clear impression of God is a necessary condition for the innateness of the idea of God, he does not believe it is sufficient:

> But had all mankind everywhere a notion of a God, (whereof yet history tells us the contrary,) it would not from thence follow, that the idea of him was innate. For, though no nation were to be found without a name, and some few dark notions of him, yet that would not prove them to be natural impressions on the mind; no more than the names of fire, or the sun, heat, or number, do prove the ideas they stand for to be innate; because the names of those things, and the ideas of them, are so universally received and known amongst mankind.[57]

Locke's overall argument, then, is that no principle is innate because no idea is innate, and no ideas are innate because none are universally assented to; but, moreover, even if some were, that would not prove them innate. In particular, the idea of God is not universally assented to, but even if it were, that would no more prove it innate than it would prove the ideas of fire, the sun, heat, or number innate.

While Locke is no doubt correct in asserting that universal assent alone does not constitute a proof of innateness, his reasons for believing so are not compelling. His argument seems to be based on the suppressed premise that no one would

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[57]Locke, op. cit., pp. 98-99.

claim that the ideas of fire, the sun, heat, and number are innate. Given that it is not only possible to conceive of someone believing that all these ideas are "stamped upon our minds," but also possible to cite philosophers who virtually asserted that all ideas are innate,[58] Locke's argument loses much of its force.

That Locke is arguing from such a suppressed premise is even more clearly seen in later passages as he continues with his argument that universality no more proves innate the idea of God than it does the idea of fire:

> . . .the generality of the acknowledging of a God, . . .which, if it be sufficient to prove the idea of God innate, will as well prove the idea of fire innate; since I think it may be truly said, that there is not a person in the world who has a notion of a God, who has not also the idea of fire. I doubt not but if a colony of young children should be placed in an island where no fire was, they would certainly neither have any notion of such a thing, nor name for it, how generally soever it were received and known in all the world besides; and perhaps too their apprehensions would be as far removed from any name, or notion, of a God, till some one amongst them had employed things, which would easily lead him to the notion of a God; which having once taught to others, reason, and the natural propensity of their own thoughts, would afterwards propagate, and continue amongst them.[59]

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[58]See Descartes, for example, who in his later writings asserts that ". . .the ideas of the movements and figures are themselves innate in us. So much the more must the ideas of pain, colour, sound and the like be innate." (Descartes, "Notes against a Programme," in Haldane and Ross, Vol. I, op. cit., p. 443.) (AT, VIII, 359)

[59]Locke, Essay, op. cit., pp. 100-101.

As has been indicated above, if one felt that innate ideas should find universal assent, he might feel compelled to explain any apparent lack of such assent on the part of children or "savages" without education. This is only to say, however, that universal assent is a necessary condition for the innateness of a particular idea, not that it is a sufficient one. Locke's objection to universal assent, here and elsewhere, seems to be directed against universal assent as a sufficient and as a necessary condition of the innateness of certain propositions.

Moreover, in examining this even more-detailed comparison of the idea of God with the idea of fire, one should keep in mind the vast difference between the two. "Fire" is an ostensive noun, one that is generally learned by someone pointing out what fire is. Accordingly, the idea usually arises in one's mind for the first time upon some experience of it. The idea of God, however, is "inferred" from what one experiences--perhaps, as Locke says, upon employing one's thoughts "to inquire into the constitution and causes of things."[60] Thus, one would not expect young children placed on an island where there was no fire to come to have this idea. It is not, however, as obvious that such children would never come to formulate the idea of a divine being. As one does not experience Him in the same way (viz., via sight, touch, etc.) as one experiences fire, it is possible

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[60] Ibid., p. 101.

that any number of things on the island could lead a group of children to formulate the idea of a powerful supernatural being or a divine order in the world. Perhaps these are not the "Gods" Locke has in mind, but if his argument is that it is the notion of the Christian God that the children will never come to have, his expectations are not a little unreasonable.

Perhaps Locke's strongest argument against the innateness of the idea of God revolves around his observation that there are many contrary and inconsistent conceptions of Him:

> Can it be thought that the ideas men have of God are the characters and marks of himself, engraven in their minds by his own finger, when we see that, in the same country, under one and the same name, men have far different, nay often contrary and inconsistent ideas and conceptions of him? Their agreeing in a name, or sound, will scarce prove an innate notion of him.[61]

Locke's argument, however, is by no means conclusive. It is not impossible, for example, to find support for the position that the many apparently diverse conceptions of God have enough in common to indicate that a single divine being has merely manifested Himself in various different forms and religions.[62] I do not here intend to defend this thesis, but rather to simply point out that it is a possible alternative to a ready acceptance of Locke's position.

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[61] Ibid., p. 104.

[62] See, for example, Obadiah Harris, Unitive Spirituality (Santa Barbara: J.F. Rowny Press, 1966).

Locke's emphasis upon conscious universality, which at times, so I have argued in the preceding section, led him away from the really interesting aspects of innateness doctrines, is also in evidence in his further treatment of the idea of God:

> If it be said, that wise men of all nations came to have true conceptions of the unity and infinity of the Deity, I grant it. But then this,
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> First, excludes universality of consent in anything but the name; for those wise men being very few, perhaps one of a thousand, this universality is very narrow.
>
> Secondly, it seems to me plainly to prove, that the truest and best notions men have of God were not imprinted, but acquired by thought and meditation, and a right use of their faculties: since the wise and considerate men of the world, by a right and careful employment of their thoughts and reason, attained true notions in this as well as other things. . . .[63]

Locke is, of course, right in asserting that regression to universality among wise men "excludes universality of consent in anything but the name," if this consent is taken to mean conscious consent only. That it might actually take some effort and introspective analysis to bring out what is only latently known is not a possibility that is explored by Locke, here or elsewhere.

Locke's second argument against construing universality as universality among "wise men of all nations" is that, if anything, it does not prove the idea of God innate, but rather "proves" that "the truest and best notions men have of God were not imprinted, but acquired by thought and meditation, and a

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[63] Ibid.

right use of their faculties. . . ." Universality among wise men does not, of course, "prove" any such thing, but what is most interesting about Locke's position here is that it again comes very close to that of Descartes. The major obstacle to explicit agreement between Locke and Descartes is that the former insists that knowledge that is innate in men cannot require the use of thought, meditation, or "a right use of their faculties" in order to bring it out, whereas the latter argues that such use of the faculties of thinking are necessary to bring out knowledge that is implicitly innate.

Locke concludes his second argument with a reference to virtue: "And if it be a reason to think the notion of God innate, because all wise men had it, virtue too must be thought innate; for that also wise men have always had."[64] Suffice it to say here that even if universality were to be taken as an argument for the existence of innate ideas, Locke's objection holds only if it is taken as sufficient; there might be reasons for supposing that, although virtue may be universal among wise men, it is not innate--e.g., there might be evidence that it is learned by all wise men. Locke's argument is conclusive only if he shows that no distinction at all can be drawn between the acquisition of certain principles and the acquisition of virtue, that may in different ways account for the presumed universality of each.

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[64] Ibid.

At times Locke may be read as conceding innateness in the Cartesian, and perhaps the only meaningful, version of the doctrine:[65]

> It is as certain that there is a God, as that the opposite angles made by the intersection of two straight lines are equal. There was never any rational creature that set himself sincerely to examine the truth of these propositions that could fail to assent to them; though yet it be past doubt that there are many men, who, having not applied their thoughts that way, are ignorant both of the one and the other. If any one think fit to call this (which is the utmost of its extent) universal consent, such an one I easily allow; but such an universal consent as this proves not the idea of God, any more than it does the idea of such angles, innate.[66]

Locke's argument here, however, is unclear. A literal reading yields the assertion that the certainty that there is a God, seen after some considerable thought, does not entail the conclusion that the idea of God is innate, which is surely true. If what Locke means to say, however, is that whatever universal consent there is about the idea of God, this does not show that this idea is innate because some effort and thought are involved in arriving at the conclusion, then his assertion is not so obviously true.

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[65] Fraser, for example, in his collated and annotated version of Locke's Essay, asserts in a footnote referring to the paragraph below: "This is really a concession of 'innate principles' and 'universal consent,' in the only meaning of 'innateness' which needs to be considered." (Alexander Fraser, John Locke's An Essay Concerning Human Understanding, p. 106, p. 106, Footnote #2.)

[66] Ibid., p. 106.

Thus Locke argues that the idea of God is not innate. Although he believes that the non-innateness of the idea of God "is a strong presumption against all other innate characters," almost as an afterthought he briefly considers the possibility that the idea of substance is innate:

> I confess there is another idea which would be of general use for mankind to have, as it is of general talk as if they had it; and that is the idea of substance; which we neither have nor can have by sensation or reflection. If nature took care to provide us any ideas, we might well expect they should be such as by our own faculties we cannot procure to ourselves; but we see, on the contrary, that since, by those ways whereby other ideas are brought into our minds, this is not, we have no such clear idea at all; and therefore signify nothing by the word substance but only an uncertain supposition of we know not what, i.e. of something whereof we have no /particular distinct positive/ idea, which we take to be the substratum, or support, of those ideas we do know.[67]

Locke does not so much argue here against the innateness of the idea of substance as merely assert that since this idea is not brought into our minds "by those ways whereby other ideas are," we see that "we have no such clear idea at all." However one may feel about the truth-value of the conclusion, it is far from obvious that the conclusion follows from the stated premises. Descartes, for example, as we have seen, argues that because the idea of God is not brought into our minds the way most other ideas are (in his case, via the senses or imagination), it must be innate. This is not to say that Descartes is right, but merely to observe that it is questionable whether Locke's

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[67] Ibid., pp. 107-108.

conclusion follows in the deductive fashion that he seems to think it does.

Returning to his argument that no propositions can be innate because no ideas are innate, Locke employs an analogy:

> Whatever then we talk of innate, either speculative or practical, principles, it may with as much probability be said, that a man hath £100 sterling in his pocket, and yet denied that he hath there either penny, shilling, crown, or other coin out of which the sum is to be made up; as to think that certain propositions are innate when the ideas about which they are can by no means be supposed to be so.[68]

Locke's analogy seems ill-chosen, for one may have a promissory note and thus need not have any coin in his pocket and still be said to have £100 sterling on himself. However, even more to the point and again ignoring any problems raised by Locke's inadequate treatment of "ideas," it is certainly feasible, notwithstanding Locke's assertions to the contrary, for one to argue for the innateness of certain propositions even though he may not believe that the ideas they contain are innate. Fraser points out, for example, that there may be

> . . .an innate intellectual obligation to perceive relations among those ideas that are themselves data of experience, e.g. to recognize necessary causal relation between sense-given sequences. Connection of ideas might be thus innate, although the connected ideas are not.[69]

Even more specific examples come to mind. Because various and related particular propositions are asserted or "followed"

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[68] Ibid., p. 108.

[69] Fraser, op. cit., p. 108.

early on, one may come to believe that the general propositions that embody them are innate even if the ideas they contain are not. Thus, noting that no one asserts "Red is green" or "Some squares are circular," one may feel that the natural inclinations towards the acceptance of the underlying general proposition "It is impossible for the same thing to be, and not to be" is such that this general proposition may be said to be innate even if the ideas of "impossibility" and "identity" are not.

Through the employment of another analogy, Locke argues that assent upon hearing the proposition "That God is to be worshipped" no more proves the ideas of "God" and "worship" innate than does the eventual assent of a blind man ("with cataracts which will be couched to-morrow") to the propositions "That the sun is lucid" or "That saffron is yellow" prove the ideas of "sun," or "light," or "saffron," or "yellow" innate:

> Every one that hath a true idea of 'God' and 'worship,' will assent to this proposition, 'That God is to be worshipped,' when expressed in a language he understands; and every rational man that hath not thought on it to-day, may be ready to assent to this proposition to-morrow; and yet millions of men may be well supposed to want one or both those ideas to-day. For, if we will allow savages, and most country people, to have ideas of God and worship, (which conversation with them will not make one forward to believe,) yet I think few children can be supposed to have those ideas, which therefore they must begin to have some time or other; and then they will also begin to assent to that proposition; and make very little question of it ever after. But such an assent upon hearing, no more proves the ideas to be innate, than it does that one born blind (with cataracts which will be couched to-morrow) had the innate ideas of the sun, or light, or saffron, or yellow; because, when his sight is cleared, he will certainly assent to this proposition, 'That the sun is lucid, or that saffron is yellow.' And therefore,

> if such an assent upon hearing cannot prove the ideas innate, it can much less the propositions made up of those ideas.[70]

Disregarding the issues of "assent upon hearing" and the temporal consideration, both of which have already been discussed in depth, it is interesting to note that, depending upon one's criterion, one can argue that the ideas of at least certain speculative principles are innate because the propositions are. Thus, substituting the speculative principle "It is impossible for the same thing to be, and not to be" for the perhaps more dubious practical principle "That God is to be worshipped," an innatist may examine the above argument and claim that the ideas of "impossibility" and "identity" must therefore also be innate even if he feels that those of the "sun," "light," "saffron," and "yellow" are not. He may, after all, distinguish between "It is impossible for the same thing to be, and not to be" and "That the sun is lucid," maintaining that only the former is innate. As we shall see, Leibniz did just that, claiming that only propositions that contain non-sensible ideas are innate.

Locke's failure to come to grips with the possibility that certain ideas are unconsciously imprinted on the mind surfaces again when he considers whether or not there are innate ideas in the memory. Curiously enough, however, while dogmatically refusing to allow that ideas can be in the mind unconsciously

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[70] Locke, op. cit., pp. 108-109.

unless they are in the memory (". . .what is not either actually in view or in the memory, is in the mind no way at all, and is all one as if it had never been there."[71]), Locke does allow for unconscious ideas so long as they are confined to memory:

> . . .if there be. . .any ideas in the mind which the mind does not actually think on, they must be lodged in the memory. . . . Whatever idea was never perceived by the mind was never in the mind. Whatever idea is in the mind, is, either an actual perception, or else, having been an actual perception, is so in the mind that, by the memory, it can be made an actual perception again.[72]

And, furthermore,

> . . .whatever idea, being not actually in view, is in the mind, is there only by being in the memory; and if it be not in the memory, it is not in the mind; and if it be in the memory, it cannot by the memory be brought into actual view without a perception that it comes out of the memory; which is this, that it had been known before, and is now remembered.[73]

Because he gives no sufficient reason, however, for either confining unconscious ideas to memory or restricting ideas in general to acquired knowledge only, it was easy for Leibniz to claim that he was placing unjustifiably severe contraints upon the mind's operations.

Locke, moreover, gives no justification for his claim that whenever an "idea" is brought into actual view, it must

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[71] Ibid., p. 110.

[72] Ibid., p. 109.

[73] Ibid., p. 111.

be accompanied by both our perception that it had been known before and that it is now remembered. There are, in fact, reasons for believing this to be false. It is very doubtful, for example, that people under hypnosis or a "truth drug" are at all aware of the many things that are brought forth from their memories. As many of the ideas thus found to be in the memory seem new to the person in whom they are discovered to reside, it is even less doubtful that such persons "perceive" that these ideas have been "known before."

In stating yet another reason why he doubts that any principles are innate, Locke employs an even more obvious non sequitur. He contends that he cannot satisfy himself that an infinitely wise God who made all things in perfect wisdom should be supposed to imprint innate <u>speculative</u> principles that are of no great use or innate <u>practical</u> principles that are not self-evident, and neither of which is distinguishable from other truths not presumed to be innate:

> Besides what I have already said, there is another reason why I doubt that neither these nor any other principles are innate. I that am fully persuaded that the infinitely wise God made all things in perfect wisdom, cannot satisfy myself why he should be supposed to print upon the minds of men some universal principles; whereof those that are pretended innate, and concern speculation, are of no great use; and those that concern practice, not self-evident; and neither of them distinguishable from some other truths not allowed to be innate. For, to what purpose should characters be graven on the mind by the finger of God, which are not clearer there than those which are afterwards introduced, or cannot be distinguished from them? If any one thinks there are such innate ideas and propositions, which by their clearness and usefulness are distinguishable from all

> that is adventitious in the mind and acquired, it will not be a hard matter for him to tell us which they are. . . .[74]

We might note, first of all, that one who is not "fully persuaded that the infinitely wise God made all things in perfect wisdom," either because he believes in no God at all or because his conception of the Diety is that of a limited being, is not very likely to feel there is a problem here--at least not the one Locke envisions. But supposing one _does_ accept Locke's premise, is it really a criticism of innate principles to say that one cannot satisfy himself _why_ God should be supposed to print upon the minds of men some speculative principles that are of no great use and some practical principles that are not self-evident? One is reminded of Descartes' reply, in his discussion of error in Meditation IV, when he comes to the question of whether it is better that he should be subject to err than that he should not:

> In considering this more attentively, it occurs to me in the first place that I should not be astonished if my intelligence is not capable of comprehending why God acts as He does; and that there is thus no reason to doubt of His existence from the fact that I may perhaps find many other things besides this as to which I am able to understand neither for what reason nor how God has produced them. For, in the first place, knowing that my nature is extremely feeble and limited, and that the nature of God is on the contrary immense, incomprehensible, and infinite, I have no further difficulty in recognising that there is an infinitude of matters in His power, the causes of which transcend my knowledge; and this

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[74] _Ibid._, pp. 111-112.

> reason suffices to convince me that the species of cause termed final, finds no useful employment in physical or natural things; for it does not appear to me that I can without temerity seek to investigate the inscrutable ends of God.[75] . . .I have certainly no cause to complain that God has not given me an intelligence which is more powerful, or a natural light which is stronger than that which I have received from Him, since it is proper to the finite understanding not to comprehend a multitude of things, and it is proper to a created understanding to be finite. . . .[76]

Disregarding any questions arising from the "propriety" of the created understanding to find a multitude of things incomprehensible, Locke's inability to satisfy himself about God's intentions in making certain principles innate does seem to be a very weak argument against their being so. Moreover, if God's intentions are left out of the analysis, there is then no problem even if innate speculative principles turn out to have little utility.

But furthermore, there is also at least some room for doubting Locke's claim that speculative principles are of no great use. If they do lay the foundation for all knowledge, as a number of philosophers have believed, then they are indeed, of great use. To argue that their use is confined to matters of speculation rather than to practice, and that therefore they are of no great use, is to take a very limited and pragmatic view of utility.

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[75] Descartes, "Meditations," Meditation IV, in Haldane and Ross, Vol. I, op. cit., p. 173. (AT, VII, 55)

[76] Ibid., p. 177. (AT, VII, 60)

As for practical principles not being self-evident, it is perhaps here that Locke makes one of his stronger claims. While it is not clear that innate practical principles must be self-evident in any conscious sense, it is prima facie disturbing to find the variety of "truths" that have at one time or another passed for innate practical principles: e.g., "That virtue joined with piety is the best worship of God," that "Men must repent of their sins."[77] It is for this reason, as well as for the fact that Locke's arguments against innate practical principles are virtually the same as his against innate speculative principles, that I have tended to emphasize the latter in my treatment of Locke's position on innateness.

Finally, although Locke implies the contrary in the passage quoted above, it should be remarked that "clearness" and "usefulness" need not be the only criteria for distinguishing innate ideas and propositions from "all that is adventitious in the mind and acquired." Leibniz, as we shall see, proposed "necessity." Moreover, and again contrary to Locke's assertion, it should also be remarked that Locke's claim that anyone who thinks there are innate ideas and propositions should not find it a hard matter to "tell us which they are," is too strong. As the problem of enumerating the specific ideas and propositions that are innate is very different from the problem of knowing whether or not there are any at all, it may indeed be

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[77]Religious principles claimed innate by Lord Herbert, listed in Locke's Essay, op. cit., Chapter 2, p. 81.

difficult for one to list them even if he is convinced that there are some. Thus, to require enumeration is unreasonable.[78]

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[78]For more on the question of enumeration, see Charles Travis, Innate Ideas (UCLA dissertation, 1967).

CHAPTER III

LEIBNIZ AND THE DEFENCE OF INNATE IDEAS

Part I: Innate Speculative Principles

In the dialogue in Chapter 1 of Book I of Leibniz' New Essays we find Philalethes presenting the arguments of Locke's Essay while Theophilus, representing Leibniz, presents his case against the empiricism of the great English philosopher. Reacting to Philalethes' assertion that, in order to refute the error of those who admit innate ideas and principles, it is "sufficient to show, as it appears eventually, that there is no need of them, and that men can acquire all their knowledge without the aid of any innate impression," Theophilus indicates that although, as a result of some recent studies, he now believes all ideas to be innate and none to be given to us by the senses, he will nevertheless put this investigation aside and, in following Locke's recently published Essay, will try to indicate how at least some ideas and some principles do not come to us from the senses.[1] Specifically, Leibniz argues that Locke, in his zeal to prevent others from employing innate principles in such a manner as to maintain their prejudices

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[1]Gottfried Leibniz, New Essays Concerning Human Understanding, translated by Alfred Langley (New York: The MacMillan Company, 1896) p. 70.

unexamined, has failed to sufficiently distinguish "the origin of the necessary truths, whose source is in the understanding, from that of the truths of fact drawn from the experience of the senses, and even from those confused perceptions which are in us."[2]

Philalethes, assuming that the grounds for innate principles lie in their universal acceptance, employs Locke's argument against the universal consent of the "general notions," viz., that

> . . .though it were certain that there are some principles in which the entire human race is agreed, this universal consent would not prove that they are innate if one can show, as I believe he can, another way through which men have been able to reach this uniformity of opinion. But, what is much worse, this universal consent is nowhere found, not even with regard to these two celebrated speculative principles (for we shall speak about the practical ones later), that whatever is, is; and that it is impossible for a thing to be and not to be at the same time. For there is a large part of the human race to which these two propositions, which will pass doubtless for necessary truths and for axioms with you, are not even known.[3]

Leibniz' response is to deny that he grounds the certainty of innate principles upon universal consent and to emphasize that rather he believes that "we ought to labor to be able to demonstrate all the axioms which are not primitive."[4]

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[2] Ibid., p. 71.

[3] Ibid., pp. 71-72.

[4] Ibid., p. 72.

Citing the readiness with which men accept doctrines about God as an indication of the inclination we have to recognize the idea of God, Theophilus asserts that this readiness in men comes from the nature of their souls.

Philalethes' reaction brings us to the heart of one of Locke's most persistent misunderstandings regarding innateness doctrines. The Lockean spokesman claims that to say that there are truths "imprinted upon the soul" which the soul does not perceive seems to him "a veritable contradiction."[5] As will be remembered, in Part I of Chapter II it was shown that Locke's inability to come to grips with this particular issue prevented him from ever progressing to a consideration of the more sophisticated innateness theories. Moreover, it was pointed out there that Locke variously characterized the imprinting, sometimes referring to it as "near a contradiction,"[6] but at other times asserting that it is merely "hard to conceive."[7]

Leibniz, in support of his contention that the soul may have truths imprinted on it that it nevertheless does not perceive, counters with the observation that we have "an infinite

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[5] Ibid., p. 77. From this point on, though I have continued to footnote the Langley edition of Leibniz' New Essays, I have followed the order of the Erdmann, Jacques, and Janet texts, which in turn follow the order of Locke's Essay. See Langley, op. cit., pp. 72-73, Footnote #2.

[6] Locke, Essay, op. cit., p. 40.

[7] Ibid., p. 56.

amount of knowledge of which we are not always conscious" and that it is for the memory to preserve this. We cannot, after all, "think distinctly and at once of everything we know."[8] Philalethes, like Locke in the Essay, does not deal with this observation; instead, he moves on to what he believes to be a more troublesome difficulty.

Philalethes claims that

> . . .if you can say of some particular proposition that it is innate, you could maintain by the same reasoning that all propositions which are reasonable, and which the mind could always regard as such, are already impressed upon the soul.[9]

It seems to be Philalethes' assertion, then, that it is not possible to distinguish propositions which are reasonable and innate from those propositions that are just reasonable.

Theophilus (that is, Leibniz) responds by allowing a large class of propositions to be labelled innate. Thus, contrary to Locke, who claims that those "who find it harder to demonstrate a proposition than assent to it when demonstrated" will "scarce allow" all mathematical demonstrations to be innate,[10] Leibniz answers by saying:

> I agree with you in regard to pure ideas, which I oppose to the phantoms of the senses, and in regard to necessary truths, or those of the reason, which I oppose to truths of fact. In this sense it must be said that

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[8]Leibniz, New Essays, op. cit., p. 77.

[9]Ibid., p. 78.

[10]Locke, Essay, op. cit., p. 56.

> all arithmetic and all geometry are innate, and are in us virtually, so that we can find them there if we consider attentively and set in order what we already have in the mind, without making use of any truth learned through experience or through the tradition of another, as Plato has shown in a dialogue in which he introduces Socrates leading a child to abstract truths by questions alone without giving him any information. We can then make for ourselves these sciences in our study, and even with closed eyes, without learning through sight or even through touch the truths which we need; although it is true that we would not consider the ideas in question if we had never seen or touched anything.[11]

Leibniz thus indicates that the reasonableness of a proposition is not alone sufficient for that proposition to be considered innate: it must, in addition, be a special type of proposition. More specifically, Leibniz seems to be adding two distinct conditions for the innateness of an idea or proposition: 1) Only "pure" ideas are innate, and 2) Only propositions which embody necessary truths (or those of reason) are innate. This is remarkably similar to the Cartesian doctrine, although Descartes made no detailed attempt to state explicitly the characteristics of innate ideas and propositions. Nevertheless, the Cartesian idea of God is a "pure" idea in the sense that it does not come to us through the senses, and the proposition that "things which are equal to the same thing are equal to one another" is a necessary truth of reason.

But perhaps worthy of even greater attention is Theophilus' further remark that

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[11]Leibniz, New Essays, op. cit., p. 78.

> Finally, in a larger sense, which it is well to employ in order to have notions more comprehensive and more determinate, all truths which can be drawn from primitive innate knowledge can still be called innate, because the mind can draw them from its own depths, although often it would not be an easy thing so to do.[12]

Leibniz thus sides with Descartes on the question of the use of the mind to discover certain ideas that are innate: it may sometimes take great effort to draw certain knowledge from the depths of the mind, but such knowledge is nevertheless innate because it does come only from the mind.[13]

Theophilus' remark, however, reveals that there has been a modification of the Cartesian position. For the first time Leibniz speaks explicitly of innate "knowledge," though he has perhaps implicitly done so by referring to certain principles as innate "truths." While Descartes did speak of certain ideas and certain principles as innate, he tended to be more concerned with the question of how these ideas and principles arise in our minds than with the question of whether the innateness of a proposition constitutes knowledge of it. It is this latter

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[12] Ibid., p. 79.

[13] It will be remembered that, while Descartes allows for considerable use of reason to elicit an innate truth, Locke seems to find this preposterous: ". . .to make reason discover those truths. . .imprinted, is to say, that the use of reason discovers to a man what he knew before: and if men have those innate impressed truths originally, and before the use of reason, and yet are always ignorant of them till they come to the use of reason, it is in effect to say, that men know and know them not at the same time." (Locke, Essay, op. cit., p. 43).

question, as we shall see, that has also led some philosophers to criticize Chomsky for his many references to seventeenth-century predecessors when he discusses the innateness of certain a priori psychological principles.[14]

Philalethes agrees with Theophilus that that which is not perceived can still be in the soul, "for we do not always remember at once all we know," but he persists with the Lockean view that this can only apply to what was known expressly before. Thus, memory can preserve what is known and not now perceived, but the mind cannot have any other kind of knowledge that it is not aware of. The only manner in which a thing may be said to be in the soul, although the soul has not yet known it, is as a capacity or faculty of the soul.[15]

Leibniz argues that perhaps there is another way:

> Why could not this have still another cause, such as the soul's being able to have this thing within it without it being perceived? for since an acquired knowledge can be concealed therein by the memory, as you admit, why could not nature have also concealed therein some original knowledge? Must everything that is natural to a substance which knows itself be known by it actually at once?[16]

It will be recalled that Locke, on this very point, asserted without justification that "what is not either actually in view

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[14]See, for example, Jonathan Barnes, "Mr. Locke's Darling Notion," The Philosophical Quarterly, Vol. 22, No. 88, July, 1972, pp. 210-211.

[15]Leibniz, New Essays, op. cit., p. 79.

[16]Ibid.

or in the memory, is in the mind no way at all, and is all one as if it had never been there."[17] Contrary to this, Leibniz argues that since acquired knowledge can be concealed within the soul, there is no reason to assume dogmatically that some original knowledge could not also be concealed therein.

In a reference to Plato's doctrine of reminiscence, Leibniz adds that at some point even here some knowledge must be considered innate or we become involved in an infinite regress. His argument seems to be that either such knowledge is innate in the preceding state of the soul, or it is necessary to proceed again even further back to a previous state of the soul. The force of this argument, however, rests on acceptance of another premise, namely that ". . .it is always clear in all states of the soul that necessary truths are innate, and are proved by what is within, it not being possible to establish them through experience, as we establish truths of fact."[18]

Leibniz adds, moreover,

> Why should it be necessary also that we could have no possession in the soul of which we had never made use? And is it the same thing to have a thing without using it as to have only the faculty of acquiring it? If that

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[17]Locke, Essay, op. cit., p. 110.

[18]Leibniz, New Essays, op. cit., p. 80.

> were so, we should never possess anything but the things which we enjoy. . . .[19]

Philalethes reply is that under this interpretation we could say that there are truths written upon the soul which it has never known and which it will never know, and this seems strange to him. Leibniz' response is not entirely satisfying, I think, for in addition to asserting that he sees no absurdity here, he remarks that things "more exalted than those which we can know in this present course of life may be developed some time in our souls, when they are in another state."[20]

Philalethes' next objection brings us to the claim that was mentioned previously in Part I of Chapter II, viz., that so-called imprinted truths seem to differ in no way from any other truths the mind is capable of knowing. Leibniz, however, argues that there <u>is</u> a difference: "The mind is not only capable of knowing them [innate imprinted truths], but further of finding them in itself."[21] The mind can not, argues Theophilus, if it has only passive powers, be the source of necessary truths, for

> . . .it is incontestable that the senses do not suffice to show their necessity, and that thus the mind has a disposition (active as well as passive) to draw them itself from its own depths; although the senses are necessary to give it the occasion and attention for this, and to carry it to some rather than to others. You see, then, sir, that these elsewhere very clever persons who are of another opinion appear not to have thought enough upon the consequences of

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[19] <u>Ibid</u>.

[20] <u>Ibid</u>.

[21] <u>Ibid</u>.

> the difference which there is between necessary and eternal truths and the truths of experience, as I have already observed, and as all our discussion shows. The original proof of the necessary truths comes from the understanding alone, and the other truths come from experience or from the observation of the senses. Our mind is capable of knowing both; but it is the source of the former, and, whatever number of particular experiences we may have of a universal truth, we could not be assured of it forever by induction without knowing its necessity through the reason.[22]

It is thus the "necessary truths," as opposed to "truths of experience," that Leibniz takes to be innate: "the senses can hint at, justify, and confirm these truths, but cannot demonstrate their infallible and perpetual certainty.[23] As we shall see in the next chapter, this assertion of necessity in connection with innateness contributes further to the disparity that exists between Leibniz's imprinted truths and Chomsky's innate principles.

Accordingly, Leibniz asserts that the faculty of the mind responsible for the discovery of the knowledge which it possesses innately is not

> a naked faculty which consists in the mere possibility of understanding them; it is a disposition, an aptitude, a preformation, which determines our soul and which makes it possible for them to be derived from it.[24]

And, moreover,

> Just as there is the difference between the figures which are given to the stone or the marble indifferently, and

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[22] Ibid., p. 81.

[23] Ibid.

[24] Ibid.

> between those which its veins already indicate, or are disposed to indicate, if the workman profits by them.[25]

Thus Leibniz, like Descartes and not unlike Chomsky, posits a somewhat vague disposition in an attempt to distinguish certain truths termed "innate" from all those other truths that the mind eventually comes to know. Unfortunately there is some question, however, as to whether or not innateness resolves the problem that Leibniz depicts.

Leibniz, as we have just seen, distinguishes "necessary truths" from "truths of experience," and argues that experience can never account for the former because induction will not yield the required certainty. But can innateness be used by Leibniz to ground necessary truths? One serious objection to such grounding is that it results in the "necessary" truths being conditional upon our minds being structured in a particular way, and consequently these truths are not really necessary ones. "If, as Leibniz would say, a necessary truth is one that is true in all possible worlds then it is true even in a world whose minds function according to precepts other than those which they follow in this world."[26]

Philalethes atthis point interjects that truths are subsequent to the ideas of which they are born, and that the ideas come from the senses. This is reminiscent, of course,

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[25] Ibid., pp. 81-82.

[26] Anthony Saville, "Leibniz's Contribution to the Theory of Innate Ideas." in Philosophy, April, 1972, Vol. XLVII, No. 180, p. 121.

of Locke's view that propositions are composed of ideas and cannot be innate because ideas are not innate. In particular, the speculative proposition "It is impossible for the same thing to be and not to be" is not innate because the ideas of "impossibility" and "identity" are not innate.[27]

Leibniz' objection is that "intellectual ideas," which are the source of necessary truths, come from the reflection of the mind upon itself rather than from the senses. As a consequence, of course, the "intellectual ideas" which make up an innate principle are themselves innate. Again, more specifically, the ideas of "impossibility" and "identity," of which the innate principle "It is impossible for the same thing to be and not to be" is composed, are innate.

Philalethes, however, contends that infallible acquiescence is not to be attached to only those propositions which embody intellectual ideas; there are such propositions in physics, and in all other sciences, and it is the senses that furnish them. As examples of propositions whose truth is no less convincing than "two bodies cannot lie in the same place at the same time," Philalethes posits "It is impossible for a thing to be and not to be in the same time"; "white is not red"; "the square is not a circle"; "yellowness is not sweetness."

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[27]See Part II of Chapter II.

Theophilus' next major point is that there are differences between these propositions. The first, for example, that "two bodies cannot lie in the same place at the same time," is in need of proof. Leibniz mentions that there are, in fact, people who reject the principle (the Peripatetics, e.g., not to mention Christians who believe that the penetration of space is possible to God). Moreover, Leibniz wishes to maintain a distinction between those propositions which are furnished by the senses (e.g., that yellowness is not sweetness) and those which are applications of the general maxim that "It is impossible for a thing to be and not to be in the same time" (e.g., "the square is not the circle"). The import of this distinction is that while the latter are innate, the former are not.[28]

At this point Philalethes puts forward an objection based upon the fact that many people who wholeheartedly embrace certain particular propositions have no knowledge whatsoever of the general maxim that yields them:

> Although you maintain that these particular and self-evident propositions, whose truth is recognized as soon as one hears them stated (as that green is not red), are received as consequences of these other more general propositions, which are regarded as so many innate principles, it seems that you do not at all consider that these particular propositions are received as indubitable truths by those who have no knowledge of these more general maxims.

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[28] Leibniz, New Essays, op. cit., pp. 83-84.

[29] Ibid., p. 73.

Theophilus' answer is that the general maxims are used in the same way as the majors in reasoning by enthymemes--we are thus not aware of our use of these general maxims even though we do employ them. ". . .very often we do not think distinctly of what we do in reasoning any more than of what we do in walking and leaping. . . ."[30]

Philalethes, however, persists in his view: as general and abstract ideas are more foreign to our minds than notions and particular truths, he feels that particular truths are more natural to the mind than general ones such as the principle of contradiction.[31] In his response Theophilus maintains that whereas particular truths may very well be grasped with much greater ease than the general maxims, and that we do, in fact, come to perceive the former before the latter, nevertheless this does not prevent "the proof of the more particular truths from depending upon the more general, of which they are only examples."[32]

> And when we wish to consider what is in us virtually and before all apperception, we are right in commencing with the most simple. For the general principles enter into our thoughts, of which they form the soul and the connection. They are as necessary thereto as the muscles and sinews, are for walking, although we do not at all think of them. The mind leans upon these principles every moment, but it does not come so easily to distinguish them and to represent them distinctly and separately, because that

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[30] Ibid.

[31] Ibid.

[32] Ibid., pp. 73-74.

> demands great attention to its acts, and the majority of people, little accustomed to think, has little of it.[33]

There is a sense in which the universal principles of language are necessary for the "learning" of a particular language, but there is a difference between this view and that of Leibniz. While Leibniz maintains that general principles "enter into our thoughts," and "are as necessary thereto as the muscles and sinews, are for walking," Chomsky does not believe that the mind actually operates by using the rules of transformational grammar. Thus, transformational theories of grammar presumably provide insights into the workings of the mind, but apparently not by detailing the specific principles according to which it operates.

In response to Philalethes' query regarding the possibility that acquiescence to certain truths may come from "the consideration itself of the nature of things," rather than from "the consideration that these propositions are engraved by nature in the mind," Theophilus clarifies what he means by "innate" truths: "I call innate the truths which need only this consideration [the knowledge of the nature of our mind and of the innate ideas which we have no need to seek outside] for their verification."[34]

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[33] Ibid.

[34] Ibid.

But, moreover, the mind has two attributes in addition to the faculty of knowing innate notions: 1) it has the faculty of finding these innate notions in itself, and 2) it has the disposition to approve them when it thinks of them as it should.[35]

Leibniz' coupling of innate truths and verification is significant. In the next chapter we shall see that for Chomsky there really is no question of verification, for what is innate are not certain truths, but rather an ability or disposition to assimilate data (in this case, sounds, words, sentences, etc.) in a particular fashion. The question of whether or not certain rules of grammar are correct may arise, but these rules, it should be borne in mind, change as the language changes. With regard to the rules of the grammar in the acquisition of a language, then, there is neither a discovery of innate notions in the mind nor a disposition to approve such rules "when it [the mind] thinks of them as it should."[36] In fact, so-called "knowledge" of the rules is so "implicit" that in most cases the mind never thinks of the rules at all.

The next issue--the question of whether or not one learns anything at all new when general maxims are proposed to him for the first time--elicits an interesting response from Theophilus. Philalethes argues:

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[35] Ibid., pp. 74-75.

[36] Ibid., p. 75.

> It seems, then, that you claim that those to whom these general maxims are proposed for the first time learn nothing which is entirely new to them. But it is clear that they learn first the names, then the truths, and even the ideas upon which these truths rest.[37]

Theophilus replies by allowing, perhaps surprisingly, that learning is involved even with regard to the acquisition of innate truths:

> . . .I agree that we learn ideas and innate truths either in considering their source, or in verifying them through experience. Thus I do not make the supposition which you aver, as if, in the case of which you speak, we learned nothing new. And I cannot admit this proposition: all that one learns is not innate.[38]

Leibniz views "learning," then, as represented in the paragraph above, as the process by which we become consciously aware of an idea or truth. Thus, he can maintain, with consistency, that certain ideas or truths are innate even if they are learned. The advantages of this view of learning are readily apparent: Leibniz has no difficulty with the child or "savage" of Locke's Essay who seem not to know an innate truth like the law of contradiction, despite the contention that it is innate. The child or savage, in "learning" the law of contradiction, is seen to be merely becoming aware of a principle that he already knew implicitly and followed unconsciously. What is important is that the child or savage find this and similar principles in himself and that they have a disposition to approve of them upon

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[37] Ibid.

[38] Ibid.

becoming conscious of them.

When Philalethes presses Theophilus further for some propositions whose ideas are innate, he finds Theophilus' response somewhat surprising. Theophilus claims that all the propositions of arithmetic and geometry are of this type. Expanding on this, Theophilus explains that actual knowledge of these subjects is not innate, but "much that may be called virtual knowledge is innate, as the figure traced by the veins of the marble is in the marble, before one discovers them in working."[39]

The final argument that Philalethes presents in Chapter I gives some indication of how the positions of Locke and Leibniz can at times be seen to be very similar to one another. Philalethes (or Locke) asserts that it is very difficult to conceive that a truth may be in the mind if the mind has never thought of that truth. He grants that "at bottom" everybody knows the two great speculative principles, and makes use of them: "there is no barbarian who, in an affair of any moment, is not offended by the conduct of a liar who contradicts himself." But his conclusion is not that these maxims are therefore innate, but rather that they are employed without an express consideration of them and are thus not in the mind at all.[40]

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[39] Ibid., p. 76.

[40] Ibid., p. 84.

Theophilus (or Leibniz), on the other hand, maintaining that these maxims are innate, argues that "the knowledge or the truths, in so far as they are within us, even when we do not think of them, are habitudes or dispositions,"[41] adding that we are well acquainted with things of which we think but little. At this point Leibniz is asserting that truths are not thoughts, but are habits and aptitudes, and that consequently "nothing prevents there being in us some of which we have never thought, nor will ever think."[42]

But as we progress to a more modern conception of innateness in the next chapter, we would do well to keep in mind that this dispositional innatism of Leibniz has very little in common with Chomsky's theory of language acquisition. It would indeed

> be erroneous to think that anything likely to turn out as innate. . .has already been identified by Leibniz. This conclusion may sound depressingly negative, but it has at least this positive merit; that of making clear what our predecessors did not achieve and of making it a little easier for us to elaborate the right sort of moves in our own investigations of this topic.[43]

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[41] Ibid., p. 84.

[42] Ibid.

[43] Anthony Savile, "Ideas," Philosophy, Vol. XLVII, No. 180, April, 1972, p. 124. It should be added here that this negative conclusion regarding the similarity of Leibniz' innatism and more recent versions is not restricted to Leibniz' dispositional innatism. Indeed, in detailing four sorts of innateness intertwined in Leibniz' writing, Savile finds that "only the third [the dispositional] has any similarity with what is discussed under this head today. . . ." And it is specifically with regard to this third type that he draws the negative conclusion quoted here. (See especially pp. 123-124.)

Part II. Innate Practical Principles

Although, as has already been indicated, innate practical principles tend not to be self-evident, with the consequence that the case for their being innate seems weaker from the start than with speculative principles, they are nevertheless of not inconsiderable interest. If Chomsky's theory of innateness bears any resemblance to innateness doctrines of Descartes or Leibniz, it is probably with regard to the latter that the strongest case can be made. To see why this is so we must first examine in some detail Leibniz' remarks pertaining to practical principles (Chapter II).

In response to Philalethes' comment that it would be very difficult to produce a rule of ethics that could be settled by an assent as general and as prompt as is accorded to the maxim "Whatever is, is," Theophilus seems to concur. He asserts that "/i/t is absolutely impossible that there be truths of reason as evident as those which are identical or immediate."[44] Moreover, although Leibniz agrees that ethics has principles which are not demonstrable, e.g., that we ought to pursue joy and avoid sorrow, he feels it is necessary to add that "this is not a truth which is known purely by reason." Indeed, "it

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[44]Leibniz, New Essays, op. cit., pp. 85-86.

is not known by the reason, but, so to speak, by an instinct."[45]

These assertions are not without difficulties. Leibniz, while allowing that a practical principle such as "we ought to pursue joy and avoid sorrow" is an innate principle, denies that it is a truth known by reason. But some recent philosophers would doubtless question whether it is a truth at all. Without questioning the veracity of the principle, these twentieth century analytic philosophers would maintain, for example, that the form of this principle should be analyzed in such a way as to indicate it is implicitly a recommendation or a command rather than a statement. Moreover, the principle seems to be tacitly qualified: To say that we do indeed pursue joy and avoid sorrow unconsciously ("these laws are written in the soul, namely, as the consequences of our preservation and of our true welfare")[46] does not in itself clarify why these principles should be considered truths.

When pressed by Philalethes, Theophilus makes some attempt to deal with this difficulty. Philalethes agrees that all men desire happiness and are averse to misery, and that these are "the truly innate practical principles," but he denies that they are truths. "/T/hey are inclinations of the soul toward the good, and not impressions of some truth

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[45] Ibid., p. 86.

[46] Ibid.

which is written in our understanding."[47]

Theophilus' response is something less than clear. First he distinguishes between "felicity" and "joy," maintaining that it is the latter rather than the former that we pursue. But, more importantly and much less clearly, he contends that our understanding of our inclination represents a practical truth:

> Our inclination. . .tend/s/. . .to joy. . . . Now, the inclination, expressed by the understanding, passes into a precept or practical truth; and if the inclination is innate, the truth is innate also, there being nothing in the soul which may not be expressed in the understanding...[48]

Leibniz' argument here is rather nebulous. First of all, "known by an instinct" is a somewhat puzzling phrase. Perhaps we are naturally inclined to pursue joy and avoid sorrow, but this does not in itself constitute a truth. Once we discover that we do indeed pursue joy and avoid sorrow, then we may be said to have knowledge of a certain truth, but it seems to be reason, not instinct, that gives us this truth. We may very well be instinctively inclined to pursue joy, but that does not turn our inclination into a truth.

But moreover, it would be well if we took careful notice here of what it is that we presumably "know" by instinct. Although the supposed fact is that "our inclination. . .tend/s/

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[47] Ibid., p. 87.

[48] Ibid.

. . .to joy. . .," the corresponding practical truth is that "we ought to pursue joy and avoid sorrow." (My emphasis) We may very well be inclined to pursue joy, but such an inclination does not constitute knowledge of the truth that we ought to pursue it. Indeed, many of the moral principles of the past have put severe restrictions on our natural inclinations and prescribed actions contrary to them. Thus, it is by no means clear here that "if the inclination is innate, the truth is innate also." The truth seems to entail considerably more than the inclination.

Leibniz, furthermore, distinguishes innate truths from innate principles in a manner that is not entirely satisfactory. Replying to Philalethes' claim that the rules of morality need to be proved and therefore are not innate, Theophilus asserts:

> I agree with you that there are moral rules which are not innate principles; but that does not prevent them from being innate truths, for a derivative truth will be innate, supposing that we can draw it from our mind. But there are innate truths, which we find in us in two ways--by insight and by instinct.[49]

Leibniz' answer, however, is not without difficulties. In calling rules of morality innate truths rather than innate principles, Leibniz makes the matter worse. Rules are not truths, but are statements of what to do and not to do. The specific rules mentioned, for example, "Do to another only what

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[49] Ibid., p. 88.

you would have him do to yourself," is not, strictly speaking, true or false. Rather, it is a command to behave in a certain way, and as such it does not have a truth value.

When Philalethes finds it disturbing that all men do not seem to follow the "natural laws" which are presumably imprinted upon everyone's minds, Theophilus' answer is interesting. Theophilus argues:

> As morality. . .is more important than arithmetic, God has given to man instincts which prompt at once and without reasoning to some portion of that which reason ordains; just as we walk in obedience to the laws of mechanics without thinking of these laws, and as we eat, not only because eating is necessary for us, but further and much more because it gives us pleasure. But these instincts do not prompt to action in an invincible way; the passions may resist them, prejudices may obscure them, and contrary customs alter them. Nevertheless, we agree most frequently with these instincts of conscience, and we follow them also when stronger impressions do not overcome them.[50]

Apparently, then, we may "break" the laws that are written on our souls and thus do not necessarily always follow them. They are guides or inclinations, and as such do not exert complete control over our actions.

If this be granted, though, one may well wonder about the analogies presented by Theophilus in defence of imprinting on the soul. While we may eat because it gives us pleasure, and yet we may indefinitely delay this activity, it is not so clear what it would mean to walk in "disobedience" to the laws

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[50] Ibid., pp. 89-90.

of mechanics. Moreover, it is even less clear how the "walking analogy" can be appropriately employed: surely Leibniz does not want to maintain that the laws of mechanics are innate in us because we obey (follow?) them in ambulatory activities without thinking of them. This would, indeed, be a peculiar use of the term "instincts," for it would presumably follow that not only men, but also dogs, cats, and even spiders are innately endowed with an unconscious knowledge (?) of the laws of mechanics.

Continuing in his belief that man is "naturally led. . . to withdraw from vile things," Theophilus asserts:

> I think that you are of my opinion at bottom in regard to these natural instincts which tend toward what is right and decent; although you will say, perhaps, as you have said with regard to the instinct which prompts to joy and felicity, that these impressions are not innate truths. But I have already replied that every feeling is the (perception) of an innate truth, but very often confused, as are the experiences of the external senses; thus you can distinguish the innate truths from the natural light (which contains only the distinctly knowable), as the genus must be distinguished from its species, since the innate truths comprehend both the instincts and the natural light.[51]

But in so arguing Leibniz merely obscures the very important issue of innate truths. One can, of course, be inclined towards what one later discovers to be a truth, but it seems peculiar to call an instinct or feeling the "perception of an innate truth." Moreover, although there were subsidiary

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[51] Ibid., pp. 91-92.

arguments for the innateness of speculative principles (e.g., that we could not have gotten them through the senses, nor presumably in any other way), as has been observed previously, virtually any instinct can now be termed an innate truth. As all instincts are not moral ones, it would seem that even thumb-sucking and wetting one's bed could be construed as innate truths, if, as Leibniz claims, "every feeling is the (perception) of an innate truth." (My emphasis)

Leibniz includes the ideas of a God and of a future life within his conception of what is innate. Like Descartes, he does not find it troubling that many people purport to have no idea of God or of his existence, for unlike Locke, he rejects the proposition that "what is not known is not innate."[52] Indeed, "[W]hat is innate is not at first known clearly and distinctly as such: often much attention and method is necessary...."[53]

And finally, Leibniz differs further from Locke in that he does not take universal consent to be a "principle proof" of innate truths. It will be remembered that Locke, perhaps because he once used universal consent himself in arguing for the innateness of certain moral principles,[54] tended to

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[52] Ibid., p. 94.

[53] Ibid.

[54] See Chapter 2 of this work.

see universal consent as the major argument of innate idea theorists. I have argued in Chapter 2, however, that universal consent was more likely seen to be a consequence of innateness rather than a "proof" of it. Consistent with this view, Leibniz asserts "For myself, I make use of universal consent, not as a principle proof, but as a confirmatory one.[55]

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[55]Leibniz, New Essays, op. cit., p. 96.

Part III. Some Further Considerations

Chapter 3 of Book I of Leibniz' New Essays is primarily concerned with "tying up" some "loose ends" regarding both innate speculative and practical principles. Philalethes is found to have difficulty with proclamations of innateness for even what he takes to be the best candidate for such a characterization, viz., "it is impossible for a thing to be and not to be at the same time." His problem is that he feels one must at the same time be convinced that the ideas of "impossibility" and "identity" are also innate.[56]

Leibniz does not deny this. Indeed, he has Theophilus state that it is "necessary" that those who favor this innate truth also be convinced that the ideas it embodies be innate. Rather than arguing for the innateness of certain ideas, however, Leibniz merely asserts that

> /T/he ideas of 'being,' of 'possibility' of 'identity,' are so completely innate that they enter into all our thoughts and reasonings, and I regard them as essential to our mind; but I have already said that we do not always pay them particular attention and that we discern them only with time.[57]

Ideas, then, like principles, may be "imprinted on the mind"--are so imprinted--although we may not be aware of this.

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[56] Ibid., p. 100.

[57] Ibid.

But such imprinting still troubles Philalethes. Arguing Locke's position, he is reluctant to yield on the point that some truth or idea may be imprinted but not consciously known. Thus, he fails to distinguish unconscious knowledge from conscious knowledge:

> If the idea of 'identity' is natural, and consequently so evident and so present to the mind that we ought to recognize it from the cradle, I would be pleased to have a child of seven years, and even a man of seventy, tell me whether a man who is a creature consisting of body and soul, is the same (man) when his body is changed, and whether, metempsychosis supposed, Euphorbus would be the same as Pythagoras.[58]

Leibniz' response, perhaps predictably, is that "what is natural to us is not known to us as such from the cradle."[59] Moreover, Leibniz asserts that an idea may be known to us even though we may not be able to decide every question dealing with it. No doubt in this he is correct. It seems unlikely that anyone would want to deny that most people have the ideas "animal" and "plant," and yet it is very unlikely that more than a few could decide in all cases whether some particular organism is a plant or an animal. Indeed, scientists found it so difficult that one even suggested the positing of an intermediate third class, the Protista.[60]

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[58] Ibid.

[59] Ibid.

[60] A suggestion made by the German zoologist, Haeckel, in 1866. See Roger Stanier, Michael Doudoroff, and Edward Adelberg, The Microbial World (Englewood Cliffs: Prentice-Hall, Inc., 1957), p. 55

Upon further questioning by Philalethes, Theophilus asserts that the "truth" that God should be worshipped is also innate:

> I believe that the duty of worshipping God declares that on occasion you ought to show that you honor him beyond every other object, and that this is a necessary consequence of the idea of him and of his existence; which signifies with me that this truth is innate.[61]

Philalethes, however, is not entirely satisfied with this answer. He raises two objections: 1) the "atheists seem to prove by their example that the idea of God is not innate," and 2) entire nations have been discovered where the people have no idea whatsoever of God or of the soul.[62]

Leibniz' response to the first objection is not entirely satisfactory, for he merely denies that there are any atheists:

> The late Mr. Fabricius, a celebrated theologian of Heidelberg, has made an apology for the human race in order to clear it of the imputation of atheism. He was an author of great accuracy, and decidedly above much prejudice; I do not, however, pretend to enter into this discussion of facts.[63]

Given Leibniz' contention that knowledge can be unconscious, a more satisfactory answer might have detailed why atheists,

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[61] Ibid., p. 102.

[62] Ibid.

[63] Ibid., p. 103. John Lewis Fabricius, 1632-1697, was professor of Greek, and then of philosophy and theology, at Heidelberg. The title of the work referred to is Apologia generis humani contra calumniam atheismi.

although they do have unconscious knowledge of God's existence, are for some reason or other-perhaps because of very strong prejudices--unable to bring forth this knowledge.

Leibniz' answer to the second objection is perhaps more satisfactory and definitely more interesting. While he grants that entire peoples have never thought of a supreme substance or of the nature of the soul, he argues:

> There are peoples who have no word corresponding to the word 'being'; does any one doubt their knowledge of what being is, although they seldom think of it in the abstract?[64]

The argument may seem to have some initial plausibility, but the analogy, I think, is dubious. It may be true that people can have knowledge of what being is without having a word for it, but surely such an ascription would be made only if there were strong reasons for inferring the existence of such knowledge. Although seemingly more abstract, the case here is not unlike that of the ascription of knowledge of the principle of contradiction to someone who somehow indicates that he does operate according to this principle even though he may not be able to state it. However, the case with atheists is different. Unless they may also be said to "unconsciously worship" a deity, their behavior usually betrays a lack of recognition of a supreme being. Thus, one is considerably less justified in attributing an idea of God to them than he is an idea of

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[64] Ibid.

being.

The lengthy quotation that Leibniz excerpts from Locke's Essay, with favorable remarks, does not really clarify matters, for the gist of it seems to be that, contrary to reports, there simply cannot be ("it appears. . .wholly strange") entire nations "so stupid" as not to have an idea of God:

> Men can scarcely avoid having some kind of idea of things of which those with whom they converse often have occasion to speak under certain names, and if the thing is one which carries with it the idea of excellence, of grandeur, or of some extraordinary quality which interests in some point and which impresses itself upon the mind under the idea of an absolute and irresistible power which none can help fearing, such an idea ought, according to all appearances, to make the strongest impression and to spread farther than any other, especially if it is an idea which accords with the simplest insight of reason, and which flows naturally from every part of knowledge. Now such is the idea of God, for the brilliant marks of extraordinary wisdom and power appear so plainly in all the works of the creation, that every rational creature who will reflect thereupon cannot fail to discover the author of all these marvels; and the impression that the discovery of such a Being must naturally make upon the souls of all those who have once heard him spoken of is so great, and carries with it thoughts of so great weight and so adapted to spread themselves in the world, that it appears to me wholly strange that an entire nation of men can be found upon the earth so stupid as to have no idea of God. This, I say, seems to me as surprising as to think of men who should have no idea of numbers or of fire.[65]

Leibniz adds that Locke, "in speaking of the simplest lights of reason, which agree with the idea of God, and of that which naturally proceeds from it, appears to differ but little from

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[65] Ibid., pp. 103-104.

my view of innate truths. . . .[66] He says this despite the fact that he also remarks that there apparently is a place where people have no knowledge of fire.[67] The further question as to whether or not, therefore, there just might also be a place where the people have no idea of God, is left in abeyance.

Like Descartes, Leibniz feels that what distinguishes innate ideas from other ideas is that the former come from within our selves. Thus, when Philalethes asserts that there are many men ignorant of some very certain propositions, Theophilus responds by saying "I admit it; but that does not prevent them from being innate--that is to say, does not prevent you from being able to find them in yourself."[68] A major difficulty with this answer, of course, is that it is virtually impossible to show that the particular truths

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[66] Ibid., p. 104.

[67] ". . .concerning this, that it appears to him as strange that there may be men without any idea of God, as it would be surprising to find men who had no idea of numbers or of fire, I will remark that the inhabitants of the Marian Islands, to which has been given the name of the Queen of Spain, who has protected missions there, had no knowledge of fire when they were discovered, as appears from the narrative which Rev. Father Gobien, a French Jesuit, charged with the care of distant missions, has given to the public and sent to me." (Leibniz, New Essays, op. cit., p. 104.) Charles le Gobien (1653-1708), who was professor of philosophy at Tours and secretary and procurator of Chinese missionaries, wrote a number of works on the missions in China.

[68] Ibid., p. 105.

mentioned ("there is a God" and "the opposite angles made by the intersection of two straight lines are equal") can be found in us. Moreover, many people have certainly doubted the assertion that there is a God.

Theophilus' response to Philalethes' next remark, concerning the idea of substance, is curious in what it fails to mention. Philalethes asserts that it would be more "advantageous" if the idea of substance were innate rather than the two truths mentioned above, maintaining that we do not have the idea at all because it does not come to us through either sensation or reflection. Leibniz, making no reference whatsoever to the irrelevance of the "advantage" of having such an innate idea, merely states that in his opinion "reflection suffices to discover the idea of substance within ourselves, who are substances."[69]

Leibniz brings Book I and the dialogue about innate ideas to a close with a final discussion about the mind having ideas of which it is not aware. Philalethes argues:

> If there are innate ideas in the mind without the mind's being actually aware of their presence, they must at least be in the memory, whence they must be drawn by means of reminiscence--that is to say, be known, when memory recalls them, as so many perceptions which have been in the mind before, unless reminiscence can subsist without reminiscence. For this conviction, where it is an inwardly certain one, that a given idea

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[69] Ibid.

> has previously been in our mind, is properly what distinguishes reminiscence from every other kind of thinking.[70]

Although I believe Leibniz can respond quite adequately to this argument,[71] I do not believe he does as well here as he might have. His initial remarks, in fact, I find somewhat misleading:

> In order that knowledge, ideas, or truths be in our mind, it is not necessary that we have ever actually thought of them; they are only natural habitudes; i.e. dispositions and aptitudes, active and passive, and more than a tabula rasa.[72]

It seems very odd to call "knowledge," "ideas," and "truths" dispositions or aptitudes. No doubt what Leibniz means to say is that, although we may not have explicitly been aware of certain ideas or thought of certain truths, nevertheless we are innately inclined to uncover them within ourselves. Thus, we are pre-disposed towards certain ideas or truths, but these ideas and truths are not themselves dispositions or aptitudes.

I should add, however, that I think Leibniz is quite correct when he states: ". . .I see no necessity which obliges us to assert that there remains no trace of a perception when there is not enough of it to remind us that we have had it."[73] Again I refer the reader to Part II of Chapter II.

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[70] Ibid.

[71] As I have discussed this argument in some detail in Part II of Chapter II of this work, I refer the reader to these previous comments.

[72] Ibid.

[73] Ibid.

CHAPTER IV

CHOMSKY AND THE SEVENTEENTH CENTURY

In what follows there are several claims that I wish to defend, ones which have considerable bearing on Chomsky's theory of innateness and its relationship with supposedly similar doctrines of the seventeenth century. The twentieth century version was first fully presented in Chomsky's Aspects of the Theory of Syntax[1] in 1965, with the result that not only was there much subsequent disagreement regarding the clarity of the linguistic version of innateness, but also the controversy of old was begun anew. It is not my intention to resolve either of these controversies in what follows, but rather to indicate how Chomsky's attempt to set the contemporary discussion "in a somewhat more general and traditional framework,"[2] while of considerable interest, has nevertheless precipitated much confusion and given rise to numerous objections from philosophers.

The primary claims that I wish to defend in this chapter are the following:

1) Chomsky's intentions in drawing upon seventeenth century literature remain unclear.

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[1]Noam Chomsky, Aspects of the Theory of Syntax (Cambridge: The M.I.T. Press, 1965).

[2]Ibid., p. 47.

2) Much of the claimed similarity between Chomsky's innateness doctrine on the one hand, and those of Descartes and Leibniz on the other, disappears or is considerably less impressive as one probes deeper into the specific issues and arguments underlying them. This is exemplified in detail in a discussion centering on the "necessity" of Chomsky's linguistic principles.

3) Although Chomsky's writings certainly raise some interesting conceptual questions, Chomsky himself actually says more of relevance to psychologists and linguists than to philosophers.

In defending the above claims I will also take a close look at Chomsky's position and precisely how it differs from that of behaviorists such as Quine and Skinner.

To begin with, it is not always easy to perceive Chomsky's precise intentions in drawing upon the literature of the seventeenth century in his presentation of his own version of innateness. While in Aspects his avowed intentions are to set the discussion in a somewhat more general and traditional framework, even in this early work attempts to force rationalist talk of innate ideas and principles into the framework of a discussion of innate mechanisms are in evidence:

> The rationalist approach holds that beyond the peripheral processing mechanisms, there are innate ideas and principles of various kinds that determine the form of the acquired knowledge in what may be a rather restricted and highly organized way. A condition for innate mechanisms to become

activated is that appropriate stimulation be presented.[3]

And some years later in the paper entitled "Recent Contributions to the Theory of Innate Ideas," Chomsky argues similarly:

> I have said nothing explicit so far about the doctrine that there are innate ideas and innate principles of various kinds that determine the character of what can be known in what may be a rather restricted and highly organized way. In the traditional view a condition for these innate mechanisms to become activated is that appropriate stimulation must be presented.[4]

In all fairness to Chomsky I believe he probably sees little difference between innate "mechanisms," "schematisms," "structures," "principles."[5] I think the philosopher will, however, find this rather disconcerting, for these terms have various connotations and, strictly speaking, are not interchangeable. To take just two examples: 1) "mechanism," I think, tends to suggest a physical or biological structure, particularly given Chomsky's lack of support of Cartesian mentalism;[6]

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[3] Chomsky, Aspects, op. cit., p. 48.

[4] Chomsky, "Recent Contributions to the Theory of Innate Ideas," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), p. 127.

[5] Some critics go so far as to speak of Chomsky's "promiscuous" use of these terms and several others. See, for example, Jonathan Barnes, "Mr. Locke's Darling Notion," The Philosophical Quarterly, Vol. 22, No. 88, July, 1972, p. 207. But also see Chomsky, Reflections on Language (New York: Random House, Inc., 1975), pp. 219f for Chomsky's reply.

[6] Although Chomsky does describe himself as a "mentalist" (some say somewhat misleadingly--see, for example, John Lyons, Chomsky (London: Wm. Collins & Co., Ltd., 1970), p. 108), he has explicitly rejected Cartesian mentalism in print as well as in personal correspondence relating to this chapter. With regard to the former, see especially Chomsky, Language and Mind (New York: Harcourt, Brace and World, Inc., 1968), p. 83.

"principles" (and "ideas") do not; 2) talk of "principles" (and "ideas") fits naturally into a discussion of innate knowledge, whereas talk of "mechanisms" does not. Moreover, frequent references to Descartes and Leibniz, among others, leads one to suppose, naturally enough, that these philosophers have not only dealt with the same issue that interests Chomsky, but that their particular doctrines are, at least in retrospect, significantly similar. I hope to show that much of this similarity is verbal rather than substantive.

Cartesian Linguistics, with its considerable emphasis on Humboldt rather than on the more familiar rationalists of philosophy, may seem to run counter to this inference. In discussing the aptness of the term "Cartesian linguistics," Chomsky notes that there may be objections on several grounds: first, the developments in linguistic theory have roots in earlier linguistic work; second, some of the most active contributors would have regarded themselves as opposed to Cartesian doctrine; third, Descartes himself devoted little time to language, his few remarks being subject to various interpretations.[7] But despite these objections, which Chomsky acknowledges to have some force, he believes that

> ...there is, in the period under review here, a coherent

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[7]Chomsky, Cartesian Linguistics (New York: Harper and Row, Publishers, 1966), p. 2.

> and fruitful development of a body of ideas and conclusions regarding the nature of language in association with a certain theory of mind and that this development can be regarded as an outgrowth of the Cartesian revolution. In any event, the aptness of the term is a matter of little interest. The important problem is to determine the exact nature of the "capital of ideas" accumulated in the pre-modern period, to evaluate the contemporary significance of this contribution, and to find ways to exploit it for advancing the study of language.[8]

More explicitly, Chomsky is using the term "Cartesian" to refer to

> ...people who were, as we can see in retrospect, contributing to a certain "capital of ideas" that develop a number of themes which--again in retrospect--we can see as having a certain unity. I would defend this as a perfectly legitimate practice, quite distinct from the equally legitimate practice of expounding the views of Descartes, Cordemoy, Humboldt, Arnauld, and others, as they themselves understood what they were doing. It is only necessary to be clear about what we are up to, and I did try to make this quite clear in the introductory passages to CL /Cartesian Linguistics/....[9]

To be sure, this seems to be "perfectly legitimate practice," but at other times Chomsky's references to earlier writers do not reflect this approach. In another of his works, for example, presented only one year later and devoted specifically to a discussion of innate ideas, Chomsky begins by saying:

> I THINK that it will be useful to separate two issues in the discussion of our present topic--one is the issue of historical interpretation, namely, what in fact was the content of the classical doctrine of innate ideas, let us say, in Descartes and Leibniz; the second is the substantive issue, namely, in the light of the information presently available, what can we say about the prerequisites for the acquisition of knowledge--what can we postulate regarding the psychologically a priori principles that

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[8] Ibid., pp. 2-3.

[9] Chomsky, personal correspondence.

> determine the character of learning and the nature of what is acquired.
>
> These are independent issues; each is interesting in its own right, and I will have a few things to say about each.[10]

Chomsky, then, does have both Descartes and Leibniz in mind when he speaks of the "classical doctrine of innate ideas." But moreover, immediately afterwards Chomsky asserts, admittedly with a warning that the historical and substantive issues must be kept separate: "What I would like to suggest is that contemporary research supports a theory of psychological a priori principles that bears a striking resemblance to the classical doctrine of innate ideas."[11] (My emphasis) Chomsky apparently does not intend this suggestion to be taken lightly. In conclusion, after sketching his own position and making a brief reference to some selected remarks of Descartes and Leibniz, he again asserts:

> It seems to me that the conclusions regarding the nature of language-acquisition, discussed above, are fully in accord with the doctrine of innate ideas, so understood, and can be regarded as providing a kind of substantiation and further development of this doctrine.[12]

It is hardly surprising, then, to find philosophers objecting when they see the differences between contemporary

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[10] Chomsky, "Recent Contributions to the Theory of Innate Ideas," in J.R. Searle, op. cit., p. 121.

[11] Ibid.

[12] Ibid., p. 128.

versions of innateness and those of the rationalists to be as impressive as the similarities. To some extent, of course, what is involved is a historical issue, but surely this is not all. With numerous references to the historical doctrine and direct quotations from Descartes and Leibniz, a number of philosophers have, as might be surmised, expected to find clarification of the new version of innateness in the works of these seventeenth-century figures. In a Philosophical Review article comparing and contrasting the old and new theories of innateness, for example, David Cooper writes:

> I am not suggesting that Chomsky's account of language acquisition loses interest once its lack of similarity with older doctrines is highlighted. It is valuable to examine the relationship between old and new hypotheses, . . . and not for purely historical reasons alone. For Chomsky and Katz, in their exposition of their own hypothesis, rely heavily on the reader being able to fill out their rather sketchy remarks on innateness through his acquaintance with the rationalist tradition. If it turns out that there is little resemblance to this older tradition, the reader is not going to be helped, and may be hindered, by reading into the new theory doctrines that belong to a quite different body of thought. Further, seventeenth-century discussions of innateness were paradigmatically philosophical, and if we assume Chomsky is merely resurrecting those discussions we shall also assume that the issues which concern him are essentially philosophical. But once the affinity is seen to be illusory, it might turn out that there is little of philosophical contention contained in Chomsky's doctrine--no more, perhaps, than in Lorenz' account of innate 'imprinting' behavior.[13]

The relationship, then, of early rationalist work to Chomsky's version of innateness is, I think, unclear. What is clear is

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[13]David Cooper, "Innateness: Old and New," The Philosophical Review, LXXXI, 4, October, 1972, p. 466.

that philosophers find themselves baffled when, after numerous references to the various seventeenth-century theories of innateness, they observe Chomsky stating that "no more is at stake than a decision to apply the term 'knowledge' in a rather obscure area."[14] The writings of Cooper also reflect this bewilderment:

> ...Chomsky is, at various points, anxious to defend Descartes and Leibniz against the Lockean 'caricature'--in his replies to some of Goodman's criticisms, for example, which, he says, suffer 'first from an historical misunderstanding.'[15] Surely it is a most peculiar tactic to spend time seeking affinity with earlier writers, defending them against critics, and then to turn around and say little is at stake in their being correct or not.[16]

Accordingly, one is likely to be misled if he examines the work of Descartes and Leibniz and hopes thereby to achieve a greater understanding of the "rationalist" cast of contemporary theories of innateness. But he is easily misled in another way as well. Although Chomsky speaks of "mechanisms" more often than he does of "ideas" when referring to what it is that is innate in his theory, he apparently is not averse to associating the two. Indeed, the title of his paper dealing primarily with innateness is "Recent Contributions to the Theory of Innate Ideas." (My emphasis) It is little wonder that philosophers become confused trying to relate the talk of innate mechanisms and that of innate ideas, despite Chomsky's urging that the

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[14] John Lyons, op. cit., pp. 113-114, footnote #2.

[15] Chomsky, Language and Mind (New York: Harcourt, Brace and World, Inc., 1968), p. 70.

[16] Cooper, op. cit., p. 470.

historical issue is separate from the substantive one.

Goodman, for example, distinguishing himself as one of the "misled," argues that "innate ideas" ultimately turn out to be neither innate nor ideas,[17] a position which gains its plausibility by the stipulation that the phrase has only one very narrow meaning and by a failure to note its various connotations in seventeenth-century literature. Since it is unlikely that Goodman has failed to note such connotations, one may, I think, regard his remarks as a plea for usage that would not be so immediately imflammatory. Indeed, in a dialogue written by Goodman, Goodman's "stand-in," Anticus, asserts "...why all the effort at historical justification? And why, after admitting the term is controversial and claiming it is unnecessary, do these people go on using it?"[18] With this position I have some sympathy, for, given the phrase's potential for misinterpretation, undoubtedly an inordinate amount of time has been spent merely in attempts to insure that all are using "innate ideas" in similar fashion. To take what I believe to be a somewhat parallel case, were one to construct a new economic theory that he wanted to popularize in the Western world, it would seem wise, maybe even just common sense, not to use the

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[17] See Nelson Goodman, "The Epistemological Argument," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), pp. 143-144.

[18] Ibid., p. 144.

term "communism" in referring to it, no matter how great the resemblance to this much-maligned doctrine.

Given that Chomsky does assert that the historical issue should be kept separate, it is all the more curious, if he does not want his version of innateness understood to be similar to that of Descartes or Leibniz, that he draws parallels between his "mechanisms" and the "innate ideas" of the rationalists, or, more accurately, Descartes. Locke's usage, after all, seems more precise, for he explicitly distinguishes between ideas and principles,[19] and thus the potentially controversial term "innate ideas" can be avoided. Chomsky does, after all, subscribe to an interpretation of Locke's views as rationalistic.

Be that as it may, Chomsky did choose to draw parallels between his "mechanisms" and the "innate ideas" of Descartes, even though he does not wish to be held responsible for defending certain other intertwined Cartesian views. That all "innate ideas" are solely "mental phenomena," for example, in that they can be (indeed, must be) posited independent of a physical bearer, is good Cartesianism but poor Chomskyism. Even if there should be a certain amount of arbitrariness as to

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[19]See John Locke, An Essay Concerning Human Understanding, collated and annotated by A.C. Fraser (New York: Dover Publications, Inc., 1894), Book I, Chapter 3, p. 92.

whether or not a particular explanation is termed "mental" or "physical,"[20] it does seem that in the contemporary controversy innate ideas are not to be thought of as entities ultimately independent of physical substance. Accordingly, the greater the emphasis that one places on this divergence of views the less he is inclined to see contemporary innatism as dealing with problems of a philosophical nature, and, in particular, with the problems and concerns of the seventeenth century.[21]

In any event, Chomsky seems more concerned with "principles" (though, of course, not exclusively) than with "ideas." When he speaks of innateness he is usually referring to underlying linguistic principles. These principles are supposedly evident from a study of the failure of the empiricist model, in any of its various forms, to explain acquisition of a first language. It should be kept in mind, however, that the question of whether or not empiricism adequately explains the output of a "passive" language acquisition device is itself an empirical issue, though Chomsky feels the evidence is already on the side of the ration-

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[20]See Chomsky, Language and Mind (New York: Harcourt, Brace and World, Inc., 1968), p. 84. Chomsky does not say this explicitly, but it seems to me that it is implied by his remarks.

[21]For a stressing of the divergences rather than the similarities that exist between Chomsky's version of innateness and that of older theories, see David Cooper, "Innateness: Old and New," The Philosophical Review, LXXXI, October, 1972, pp. 465-483.

alist. Unlike arguments pointing to the astronomical number of sentences a fluent speaker understands and the subsequent phenomenal or empirically impossible task of correlating these to sentences he has previously encountered,[22] Chomsky's contention, as we have seen, is that contemporary empiricist models are theoretically incapable of dealing with even the data that is presently available because of certain a priori prejudices which they contain.

The principles that are innate, then, are those whose acquisition can not be explained by simple reference to the data available to the language-learner (that is, the words and sentences he hears spoken around him), but whose use is supposedly evident from a comparison of this initial data with what the speaker-hearer must be presumed to know to be able to speak and understand a language. A problem that neither the rationalist nor the empiricist has been able to resolve thus far results from the "creativity of language," that is, "the speaker's ability to produce new sentences, sentences that are immediately understood by other speakers although they bear no physical resemblance to sentences which are 'familiar.'"[23] By use of this term Chomsky wishes to convey three distinct aspects of the normal use of language, namely that it is not

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[22]See Jerrold Katz, The Philosophy of Language (New York: Harper and Row, Publishers, 1966), pp. 260-261.

[23]Chomsky, Topics in the Theory of Generative Grammar (The Hague: Mouton and Company, 1966), p. 11.

only 1) innovative (in the sense that much of what we say and hear is entirely new to us) and potentially infinite, and 2) free from the control of detectable stimuli, external or internal, but that it is also 3) coherent and "appropriate to the situation." The third of these properties can not be explained by any contemporary theories, but the empiricist model is not capable of dealing with even the first two. Furthermore, the overall problem of explaining how it is that a human being can use language in a creative way is a serious one that "cannot be talked out of existence by invoking 'habit' or 'conditioning' or 'natural selection.'"[24]

We are all, then, capable of understanding and speaking an infinite number of sentences that we have never before encountered, and this is because we utilize certain principles that allow us to go well beyond the meagre empirical data with which we have come in contact.[25] These principles cannot be derived solely from the data available to the language learner, but instead are utilized as the result of a rather specific innate mechanism being activated by the presentation of the data. "In studying the actual character of learning, linguistic or otherwise, it is

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[24]Chomsky, Language and Mind, op. cit., pp. 10-11.

[25]Ibid., p. 68. Moreover, Chomsky believes the "evidence" (data) is very degenerate in quality as well. See Chomsky, "Recent Contributions to the Theory of Innate Ideas," reprinted in J.R. Searle, op. cit., p. 125.

of course necessary to distinguish carefully between these two functions of external data--the function of initiating or facilitating the operation of innate mechanisms and the function of determining in part the direction that learning will take."[26] And furthermore:

> The rationalist approach holds that beyond the peripheral processing mechanisms, there are innate ideas and principles of various kinds that determine the form of the acquired knowledge in what may be a rather restricted and highly organized way. A condition for innate mechanisms to become activated is that appropriate stimulation be presented.[27]

While Chomsky then goes on to assert that the writings of Descartes and Leibniz exemplify this approach,[28] it is important to note that much of the similarity of Chomsky's approach and that of these rationalists concerns a general theory of mind rather than specific arguments for innate ideas or principles. Descartes, for example, in the relevant passage quoted by Chomsky is concerned with the interaction of mind and body after he has posited these two as quite distinct substances:

> ...any man who rightly observes the limitations of the senses, and what precisely it is that can penetrate through this medium to our faculty of thinking must needs admit that no ideas of things, in the shape in which we envisage them by thought, are presented to us by the senses. So much so that in our ideas there is nothing which was not innate in the mind, or faculty of thinking, except only these circumstances which point to experience--the fact, for instance, that we judge that this or that idea, which we now have present to our

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[26] Chomsky, Aspects, op. cit., p. 34.

[27] Ibid., p. 48.

[28] Ibid., pp. 48-50.

> thought, is to be referred to a certain extraneous thing, not that these extraneous things transmitted the ideas themselves to our minds through the organs of sense, but because they transmitted something which gave the mind occasion to form these ideas, by means of an innate faculty, at this time rather than at another. For nothing reaches our mind from external objects through the organs of sense beyond certain corporeal movements...but even these movements, and the figures which arise from them, are not conceived by us in the shape they assume in the organs of sense.... Hence it follows that the ideas of the movements and figures are themselves innate in us. So much the more must the ideas of pain, colour, sound and the like be innate, that our mind may, on occasion of certain corporeal movements, envisage these ideas, for they have no likeness to the corporeal movements.[29]

And, Chomsky notes, for Descartes necessary principles such as that things equal to the same thing are equal to each other, are similarly innate because they cannot arise from "particular movements." In reply to Regius, Descartes says:

> Could anything be imagined more preposterous than that all common notions which are inherent in our mind should arise from these movements, and should be incapable of existing without them? I should like our friend to instruct me as to what corporeal movement it is which can form in our mind any common notion, e.g. the notion that 'things which are equal to the same thing are equal to one another,' or any other he pleases; for all these movements are particular, but notions are universal having no affinity with movements and no relation to them.[30]

But, again this is a matter of concern for Descartes because of his dualistic metaphysics; however, as was noted earlier in this

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[29] Descartes, "Notes directed against a certain Programme," collected in Elizabeth S. Haldane and G.R.T. Ross, The Philosophical Works of Descartes (London: Cambridge University Press, 1968), Vol. I, pp. 442-443. (My emphasis) (AT, VIII, 358-359)

[30] Ibid., p. 443. (AT, VIII, 359)

chapter, it is this aspect of Cartesianism that Chomsky does not wish to support. Chomsky can, and does, stress the similarity of his approach and that of the seventeenth century, but significant divergences in view are no less in evidence.

"Necessary truths," in particular, are the occasion of a further disparity. For Leibniz, the main problem to be resolved centers on the "fact" that one can not obtain universal necessity from particular instances. As a consequence Leibniz argued that necessary truths are innate:

> The senses, although necessary for all our actual knowledge, are not sufficient to give it all to us, since the senses never give us anything but examples, i.e., particular or individual truths. Now all the examples which confirm a general truth, whatever their number, do not suffice to establish the universal necessity of that same truth....[31]

Chomsky can, of course, claim that he is extending the rationalist approach to language learning, but considering the vastly different motivations, one may well wonder if it wouldn't be better to ignore whatever superficial similarities may exist, leaving untouched the unending philosophical controversy of the seventeenth century.

It is important at this point, I believe, to reflect further on the rationalist approach to note a radical departure by Chomsky from the goals of that period. It seems that much

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[31]Gottfried Leibniz, New Essays Concerning Human Understanding, translated by Alfred Langley (New York: The MacMillan Company, 1896), p. 43.

of the motivation for the introduction of innate ideas is the resolution of a specific epistemological problem, viz., how is it that we know certain principles to be true even though we have never learned them in the customary way? We might be taught the law of contradiction, for example, but there is a very real sense in which we knew the law all along and only learned a way of, perhaps, symbolically representing this knowledge. This was Leibniz' position: the native "knows" the law of contradiction in the sense that he operates according to this principle throughout his life, but he may never be able to express or even recognize $\sim(p.\sim p)$ unless he encounters someone knowledgeable in Symbolic Logic.[32] But the law of contradiction is a "necessary truth" and one that everyone knows, though he may very well not be aware of this.

Chomsky's version of innateness is significantly different. We have seen that Chomsky believes that every language user utilizes certain non-empirical grammatical rules and that this explains his ability to learn to speak and to understand his initial language even though his contact with

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[32]Leibniz, op. cit., Chapter I, pp. 64-85.

it may be minimal indeed.[33] However, while there is a sense in which we speak of knowing rules, whether these be those associated with games or, as here, with certain linguistic skills, we do not generally think of rules as "truths." In fact, we are more likely to speak of a rule in terms of its being "correct" or "incorrect." Thus, one who is learning chess might ponder whether or not he can move his bishop forward or backward along the file in which it is located, and in response to his inquiry we might answer "No, that is not the correct move--in chess, the bishop can only move on the diagonal." We might even assert, in the event that no game employs it, that our beginner's query concerns something which is no rule at all--that is, there is no rule that allows for the movement of one's bishop in a file. We would not, however, say that a certain rule is false, though we might, of course, claim that it is false that a particular rule is such-and-such.

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[33] In speaking of "minimal contact," it should be borne in mind that it is the meagreness of the data, and not the ease (short time) with which one learns his native tongue, that is most significant, though both have been mentioned in this context. In particular, see Hilary Putnam, "The 'Innateness Hypothesis' and Explanatory Models in Linguistics," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), pp. 130-139, and Chomsky's reply in a paper entitled "Linguistics and Philosophy," collected in Sidney Hook (editor), Language and Philosophy (New York: New York University Press, 1969), p. 79.

There is, then, a certain arbitrariness and relativism about rules that is not to be found among what is perhaps best described as "logical principles."[34] Rules can be changed, and a rule that was at one time utilized can be dropped and suddenly become inapplicable. We can, of course, change our minds about the truth or falsehood of a certain proposition, but there is a sense in which this is not merely a choice dependent upon our aims and desires. At one time it was a rule of baseball that a ball caught on one bounce was an "out," but with the introduction of better equipment and the development of more skillful players, this rule was dropped (or changed.) Logical principles are not subject to such intentional changes.

While it must be admitted that there is a sense in which Chomsky's linguistic rules cannot be changed and are not dependent upon our choices (viz., with proper stimulation, they develop in all human beings), this type of "necessity" is vastly different from that associated with certain logical principles (e.g., that things which are equal to the same thing are equal to one another) that were the concern of

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[34]I am especially indebted to Charles Travis (Department of Philosphy, The University of Calgary), who used this phrase in correspondence, and, in so doing, helped me to clarify this point at a time when I perceived it somewhat obscurely. Logical principles are to be contrasted with Chomsky's "psychological principles."

seventeenth-century rationalists. Indeed, it is contingency rather than necessity that characterizes Chomsky's psychological principles. In contrasting rules with laws of nature, Chomsky claims that if his theorizing is correct, these rules "are constructed by the mind in the course of acquisition of knowledge,"[35] but that "they can be violated," such departure often times being an effective literary device.[36] One does not "violate" a logical truth. It is thus only by equivocating on the term "necessity" that Chomsky can claim that his psychological principles and the logical principles of the rationalists are both necessary principles.[37]

That Chomsky should ignore important differences between logical principles and psychological principles should not be particularly surprising. Roy Edgley noted some time ago that "Chomsky talks of both innate knowledge and innate structure indifferently."[38] What Hume's Empiricism forbids him to allow is not that certain principles of induction can be ascribed to

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[35]Noam Chomsky, Problems of Knowledge and Freedom (New York: Pantheon Books, 1971), p. 32.

[36]Ibid.

[37]For more on this, see Cooper, op. cit., pp. 474-476.

[38]Roy Edgley, "Innate Ideas," in G.N.A. Vesey (editor), Knowledge and Necessity (London, 1970), Royal Institute of Philosophy Lectures, Vol. 3, p. 27.

people, but that "such principles should be innately known to be true; they are at most beliefs...."[39] "To the extent that Chomsky treats his ascription of these principles as a matter of psychology...his position on this matter differs from Hume's only in degree."[40]

It is not, of course, mandatory that what the speaker-hearer knows be a "truth," for knowledge of a certain principle, even if "tacit," may be all that is needed to explain language acquisition. But it is important to note that the problem which innate psychological principles are held to resolve is not the problem with which the rationalists of the seventeenth century were so concerned. It has, nevertheless, been claimed by some that the tentative conclusions of contemporary language theory have relevance for the historical controversy.[41] In light of the above, this seems dubious in the case of innate ideas.

Chomsky aroused philosophers, as noted earlier, by his espousal (at least by implication) of the Cartesian doctrine that certain of our ideas are innate. Much confusion has resulted from Chomsky's associating himself with this term, and this confusion was fostered even further by his claims regarding the relevance of seventeenth-century literature to

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[39] Ibid.

[40] Ibid.

[41] See Katz, op. cit., p. 186 and pp. 240-282.

his more sophisticated theory. I have, furthermore, argued that although discussion of "innate mechanisms" may be less controversial, it also tends to be of less philosophical significance. This is seen most clearly by examining some of Chomsky's more recent statements.

In the Russell Lectures, for example, Chomsky speaks of the interplay of "innate mechanisms, genetically determined maturational processes, and interaction with the social and physical environment."[42] Apparently agreeing with the biologist Jacques Monod, Chomsky notes that he believes "[it] is quite reasonable to suppose that specific principles of language structure are a biological given, at the present stage of human evolution."[43] Further, says Chomsky, "Knowledge of language results from the interplay of initially given structures of mind, maturational processes, and interaction with the environment."[44] Such a view has precedence in an earlier work by another biologist for whom Chomsky wrote a lengthy appendix. Lenneberg, in a section entitled "Innate Mechanisms," similarly links innateness with biological constitution:

> At present, biology does no more than to discover how various forms are innately constituted, and this includes descriptions of a creature's reactions to environmental

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[42] Chomsky, Problems of Knowledge and Freedom, op. cit., p. 21.

[43] Ibid., p. 10.

[44] Ibid., p. 23.

> forces. Research into these reactions does not eventually free us from the postulation of innate features but merely elucidates the exact nature of innate constitutions. The discovery and description of innate mechanisms is a thoroughly empirical procedure and is an integral part of modern scientific inquiry.[45]

But who opposes this position? Even Quine, long considered an opponent of Chomsky's theories regarding language acquisition, holds that innateness is not contradictory with his conception of behaviorism, which "sees nothing incongenial in the appeal to innate dispositions to overt behavior, innate readiness for language-learning."[46] Perhaps even more to the point, Quine asserts, "The linguist has little choice but to be a behaviorist at least qua linguist; and, like any behaviorist, he is bound to lay great weight upon innate endowments."[47] Furthermore, says Quine:

> ...the behaviorist is knowingly and cheerfully up to his neck in innate mechanisms of learning-readiness. The very reinforcement and extinction of responses, so central to behaviorism, depends on prior inequalities in the subject's qualitative spacing, so to speak, of stimulations. If the subject is rewarded for responding in a certain way to one stimulation, and punished for thus responding to another stimulation, then his responding in the same way to a third stimulation reflects an inequality in his qualitative spacing of the three stimulations; the third must resemble the first more than the second. Since each learned response presupposes some such prior inequalities, some such inequal-

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[45]Eric Lenneberg, Biological Foundations of Language (New York: John Wiley and Sons, Inc., 1967), p. 393.

[46]W.V. Quine, "Linguistics and Philosophy," in Sidney Hook (editor), Language and Philosophy (New York: New York University Press, 1969), p. 98.

[47]W.V. Quine, "To Chomsky," in Synthese 19 (1968-69), p. 278.

> ities must be unlearned; hence innate. Innate biases and dispositions are the cornerstone of behaviorism, and have been studied by behaviorists.
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> ...This qualitative spacing of stimulations must therefore be recognized as an innate structure needed in accounting for any learning, and hence, in particular, language-learning. Unquestionably much additional innate structure is needed, too, to account for language-learning.[48]

Skinner, moreover, while probably taking as strong a behavioristic stand as anyone, not only allows for innateness in the form of genetic endowment, but also believes that such endowment is idiosyncratic. Thus, in Science and Human Behavior, he writes:

> Behavior requires a behaving organism which is the product of a genetic process. Gross differences in the behavior of different species show that the genetic constitution, whether observed in the body structure of the individual or inferred from a genetic history, is important.[49]

And, much more recently, Skinner asserts: "A child is born a member of the human species, with a genetic endowment showing many idiosyncratic features, and he begins at once to acquire a repertoire of behavior under the contingencies of reinforcement to which he is exposed as an individual."[50] If this is all that contemporary rationalists claim, then there would seem to be no major point of contention and little room for controversy. And yet disagreement abounds.

I must hasten to add here that I am not maintaining that Chomsk

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[48]Quine, "Linguistics and Philosophy," in Sidney Hook, op. cit. pp. 95-96.

[49]B.F. Skinner, Science and Human Behavior (New York: The Free Press, 1953), p. 26.

[50]B.F. Skinner, Beyond Freedom and Dignity (New York: Bantam Books, Inc., 1972), p. 121.

overall position is no different from that of Quine or Skinner. Chomsky seems to think that much of the difference lies in the specificity that he and these critics are willing to attribute to innate ideas and principles. He notes,[51] for example, that Quine is apparently willing to credit the child with an innate "quality space":[52] we have just seen that Quine will go even further, asserting that "Unquestionably much additional innate structure is needed, too, to account for language-learning."[53] Chomsky writes:

> The rationalist approach holds that beyond the peripheral processing mechanisms, there are innate ideas and principles of various kinds that determine the form of the acquired knowledge in what may be a rather restricted and highly organized way.[54]

There may, perhaps, be some substance to this claim, but it is interesting to note that this appears to be an empirical question rather than a philosophical one. If it is the contention of Quine and Skinner, as it does many times seem to be, that we can know <u>a priori</u> that there simply cannot be innate mechanisms with the specificity designated by Chomsky, then I believe the

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[51] Chomsky, <u>Aspects, op. cit.</u>, p. 47.

[52] W.V. Quine, <u>Word and Object</u> (Cambridge: The M.I.T. Press, 1960), pp. 83ff.

[53] W.V. Quine, "Linguistics and Philosophy," in Sidney Hook, <u>op. cit.</u>, p. 96.

[54] Chomsky, <u>Aspects, op. cit.</u>, p. 48.

latter rather than his critics has the stronger position in this regard.[55]

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[55]Chomsky has, in print as well as in personal correspondence regarding this chapter, argued that Quine has abandoned his earlier views of Word and Object. As I do not want to discuss this aspect of the issue here, I will merely refer the reader to Chapter 4 of Chomsky's Reflections on Language (New York: Random House, Inc., 1975), and also state Chomsky's view relative to this chapter: "Your quotes from Quine are dated 1968-9, and are in response to my discussion of Word and Object. I think the question you should raise is whether Quine has not abandoned the position I criticized. I think he has. Thus in these 1968-9 articles he defines 'behaviorism' as the view that all 'criteria' must be couched in observation terms and that conjectures must 'eventually be made sense of in terms of external observations.' Thus 'behaviorism' is weak verificationism. He also states that 'conditioning is insufficient to explain language learning,' and (Synthèse) that 'generative grammar is what mainly distinguishes language from subhuman communication systems.' But all of this is entirely inconsistent with his earlier views, e.g., in Word and Object. There he stated that a theory, in particular a language, can be characterized as 'a fabric of sentences variously associated to one another and to non-verbal stimuli by the mechanism of conditioned response,' which cannot be the case if conditioning is insufficient to explain language learning, as he now asserts, in his revised 'behaviorism.' Furthermore, in Word and Object he specified exactly 3 mechanisms by which sentences can be learned: association of sentences with sentences, association of sentences with stimuli, and 'analogic synthesis' which is left obscure, with one example, a case of simple substitution of one word for another. This is very different from his present view, in which he speaks of 'the as yet unknown innate structures. . .that are needed in language-learning....' Of course, if generative grammar is the distinctive characteristic of human language, then his statements about learning in Word and Object, must be entirely false. Also, in Word and Object, he defines a language as a 'complex of present dispositions to verbal behavior, in which speakers of the same language have perforce come to resemble one another'--also inconsistent with his new views.

"My point is this. Quine has plainly abandoned his earlier views, and now defines 'behaviorism' in a way that makes it quite vacuous. He will now admit anything as innate endowment, so long as conjectures can ultimately be made sense of in terms of observations. In Word and Object, on the contrary, he took a very specific position, now abandoned. ...The issue is not whether there are innate biologically determined elements underlying acquisition of language. At least, that has never been the issue that interested me. Cf. Aspects, p. 51, where I point out that both

We might note at this point that the general form of the argument has been significantly altered. Whereas sometimes it might have seemed that certain philosophical issues were at stake (for example, when Chomsky aligns himself with Descartes rather than with Locke or Hume), clearly the present claim is an empirical one. Whether or not there are certain structural mechanisms which, upon stimulation, assist in rather specific ways in the acquisition of an initial language, remains to be seen, though Chomsky believes there is considerable evidence for such a conclusion.[56] Accordingly, Chomsky always considers his claim to be a hypothesis worthy of closer examination, rather than a conclusion somehow deduced from our present knowledge of language acquisition. In Language and Mind, for example, arguing against Putnam he urges:

> Invoking an innate representation of universal grammar does solve the problem of learning, if it is true that this is the basis for language acquisition, as it well may be. If, on the other hand, there are general learning strategies that account for the acquisition of grammatical knowledge, then postulation of an innate universal

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the empiricist and rationalist approaches for which I've proposed a 'rational reconstruction' presuppose innate properties; roughly, data-processing procedures, matching, induction (empiricist speculation), versus the general form of the system of knowledge (language, in this case), in the rationalist speculations. These are very different views, empirically different. Formerly Quine proposed the first view; now, I take it, he has shifted to the second." (Chomsky, personal correspondence regarding this chapter.)

[56] Chomsky, "Recent Contributions to the Theory of Innate Ideas," reprinted in J.R. Searle, op. cit., p. 121.

> grammar will not 'postpone' the problem of learning, but will rather offer an incorrect solution to this problem. The issue is an empirical one of truth or falsity, not a methodological one of states of investigation.
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> To summarize, it seems to me that neither Goodman nor Putnam offers a serious counter-argument to the proposals concerning innate mental structure that have been advanced (tentatively, of course, as befits empirical hypotheses) or suggests a plausible alternative approach, with empirical content, to the problem of acquisition of knowledge.[57]

Moreover, and more recently, as indicated in his paper at a symposium on language and philosophy, Chomsky refers to this theory as an "empirical hypothesis":

> An innate schematism is proposed, correctly or incorrectly, as an empirical hypothesis to explain the uniformity, specificity, and richness of detail and structure of the grammars that are, in fact, constructed and used by the person who has mastered the language.[58]

This is to some extent quite understandable, for, since Chomsky has only recently turned his attention to the postulation of innate schematisms in language acquisition, the specific principles construed as innate are at present put forth only tentatively. They are many times described in a general way, and where there is some specificity, as with the cyclic principle, there is also some considerable doubt, I think, as to whether or not there might be other explanations for the phenomena

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[57] Chomsky, Language and Mind (New York: Harcourt, Brace and World, Inc., 1968), p. 75. (My emphasis)

[58] Chomsky, "Linguistics and Philosophy," in Hook, op. cit., p. 68. In passing we might note that what is here proposed as innate is a "schematism."

observed.[59]

While noting Chomsky's use of the term "hypothesis" in discussing his views on language acquisition, there are several points in need of clarification lest some misunderstandings ensue. By no means secondary among these is that I do not consider the "hypothesis" ascription to Chomsky's doctrine pejorative in the least. I particularly wish to emphasize this point in view of some contemporary usage which may perhaps be interpreted as taking a contrary position. Harry Bracken, for example, in discussing Kenneth MacCorquodale's reply to Chomsky's "Review,"[60] reacts somewhat negatively to what he takes to be MacCorquodale's position regarding the extrapolation of behaviorism to include linguistic behavior within its domain, viz., that "the whole thing is merely an

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[59]I do not here mean by "other explanations" that eventually a physical or biological account of the data observed might be forth-coming. Rather, at this stage it seems to me that any such specific accounts of the data are considerably premature, and that, even if the cyclic principle should remain relatively intact under close scrutiny, it is by no means clear that other more adequate explanations of the same data might not be found. For the general criticism, see Robert Schwartz, "On Knowing a Grammar," in Hook, op. cit., especially pp. 187-188. For details, see Chapter 5 of this work.

Furthermore, there is the possibility that the "data" itself might come to be viewed differently. Putnam, for example, has doubted whether a child's ability to grasp a language is really as amazing as Chomsky makes it out to be (See Putnam, "The 'Innateness Hypothesis' and Explanatory Models in Linguistics," reprinted in J.R. Searle, op. cit., pp. 136-137), and thus will not find himself requiring an explanation everywhere Chomsky thinks one necessary.

[60]Chomsky, "Review of Skinner's Verbal Behavior," reprinted in Leon Jakobovits and Murray Miron, Readings in the Psychology of Language (Englewood Cliffs: Prentice-Hall, Inc., 1967), pp. 142-

hypothesis which is not to be rejected because, given infinite time, it may be confirmed....[61]

Secondly, when reading Chomsky's work one is inclined, I think, to feel a pull in two rather opposed directions, according to whether he sees the linguistic version as a kind of "substantiation" of earlier work or not. Viewed from the standpoint of seventeenth-century rationalism, one tends to read Chomsky as asserting that certain "ideas" must be considered to be innate if we are to adequately explain language acquisition. Viewed from the standpoint of the twentieth century, with its heavy emphasis on the empirical approach and "physical" explanation, one tends to see the Chomskian hypothesis as asserting that certain pre-set biological mechanisms must be assumed to exist if we are to understand how a child learns his initial language in an environment viewed as containing incomplete data for the acquisition of the underlying grammar that must be internalized. The former view is very controversial, but the latter, so I have argued, is considerably less so; moreover, it is perhaps even conceptually acceptable to Chomsky critics. However, it also bears considerably less resemblance to the rationalist movement of the seventeenth century as

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[61]Harry Bracken, "Minds and Learning: The Chomskian Revolution," a revised version of a paper delivered at the LSA's Linguistic Institute 71, SUNY-Buffalo, July 13, 1971, p. 4. (My emphasis)

represented by Descartes and Leibniz.

Moreover, it seems to me that there are several hypotheses to be gleaned from Chomsky's work. In some contexts it is the existence of innate principles that is hypothesized, and research is consequently to be directed towards discovering precisely which of the general principles needed for language acquisition are innate. Thus the examination of the A-over-A principle[62] and the cyclic principle of phonology.[63] On the other hand, at other times it is suggested that we should assume the existence in the "mind" of certain principles used in language acquisition, and that in doing so we not only obtain a possible explanation of how a child comes to acquire his first language in spite of the presumed meagre data available to him, but we also gain insight into how the mind works. The primary contention of the latter, then, is that, with this new approach, we just might learn something about the mind that could not be gotten working within the behaviorist framework. The second

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[62]For discussion of the A-over-A principle, see Chomsky, Language and Mind, op. cit., pp. 42-47, and John Lyons, Chomsky, op. cit., pp. 101-102.

[63]For discussion of the cyclic principle in general, see "The Cyclic Principle," Chapter 28, in Jacobs and Rosenbaum, English Transformational Grammar (Waltham, Massachusetts: Blaisdell Publishing Company, 1968), pp. 235-249. For discussion of the cyclic principle of phonology as an innate organizing principle of universal grammar, see Chomsky, "The Formal Nature of Language," in Lenneberg, Biological Foundations of Language, op. cit., pp. 411-416; Chomsky, "Linguistics and Philosophy," in Hook, op. cit., pp. 67-68 and p. 78; and Chomsky, Language and Mind, op. cit., pp. 37-38.

hypothesis thus involves a theory of mind as well as the postulation or assumption of specific innate principles.

The two, of course, are not unrelated. In point of fact, it seems that the first may be a prerequisite for the utility of the second in that it gives the second the specificity necessary to make it enlightening. Without any awareness of what the particular principles may be that the mind is endowed with (or constructs), it is difficult to see how we could learn anything about the mind even if it did make use of them in its operations.

Regarding the first of these two hypotheses, that certain principles used by the mind are innate and our problem is to ascertain which principles these are, the task is apparently one for linguistics and has little or no bearing on the rationalist-empiricist controversy. These principles are not truths, as we have seen, and consequently bear little resemblance to the principles that were supposed innate by the early rationalists. No epistemological problem is involved. "How is it that we come to know a language?" looks like it could be a problem with which epistemology might concern itself, but as this seems to translate into "How is it that a child learns a language when only presented with meagre data?" it seems more likely that this is a problem for learning theory and psychology.

The second hypothesis similarly seems unrelated to early discussions of innate idea theories. In fact, it seems to me that it quite effectively reduces to a plea for "mentalistic

psychology," an alternative to behaviorist theories and one that Chomsky believes may in the end prove to be more productive:

> If a scientist were faced with the problem of determining the nature of a device of unknown properties that operates on data of the sort available to a child and gives as 'output' (that is, as a 'final state of the device,' in this case) a particular grammar of the sort that it seems necessary to attribute to the person who knows the language, he would naturally search for inherent principles of organization that determine the form of the output on the basis of the limited data available. There is no reason to adopt a more prejudiced or dogmatic view when the device of unknown properties is the human mind; specifically, there is no reason to suppose, in advance of any argument, that the general empiricist assumptions that have dominated speculation about these matters have any particular privileged claim. No one has succeeded in showing why the highly specific empiricist assumptions about how knowledge is acquired should be taken seriously. They appear to offer no way to describe or account for the most characteristic and normal constructions of human inteligence, such as linguistic competence. On the other hand, certain highly specific assumptions about particular and universal grammar give some hope of accounting for the phenomena that we face when we consider knowledge and use of language. Speculating about the future, it seems not unlikely that continued research along the lines indicated here will bring to light a highly restrictive schematism that determines both the content of experience and the nature of the knowledge that arises from it, thus vindicating and elaborating some traditional thinking about problems of language and mind.[64]

The second hypothesis, then, seems to express a hope that future research will not confine itself to the empiricist model and thereby neglect certain types of questions that just might be worth pursuing:

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[64]Chomsky, Language and Mind, op. cit., p. 53.

> It seems to me that the most hopeful approach today is to describe the phenomena of language and of mental activity as accurately as possible, to try to develop an abstract theoretical apparatus that will as far as possible account for these phenomena and reveal the principles of their organization and functioning, without attempting, for the present, to relate the postulated mental structures and processes to any physiological mechanisms or to interpret mental function in terms of "physical causes."[65]

But, alas, such pleas are of much greater importance to psychologists than to philosophers. Psychology might very well profit from a new model, and perhaps might even learn something about the mind by carefully noting its operations, à la Chomsky, during language acquisition. One is, in fact, reminded of Thomas Kuhn's view of science as accepting a particular model as its paradigm[66] and then operating within its framework until a crisis is reached, at which time a revolution may occur with the replacement of the old paradigm by a new one.[67] But this may take time. If Kuhn is right, the process of revolution is not a rational one, but instead

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[65] Ibid., p. 12.

[66] One may, of course, question whether or not psychology has a genuine paradigm or is even a science at all, but I think viewing psychology through this model is enlightening nevertheless. Behaviorism, after all, has more or less dominated psychology for the past forty years by giving rise to numerous experiments and subsequently to the feeling among many that psychology has finally become a true science. Whether or not this is so is irrelevant for the purposes of this discussion, for the paradigm-crisis-revolution model is applicable to non-sciences as well. In fact, perhaps even more so. See postscript to Thomas Kuhn, The Structure of Scientific Revolutions, footnoted below, p. 208.

[67] Thomas Kuhn, The Structure of Scientific Revolutions (Chicago: The University of Chicago Press, 1970).

one of waiting until the adherents of the old paradigm pass away and are replaced by new people in the field who find the problems encountered by a competing paradigm of much greater interest. Some day psychology may benefit from a new paradigm similar to Chomsky's version of innateness, but it will not at the same time be significantly similar to the innateness theories of either Descartes or Leibniz.

While much of the preceding is negative regarding Chomsky's contribution to the philosophical discipline, I do nevertheless believe that he has, if only peripherally, flirted with one issue that is both important and philosphical in nature. At times one feels that underlying much of the unsympathetic discussion of Chomsky's appeals to innateness is the nagging feeling, perhaps rarely expressed explicitly, that "innateness" does not explain anything. Note, for example, Putnam's emphatic remark that "Invoking 'Innateness' only postpones the problem of learning, it does not solve it."[68] Whether or not there are specific language-acquisition "mechanisms" that are innate is, it seems to me, as Chomsky claims, an empirical question to be decided by further investigation. But whether or not an appeal to innateness is, in any of its various forms, to count as a legitimate type of scientific

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[68]Putnam, "The 'Innateness Hypothesis' and Explanatory Models in Linguistics," in J.R. Searle, op. cit., p. 139. For Chomsky's replies, see Chomsky, Language and Mind, op. cit., p. 75, and Chomsky, "Linguistics and Philosophy," in Hook, op. cit., p. 80.

explanation, is an interesting as well as genuine philosophical issue that Chomsky's writings have given rise to. Because I want to discuss some of these philosophical issues in the next chapter, it is with this observation that I wish to bring the present chapter to a close.

In conclusion, let me add that there is undoubtedly some resemblance between the old and new theories of innateness, but notwithstanding whatever such similarities may exist, I have argued that the more one emphasizes the similarities, the more likely he is to be misled in his interpretation of the more recent version. Even more conducive to misunderstanding, I believe, is Chomsky's considerably stronger claim that the more recent theory can be viewed as a kind of substantiation of the earlier one. I have, in addition, tried to show in the closing part of this chapter that (despite my agreement with Chomsky that harsh boundaries should not be allowed to exist between academic disciplines) the greater part of Chomsky's work has more relevance to psychological and linguistic theory formulation than to the resolution of the long-standing rationalist-empiricist controversy.

CHAPTER V

SOME FURTHER PHILOSOPHICAL PROBLEMS

Part I: "Explanatory Power" and Research Models in the Social Sciences.

Undoubtedly "explanatory power," although lacking sharp meaning and possessing indefinite boundaries, is an important element in accepting one hypothesis or theory over another. It is clearly to the advantage of a hypothesis if it can be counted on to explain data that competing hypotheses are unable to account for or simply do not deal with. Thus, for example, although there were many non-scientific and perhaps even non-rational facets to the revolution that eventually resulted in the acceptance of the Copernican theory over that of Ptolemy, it seems likely that the ability of the former to better explain the more accurate data that became available in the 16th century also played an important role in the overthrow of the complex system of epicycles and deferents. The Ptolemaic System was able to account for some of the most striking irregularities of planetary movements, such as retrograde motion, and although the Copernican System left slight but recognized inaccuracies that remained the subject of investigation, it nevertheless seemed to provide a more precise as well as simpler explanation.

Copernicus' attack on the apparently trivial mathematical details of 15th century astronomy eventually led to the revolution that bears his name.[1] But if Chomsky is right, the behaviorist (or empiricist, as the case may be) model is open to attack on grounds more serious than minor inaccuracies. Behaviorism, argues Chomsky, has no explanatory power in the realm of human verbal behavior; indeed, Skinner's work, "the most careful and thorough-going presentation" of behaviorist speculation regarding the nature of higher mental processes, is characterized as "a reductio ad absurdum of behaviorist assumptions."[2] Chomsky's model of language acquisition, on the other hand, may have explanatory power that is absent from behaviorist theories because it allows for the introduction of an innate component. Chomsky writes:

> To provide a framework for the discussion, let us consider the problem of designing a model of language-acquisition, an abstract 'language-acquisition device' that duplicates certain aspects of the achievement of the human who succeeds in acquiring linguistic competence. We can take this device to be an input-output system
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> data ⟶ [LA] ⟶ knowledge
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> To study the substantive issue, we first attempt to determine the nature of the output in many cases, and then to determine the character of the function relating input to output. Notice that this is an entirely empirical matter; there is no place for any

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[1] Thomas Kuhn, The Copernican Revolution (New York: Random House, Inc., 1957), p. 73.

[2] Noam Chomsky, "Review of Skinner's Verbal Behavior," reprinted in Leon Jakobovits and Murray Miron, Readings in the Psychology of Language (Englewood Cliffs: Prentice-Hall, Inc., 1967), pp. 142-171. See especially the preface, pp. 142-143.

> dogmatic or arbitrary assumptions about the intrinsic, innate structure of the device LA. The problem is quite analogous to the problem of studying the innate principles that make it possible for a bird to acquire the knowledge that expresses itself in nest-building or in song-production. On a priori grounds, there is no way to determine the extent to which an instinctual component enters into these acts. To study this question, we would try to determine from the behaviour of the mature animal just what is the nature of its competence, and we would then try to construct a second-order hypothesis as to the innate principles that provide this competence on the basis of presented data. We might deepen the investigation by manipulating input conditions, thus extending the information bearing on this input-output relation. Similarly, in the case of language-acquisition, we can carry out the analogous study of language-acquisition under a variety of different input conditions, for example, with data drawn from a variety of languages.[3]

Given Chomsky's general views of behavioristic explanations, the question that must eventually be discussed is whether Chomsky's are any better. In other words, are we much closer to understanding human language acquisition when we are told that there must be an innate component to account for language learning? Can we confidently conclude that we have progressed with our explanations in an area where Chomsky argues we have really had none in the past?

I shall argue in the rest of this section that any affirmative answers to such questions are unwarranted. The reasons for such a negative response are two-fold. First of all there are, I believe, serious questions to be raised about the degree of explanatory power that Chomsky can legitimately claim to

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[3]Noam Chomsky, "Recent Contributions to the Theory of Innate Ideas," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), pp. 121-122.

have achieved with his proposals of innateness. And secondly, I have argued in the previous chapter that Chomsky is, strictly speaking, unable at the present time to give explanations at all because what he actually seems to be proposing is a methodological research alternative to the behaviorist model.

That Chomsky can not justifiably make any precise claims about the degree of explanatory power achieved by his doctrine of innateness should be obvious. The proposals of innateness are such that it is difficult to escape the charge of presenting ad hoc explanations at best. To argue that there is an "instinctual component" in language acquisition, in addition to the "empirical data," does not get us very far. Putnam, I think, was getting at a similar point when he asserted that "Invoking 'Innateness' only postpones the problem of learning; it does not solve it."[4]

Putnam, I think, raises an interesting question. Whether or not invoking innateness solves the problem of learning depends upon precisely what is seen to be the basic problem. If the problem is viewed as one of how a child can come to speak and understand a language when his contact with it is so minimal as to make it difficult to comprehend how he can possibly grasp its underlying and complex structure, then invoking innate-

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[4]See Hilary Putnam, "The 'Innateness Hypothesis' and Explanatory Models in Linguistics," reprinted in J.R. Searle, The Philosophy of Language (London: Oxford University Press, 1971), p. 139.

ness, if meaningful,[5] does seem to provide a solution. Beginning with certain preconceptions regarding the form of linguistic rules, the child from the outset begins "testing" a relatively small number of hypotheses and "discovers" the structure of the language to which he is exposed (all unconsciously, of course!). Thus, using empirical, though unconscious, procedures the child eventually falsifies his incorrect hypotheses.

But this in itself does not get us very far. To be told that there may be very specific, pre-set, innate mechanisms that are triggered by even meagre contact with a language constitutes only a first step in providing an explanation of language acquisition. At most it tells us why it is that conventional behavioristic ("empiricist") research methods (or any other that employs general learning theories) have failed in the past. In order to understand language acquisition we must expand the explanatory power and obtain more details about the nature and function of the particular mechanisms, for otherwise we have nothing more than a very general model under which Chomsky thinks further research should take place.

This brings us to the second point I would like to make in this section. It seems to me that a more favorable reading

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[5]See Part II of this chapter.

can be given to Chomsky's writings if one views him as having found the behaviorist model inadequate and as a consequence doing little more than positing a new model under which research in the future might take place. Such a reading finds support, I think, in Chomsky's references to the role of genes and electrons in the natural sciences. Thus, in Problems of Knowledge and Freedom, for example, Chomsky writes:

> The structures [the abstract forms underlying sentences] and the operations that apply to them are postulated as mental entities in our effort to understand what one has learned, when he has come to know a human language, and to explain how sentences are formed and understood. I would like to emphasize that there is nothing strange or occult in this move, any more than in the postulation of genes or electrons.[6]

Leaving aside the question of whether or not there is anything strange or occult about postulating "mental entities" in an effort to understand what one has learned when he has come to know a human language, I want to emphasize that mere postulation in itself does not yield explanations. Although it is very difficult indeed to enumerate what restraints must be placed upon our speculations, it is nevertheless clear, I think, that with his innate component Chomsky has never come close to achieving the specificity that made it useful to introduce "entities" such as genes and electrons into scientific theorizing. Chomsky is, of course, hopeful that by postulating

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[6]Chomsky, Problems of Knowledge and Freedom (New York: Pantheon Books, 1971), p. 32.

mental entities (or, I take it, "operations of the mind") we may some day obtain a language-learning theory with considerably more explanatory power than any theory about language currently available, but at the present time there is justification for little more than hope. Further research within his framework just might produce insights that may otherwise have never been achieved, but so might research within non-Chomskyan frameworks.

What should be kept in mind, then, is that Chomsky's simple ascription of innate features to the "language-acquisition device" does not give us a complete explanation of language acquisition; rather it is merely a way of viewing the problem of language learning so that explanations in the future will be forthcoming. It is quite possible, though Chomsky thinks unlikely, that future research will finally show that the innate component is insignificant in language acquisition.

In light of the above, I think it should be clear that discussion of Chomsky's theory of innate ideas is somewhat premature. What Chomsky has done is make proposals regarding the possibility that certain principles of language acquisition are innate, and then suggest that we proceed to examine these proposals empirically.[7] But whereas this seems to give us a procedure for rejecting particular principles as innate, the

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[7]"Empirically," that is, in his sense of the term. See the closing paragraphs of this section.

problem is complicated by the fact that even Chomsky can not posit with any certainty particular principles that appear to be innate. It would seem that we could continue the rejections indefinitely, for no matter how many, we can never, by this method, be certain of the truth of the universal statement "There are no innate principles."

In closing I might add that Chomsky's research suggestions are not uninteresting. If Chomsky can convince his critics that "intuitions" can legitimately be absorbed under the admittedly vague phrase "empirical data," then he will have gone a long way towards making some type of dualistic scientific methodology more palatable. And indeed there are reasons for thinking that Chomsky would find this resolution of the rationalist/empiricist controversy viewed as one of methodology quite acceptable,[8] though in the end Chomsky still wishes to leave open the question of the metaphysical implications of any such dualistic methodology.[9] Accordingly, although there is undoubtedly a difference between Chomsky's "empirical" procedures and those of more conventional empiricists in the natural and social sciences (that is, e.g., Chomsky allows for

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[8]See, for example, the comments on "physical explanation" in Chomsky, Language and Mind (New York: Harcourt, Brace and World, Inc., 1968), pp. 83-84.

[9]Chomsky has made this point (regarding the metaphysical implications of his work) quite clear in discussions of Chapter IV of this dissertation.

the introduction of the "mentalistically-flavored" data of intuitions), he yet wishes to remain uncommitted to a dualistic metaphysics. Given that intuitions have not been widely accepted as data in the social sciences, I wish in the final analysis to remain open regarding their future role, though Chomsky himself clearly favors a broadening of what is to be accepted as data for any theory. I shall again bring attention to this in the conclusion of this work.

Part II. Knowledge and Innateness

In his discussion of the problem of designing a model of language acquisition (See the long paragraph quoted in the preceding section), Chomsky asserts that there is a parallel to be found in the animal kingdom: "/t/he problem is quite analogous," he says, "to the problem of studying the innate principles that make it possible for a bird to acquire the knowledge that expresses itself in nest-building or in song-production." He then goes on to say that "/o/n a priori grounds, there is no way to determine the extent to which an instinctual component enters into these acts."[10] Although I think Chomsky is probably right in this second assertion, I am uneasy with how freely Chomsky is willing to ascribe "knowledge" in the cases of nest-building and song-production. The precise source of this uneasiness I hope to make clear in this section.

To begin with, then, I believe Chomsky's remarks regarding the determination of to what extent an instinctual "component" enters into the acts of nest-building and song-production are essentially correct. One cannot, on "a priori grounds," ascertain to what degree an instinctual component enters into the acts of

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[10]Noam Chomsky, "Recent Contributions to the Theory of Innate Ideas," reprinted in J.R. Searle, op. cit., p. 121.

nest-building and song-production. Somehow, through experiments or careful observations, but most probably both, one might, however, hope to uncover the precise roles of heredity and environment. Not everyone may agree that this is a particularly productive way to proceed, but at least the assertion is clear.

That the problem of designing a model of language acquisition is quite analogous to the problem of studying the innate principles that make it possible for a bird to acquire the knowledge that expresses itself in nest-building or in song-production, however, is much less clear. The analogy is not so obvious as one might hope. One might question, for example, whether birds have knowledge at all, let alone that of an innate variety. One might, of course, say of a particular bird that it <u>knows how</u> to build a really fine nest, but it is doubtful, I think, that such a characterization involves an ascription of <u>knowledge.</u> Rather, in instances such as this, one seems to be describing a skill that is possessed by the bird in question.

Even in the case of human beings, where the ascription of knowledge of something is quite appropriate in some circumstances (that is, people are the types of beings who may be said to "know" things), it seems unlikely that such an ascription would be made in any case really analogous to nest-building or song-production. Thus, when we say of a person that he knows how to ride a bicycle, we are not saying anything about the

knowledge that he possesses.[11] Riding a bicycle, like nest-building in birds, is one of the things he can do (i.e., knows how to do); to claim further that he knows a set of principles seems to only muddle the issue.

Somewhat parenthetically, we might further note here that, in the case of language, it is not even clear that it makes sense to attribute knowledge of specific principles via a study of the language acquisition device outlined by Chomsky. Robert Schwartz, for example, with his device for measuring density, has argued quite forcefully, I think, that "/t/he

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[11] Chomsky seems to agree in the case of the bicycle rider, though not categorically. In speaking with disfavor of an analogy drawn by Harman between a speaker of a language having unconscious knowledge of the rules of his grammar and a bicycle rider having unconscious knowledge of the principles of mechanics (though the debate over the bicycle rider is difficult to follow because Chomsky and Harman each accuse the other of misrepresenting his position, Harman seems to be suggesting that there is no more reason to grant knowledge of the rules of grammar to a speaker-hearer than there is knowledge of mechanics to a bicycle rider), Chomsky says "we do not attribute knowledge of mechanics to the bicycle rider if in fact this assumption does not help explain his ability to ride a bicycle. . . ." (Noam Chomsky, "Comments on Harman's Reply," in Sidney Hook, op. cit., pp. 154-155.) See also Noam Chomsky, "Linguistics and Philosophy," and Gilbert Harman, "Linguistic Competence and Empiricism," both collected in Sidney Hook, op. cit., p. 87 and pp. 145-146 respectively.

It should be noted that there are dissenters from the position taken here. Eric Lenneberg, for example, seems to assume that the bicycle rider does have an unconscious knowledge of the laws of physics: "We do not have to assume . . . that the child knows the grammar consciously. A tennis player or bicycle rider responds to and behaves in accordance with laws of physics without being able to formulate them or to work out consciously any of the computations that his nervous system is doing for him." (Eric Lenneberg, Biological Foundations of Language (New York: John Wiley & Sons, 1967), p. 300; my emphasis.) However, Lenneberg gives no justification for his assumption, and I can see none.

fact that we can specify S's competence in terms of a formal system of generative rules does not in itself imply that S has represented a corresponding system in him."[12] What Schwartz means is that it does not follow that S uses the rules of the formal system even if they do in some sense specify S's competence. Chomsky has said as much and more:

> One further point requires some clarification. We noted at the outset that performance and competence must be sharply distinguished if either is to be studied successfully. We have now discussed a certain model of competence. It would be tempting, but quite absurd, to regard it as a model of performance as well. Thus we might propose that to produce a sentence, the speaker goes through the successive steps of constructing a base-derivation, line by line from the initial symbol S, then inserting lexical items and applying grammatical transformations to form a surface structure, and finally applying the phonological rules in their given order, in accordance with the cyclic principle. . . . There is not the slightest justification for any such assumption. In fact, in implying that the speaker selects the general properties of sentence structure before selecting lexical items (before deciding what he is going to talk about), such a proposal seems not only without justification but entirely counter to whatever vague intuitions one may have about the processes that underlie production. A theory of performance (production or perception) will have to incorporate the theory of competence--the generative grammar of a language--as an essential part. But models of performance can be constructed in many different ways, consistently with fixed assumptions about the competence on which they are based.[13]

Chomsky's pessimism seems justified. Even more recently James Deese has written:

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[12]Robert Schwartz, "On Knowing a Grammar," in Sidney Hook, op. cit., p. 187. For further discussion of Schwartz and his density-measuring device, see Part III of this chapter.

[13]Noam Chomsky, "The Formal Nature of Language," Appendix A to Eric Lenneberg's Biological Foundations of Language (New York: John Wiley & Sons, Inc., 1967), pp. 435-436.

> There is still plenty of room for doubt as to whether the human mind derives sentences in the same way as does generative theory. For example, in order to describe the grammar of noun-phrases having adjectival modifiers in them, a fairly complicated derivational history is required. Yet adding adjectives to the subject- and predicate-nouns of sentences scarcely makes those sentences more difficult to perceive, to remember, or otherwise to process. There is a discrepancy between generative theory and human ability in this case, and it tends to reinforce the view that generative theory does not provide a complete account of the process in linguistic competence, however well it may describe that competence itself.[14]

When one uses a word like "knowledge" with a somewhat extraordinary meaning, the onus is on him to explain precisely how and why he is so using the word. Or, if one wishes to extend the range of a particular concept, the onus is on him to justify such an extension. Chomsky does neither here when he speaks of the knowledge of a bird.

Returning to the bicycle rider, we can see that not a little of the difficulty seems to be that Chomsky is quite free in his ascriptions of knowledge. In his comments on Harman's reply at a New York symposium on language and philosophy, Chomsky said:

> As to the question asked in his Reply, why one should say 'that a speaker of a language has an unconscious knowledge of the rules of his grammar' when we do not make an analogous statement about the 'unconscious knowledge of the principles of mechanics' by the bicycle rider, I think the answer is simple, once the lack of significant analogy between the two cases is accepted: we do not attribute knowledge of mechanics to the bicycle rider if in fact this ascription does not help explain his ability to ride a bicycle; we do attribute knowledge of the rules

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[14]James Deese, Psycholinguistics (Boston: Allyn and Bacon, Inc., 1970), p. 44.

> of grammar to the speaker-hearer if this assumption does contribute to an explanation of his ability to use a language. Or, to eliminate the irrelevant reference to the skill of the bicycle rider, the answer is simply: we postulate that a speaker of a language has an unconscious knowledge of the rules of grammar if this postulate is empirically justified by the role it plays in explaining the facts of use and understanding and acquisition of language.[15]

The implication is that we would attribute knowledge of the laws of mechanics to the bicycle rider if this assumption did contribute to an explanation of his ability to use a bicycle. This is, I think, subject to question on several counts.

First, what sense can be made of the ascription of unconscious knowledge of the laws of mechanics to the bicycle rider? In searching for an answer to this question, it has to be admitted, I think, that the bicycle rider analogy has become the center of much confusion. We have seen, for example, that Lenneberg asserts

> . . . [W]e do not have to assume . . . that the child knows the grammar consciously. A tennis player or bicycle rider responds to and behaves in accordance with laws of physics without being able to formulate them or to work out consciously any of the computations that his nervous system is doing for him.[16]

But, although Lenneberg seems to imply here that we do attribute unconscious knowledge of physics to the tennis player and the bicycle rider, Chomsky has indicated we do not attribute such knowledge to the bicycle rider. Thus, even if the speaker-hearer

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[15] Noam Chomsky, "Comments on Harman's Reply," printed in Sidney Hook, Language and Philosophy, op. cit., pp. 154-155.

[16] Eric Lenneberg, Biological Foundations of Language, op. cit., p. 300.

"responds to and behaves in accordance" with the rules of the grammar, this does not justify or clarify the ascription of unconscious knowledge. Indeed, if any conclusion is to be drawn from the analogy it would seem to be that the speaker-hearer, like the bicycle rider, does not have knowledge of the rules of grammar, even if he "responds to and behaves in accordance" with them.

But secondly, replying to Harman above, it is unclear what Chomsky means when he asserts that "we postulate that a speaker of a language has an unconscious knowledge of the rules of grammar if this postulate is empirically justified by the role it plays in explaining the facts of use and understanding and acquisition of language." (My emphasis) Postulates are not generally empirically justified by the role they play in explanations. The use of "instincts" in explanations of animal behavior, for example, was not "empirically justified" when it was decided to ascribe certain characteristics to an animal's constitution rather than to his acquired behavior.

Part III: An Epistemological Difficulty

It seems to me there has been more than a little confusion regarding the sense in which Chomsky uses the term "knowledge," a confusion which is not completely resolved, I think, by the few remarks Chomsky has made on this matter. In reacting to Harman's remarks, for example, Chomsky argues that knowledge of language is describable neither in terms of "knowing how" nor "knowing that":

> Knowledge of language is not a skill, a set of habits, or anything of the sort. I see nothing surprising in the conclusion that knowledge of language cannot be discussed in any useful or informative way in this impoverished framework.[17]

Knowledge of language, then, is to be considered a third type of knowledge, not reducible to "knowing how" or "knowing that."

However that may be, I do not find the question of whether language is a third type of knowledge to be the most significant epistemological issue in Chomsky's hypothesis. Perhaps this particular difficulty could be resolved trivially by using some other word than "knowledge" to describe our mastery of a language, though there may be sufficient similarities here with other acceptable types of knowledge to warrant the ascription of knowledge to one who acquires a language. Certainly a

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[17]Noam Chomsky, "Linguistics and Philosophy," reprinted in Sidney Hook, Language and Philosophy (New York: New York University Press, 1969), p. 87.

prima facie case can be made for such a view, for we do speak of people knowing French and knowing how to speak and understand French.

Far more serious, I think, is the question of how we are going to treat the ascription of knowledge of linguistic principles to one who can be described as following the principles of a universal grammar or of a specific grammar. It is by no means clear to me that one would want to say that a person has knowledge of either of these types of principles, although Chomsky's position seems to entail such ascriptions. Chomsky, as we have seen in the preceding section, goes considerably further--we find, in his view, that even birds are capable of having knowledge of an innate variety. However, in addition to the questions raised therein regarding the extent to which we are willing to attribute knowledge to such creatures as birds, given our uncertainty as to their degree of consciousness and awareness in general, I think there is a further interesting epistemological issue to be explored.

The issue has its roots in Chomsky's characterization of our knowledge of linguistic principles, universal or particular, as unconscious. What this means is that, although such principles yield a description of what must be ascribed to the mind for the acquisition of a language to become possible, they are not open to introspection.

Perhaps the sense in which linguistic principles may be said to be unconscious is illustrated by an example taken from phonetics.

It is well-known that a native speaker of English pronounces the word "the" in two distinctly different ways, depending upon whether this word immediately precedes another which begins with a vowel or a consonant sound. This principle, although capable of being brought to consciousness and made explicit, remains at an unconscious level for most people. Few are ever aware of employing such a principle, though it is adhered to rather strictly.[18] A similar, although probably more consciously-learned rule, is the one that "tells" us to use "a" in front of "book" and "an" in front of "apple." Chomsky, of course, in addition claims that linguistic rules may be innate as well, and it is this particular characterization that I wish to pursue here.

That there must be some method for verifying that a specific rule is followed is something about which Chomsky is quite explicit. He has always maintained that his hypothesis about innate mechanisms is an empirical one. Nevertheless, precisely <u>what</u> has been verified should Chomsky's postulated innate mechanisms prove to have sufficient explanatory power to allow them to be generally accepted, remains an

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[18]It is interesting to note here that for emphasis the usual pronunciation may not be followed. Thus, were one to state emphatically "<u>the</u> book you are looking for was lost in the fire," he would customarily (and again, unconsciously) use the pronunciation of "the" which is generally used in the phrase "the apple." Rather than being a violation of the rule, this instead indicates that the "real" or more sophisticated rule is actually more complex than I have suggested here.

open question. It seems to me the question must inevitably arise as to why we should describe the mechanism the speaker-hearer possesses as "knowledge." It is true that we do speak of people knowing how to speak French, but as has already been argued, we also speak of birds knowing how to build a nest, even though it is far from clear that we really do think birds possess this particular bit of knowledge or any other. Specifically where we draw the line, if determinable at all, is not to be decided by the way we speak. (Does a spider have knowledge of web-construction? Surely, in some sense, he "knows how" to spin a web, but it is a moot point, I think, whether we even want to say he has knowledge of web-construction, let alone are justified in doing so.)

Why, then, describe what is innate as knowledge, whether the presumed possessor be man or bird? Suppose one were to argue that it is not knowledge that the man and bird possess, but only a set of beliefs upon which they act? Does it make sense to distinguish between a man having knowledge of certain linguistic principles and his merely believing them (unconsciously, of course!)? Indeed, can we even distinguish belief in certain linguistic principles from merely making use of them unconsciously in acquiring a language? (That is, what is added by saying a person "knows" rather than merely "believes," or "believes" rather than merely "is guided by" certain linguistic principles even if he does make use of them unconsciously in learning a language?)

It is in this context, I think, that Schwartz' "density machine" raises an interesting question. Via this example Schwartz argues that "[t]/he fact that we can specify S's competence in terms of a formal system of generative rules does not in itself imply that S has represented a corresponding system in him."[19] The "machine"(input-output device) labels spheres "+" if their density is greater than 1.0 and "-" if their density is less. The device's operation is presumably described by equations dealing with the volumes of spheres and their density:

$$\text{Vol. of sphere} = \frac{4}{3}\ \text{radius}^3 \qquad \text{Density} = \frac{\text{Weight}}{\text{Volume}}$$

Schwartz then argues that the device may very well not employ the formulae above, but might instead operate according to different principles. It might, for example, contain a liquid like water with a density of 1.0 and label "+" any sphere which sinks and "-" any sphere which floats. Given such a machine, Schwartz asks: "Would it be reasonable to claim that our equations are internally represented in this machine?"[20] Schwartz' answer is that it would not, for

> [a]lthough in some sense the liquid in the machine could be held to 'stand for' the equations, it seems less reasonable to claim that the analysis provided by the equations is mirrored in any interesting manner

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[19]Robert Schwartz, "On Knowing a Grammar," in Sidney Hook, op. cit., p. 187.

[20]Ibid., p. 188.

by the internal processes of the machine.[21]

Given the above, it seems to make sense to say of the machine that it operates <u>according to</u> certain physical principles, perhaps even "utilizes" them; it seems to make little sense, however, to say that the machine, in addition, "believes" or "knows" these principles. Accordingly, one is very strongly inclined to say that the machine does not have knowledge, unconscious, innate, or otherwise, of the equations which describe its operations. Similarly, I should think one would find himself uneasy granting to human beings beliefs in, or knowledge of, linguistic principles, even though they are, at least, the types of subjects (namely, conscious ones) with which knowledge ascriptions are compatible.

The source of this uneasiness is not easy to locate, but it is rooted, I think, in Chomsky's claim that this unconscious knowledge is innate. Notwithstanding whatever Platonic tradition may have been established regarding the possibility or conceivability of innate knowledge, it is this additional stipulation, I think, that raises an interesting question about epistemology. Are we really justified in attributing <u>knowledge</u> of a particular principle to a person who can offer no evidence and no justification whatsoever for his "acceptance" of it over many other similar principles? Whereas it

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[21] <u>Ibid</u>.

seems to me clear that people many times <u>believe</u> principles for which they have no justification, it is much less obvious that they can be said to <u>know</u> such principles.

Let us examine more closely the Chomskyan model of knowledge. A subject S knows (speaks and understands) a language L, and with this in mind it is postulated that he in addition knows unconsciously and innately the universal principles underlying L. We verify that S <u>really does</u> know the universal principle by establishing that there are indeed universal principles with sufficient explanatory power to cover all existing languages.

To make this explicit, suppose S_1 to have been born "lucky" in that it was his good fortune to possess a congenital mechanism which, when triggered by his verbal environment, resulted in his acquiring language L_1. S_2 was less fortunate, for he was a mutant whose congenital mechanisms "malfunctioned" (viz., they <u>did</u> function, but generated principles which failed to help him master L_1) and, although he also was exposed to the verbal environment of S_1, this resulted in his failure to acquire L_1. S_3 possessed the "proper" congenital mechanisms, but was never exposed to any language. He, of course, also failed to acquire L_1.

On the Chomskyan model it is postulated that S_1 has <u>innate knowledge</u> of the universal principles describing his acquisition of L_1. S_3 presumably has knowledge of these principles also, but he never had the opportunity to make use of them. He had the capacity to acquire L_1, but due to a

deprived environment failed to do so. S_2, however, seems to me an interesting and much less straight-forward case. Is he most accurately described as one who has no knowledge, for he failed to acquire the principles underlying L_1 upon exposure to it? Or is he better described as one who has knowledge of a considerable number of principles, but, alas, the wrong ones?

The problem that arises here is the question of a criterion, and seems to me to yield interesting consequences regarding ascription of knowledge to S_1. One might argue that S_1 has knowledge of the principles underlying L_1, while S_2 does not, for S_1 knows L_1. But this seems questionable, particularly given Chomsky's belief that neither S_1 nor S_2 actually make use of the principles in constructing and understanding sentences of a language.[22] Accordingly, it seems to me quite arbitrary to ascribe knowledge of certain principles to S_1 merely because his principles should happen to have utility, and deny knowledge of certain other principles to S_2 on the grounds that his principles produced no results. One might, of course, argue that there is no reason to suppose S_2 has actually learned any principles, for he has not learned L_1; however, if we again recall that it is very unlikely S_1 utilizes

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[22]See Part II of this chapter and Noam Chomsky, "The Formal Nature of Language," Appendix A to Eric Lenneberg's Biological Foundations of Language (New York: John Wiley & Sons, Inc., 1967), pp. 435-436.

the principles underlying L_1 in mastering L_1, there seems little reason for supposing his acquisition of L_1 is in any way an indication of his knowledge of the underlying principles.

CONCLUSION

In this work I have laid great emphasis upon certain epistemological and metaphysical issues arising out of the writings of Descartes and Leibniz as well as those of Noam Chomsky in linguistics. In so doing I have, of course, discussed these particular issues at length and to the exclusion of others which are also of considerable interest. Accordingly, in addition to summarizing the major points of the preceding discussions, in these final pages I wish to stress the orientation that underlies the historical outlook and philosophical analysis of the foregoing chapters as well as give some indication of where future research might profitably take place.

I have maintained throughout this work that similarities between Chomsky's version of innateness and that of the 17th century rationalists, Descartes and Leibniz, become markedly less striking as one emphasizes the epistemological and metaphysical implications of their writings. This is not to say that Chomsky's writings are therefore uninteresting to philosophers or that they bear no resemblance whatever to the work of Descartes and Leibniz, or perhaps to other earlier figures such as Humboldt and the Port Royalists. Instead I wish to emphasize that, given his views, Chomsky is not contributing to a resolution of the 17th century debate over innate ideas, though

he is indeed generating a lively discussion regarding the correct methodology in a number of the social sciences.

Insofar as epistemological issues are concerned, then, Chomsky is not so interested in how it is that we come to have ideas and principles that do not seem to originate or be verifiable in sense experience, but rather with what methodology might prove most useful in linguistics and the social sciences. As was indicated in Part I of Chapter V, Chomsky would like to include "intuitions" (which, of course, have been traditionally treated as non-physical entities and as therefore inappropriate in the sciences) as part of the data to be accounted for by linguists; as a consequence he may appear to be a metaphysical dualist himself. In the end, however, Chomsky fails to make any metaphysical commitments. The metaphysical implications of his writings (or rather the lack of them, as Chomsky sees it) should be of interest to the philosopher and well worth emphasizing again.

What should be kept in mind, then, is that although Chomsky does not wish to deny outright the metaphysical dualism of Descartes, he does not embrace it. Rather, he remains uncommitted and open on this question. Thus, in concluding remarks in Language and Mind Chomsky writes:

> There is one final issue that deserves a word of comment. I have been using mentalistic terminology quite freely, but entirely without prejudice as to the question of what may be the physical realization of the abstract mechanisms postulated to account for the phenomena of behavior or the acquisition of knowledge. We are not contrained, as was Descartes, to postulate a second

> substance when we deal with phenomena that are not expressible in terms of matter in motion, in his sense. Nor is there much point in pursuing the question of psycho-physical parallelism, in this connection. It is an interesting question whether the functioning and evolution of human mentality can be accommodated within the framework of physical explanation, as presently conceived, or whether there are new principles, now unknown, that must be invoked, perhaps principles that emerge only at higher levels of organization than can now be submitted to physical investigation. We can, however, be fairly sure that there will be a physical explanation for the phenomena in question, if they can be explained at all, for an uninteresting terminological reason, namely that the concept of "physical explanation" will no doubt be extended to incorporate whatever is discovered in this domain, exactly as it was extended to accommodate gravitational and electromagnetic force, massless particles, and numerous other entities and processes that would have offended the common sense of earlier generations. But it seems clear that this issue need not delay the study of the topics that are now open to investigation, and it seems futile to speculate about matters so remote from present understanding.[23]

In the end, then, Chomsky apparently sees his work to be as compatible with physicalism as with dualism, and does not wish to make speculations respecting either. As a consequence, of course, Chomsky leaves the question of the metaphysical implications of his theory untouched, though it might well be explored by philosophers in the future.

In emphasizing certain epistemological and metaphysical aspects of Chomsky's writings, a number of other interesting and related issues are also left unexplored by this work. Chomsky himself has at times stated he is closer to Humboldt than to either Descartes or Leibniz, and a closer examination

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[23]Chomsky, Language and Mind (New York: Harcourt, Brace and World, Inc., 1968), pp. 83-84. Moreover, Chomsky has, in discussing the previous chapter of this work, made explicit that he does not support the dualism of Descartes.

of this claim might well be worthwhile as an aid to understanding Chomsky's present assertions as well as for historical reasons. With its emphasis on Descartes and Leibniz, this work has not probed the possibility that Humboldt is better background reading for achieving an understanding of Chomsky's form of innatism than either of these two great rationalists.

There is no doubt, I think, that considerable analysis in this work has taken place with the epistemological assumption that 17th century rationalists were primarily concerned with truths in their innateness theories. This is not to say that some truths were seen as validated when interpreted as innate, but merely that the concern of people like Descartes and Leibniz was with how it is that we come to know truths that do not seem to have empirical verification. Among other things this led to an emphasis (in this work) on "necessary truths" in particular, with the consequence that further work might be profitably done in this area by someone of a decidedly-different orientation.

It should be added, however, that the major reason behind the decision to concentrate on some ideas or principles rather than others, or on necessary truths rather than truths in general, was that I believed, in so doing, the more interesting aspects of the work of Descartes and Leibniz regarding innateness would surface. Descartes did in his later writings profess that all ideas were innate; Leibniz, with his theory of monads, also implies that all ideas in the end are innate. However, I did not find these views of innateness to be as

interesting as those where a less extreme position was taken, and thus chose to explore the latter rather than the former. This seemed particularly prudent given Chomsky's belief that only some principles are innate, not all.

It seems to me that Chomsky's strongest link with Descartes and Leibniz, and perhaps with a number of other figures of the seventeenth century, revolves around his claim that there is some mechanism within human beings that is to some extent "pre-set," and which to some extent is also fairly specific in its functioning: that is, the "mechanism" has a very particular job to perform. Thus, for Descartes this "faculty" (at times referred to as merely the "faculty of thinking")[24] is an important element in one's becoming aware of certain ideas and non-empirical truths. And for Chomsky a pre-set and fairly specific mechanism allows one to grasp the deep structure of a language where the actual empirical data is by itself considered too meagre for such a task. Viewed in this very general way one can, I believe, claim that Chomsky's form of innatism "parallels" that of Descartes and Leibniz to some degree. The question that arises in the end, however, is whether such comparisons genuinely assist one in trying to understand Chomsky's views on this matter, or whether they merely tend to foster confusion and are thus best left unstated. It is this latter view that I have emphasized and

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[24]Descartes, "Notes Directed Against a Certain Programme," in Haldane and Ross, Vol. I, op. cit., p. 442.

argued for in this work.

Accordingly, in the final chapters of this study I have given considerable attention to analyses of certain key notions that I believe to be particularly troublesome. In Chapter IV, I examined Chomsky's position on innateness by gradually isolating it from the positions of Descartes and Leibniz and, for that matter, from any of the early writers sympathetic to some "innate idea" doctrine. What resulted, I think, is a portrait of Chomsky as an unconventional empiricist--unconventional in that he does accept intuitions as part of the data to be explained by any language-learning theory, but nevertheless an empiricist in that he considers his proposals regarding the innate component in language acquisition to be in the end testable and falsifiable.

Chapter V deals with Chomsky's theory in complete isolation from work of earlier centuries. I have focused on certain issues that I find problematic in Chomsky: the degree of explanatory power he can legitimately claim, the relationship between consciousness and ascriptions of knowledge, and an "epistemological difficulty" which I perceive to be rooted in any attempt to view knowledge as innate. All of these issues can, with profit, I believe, be pursued considerably further, but they nevertheless serve to focus attention upon aspects of Chomsky's work worth exploring.

Stripped of the repeated references to work of preceding centuries, Chomsky's claims not only seem more manageable and comprehensible, but also less controversial and in the final

analysis unsupported. In Chapter IV, I have argued that whether or not there are indeed some particular principles that are very specific to the acquisition of a first language is at present an open question, though an interesting one for researchers in linguistics. But before any affirmative or negative answers can with justification be given to this question, it will be necessary to develop the principles to a much greater degree and to get more widespread agreement about the role of genetics and the environment. Without such refinement and agreement one can only speculate about highly specific innate components in language acquisition.

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