THE ANALYTIC AND SYNTHETIC

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I ANALYTIC AND SYNTHETIC

An important and a frequently occurring concept in modern philosophy, especially in modern empiricism, has been that two distinct kinds of statements (propositions or judgements) can be distinguished and classified. On the one hand there are said to be analytic statements; on the other, synthetic statements. The difference between these two kinds of statements can be characterized, though inadequately, by a description of the method by which we come to determine their truth-values. For example, consider the statement: "Generally speaking, bachelors are more wealthy than married men." In order to determine whether this statement is true, or false, one should make an investigation into the respective incomes and savings of bachelors and married men; then by comparing his findings, he should presumably arrive at a conclusion. Statements of this kind are generally regarded as synthetic. On the other hand, if one considers a statement like:

(1) All bachelors are unmarried males,

and if he understands what the words "bachelor," "unmarried," and "male" mean, he knows that the statement is

true without making an empirical investigation into the marital status of bachelors and married males. Statements of this kind are generally regarded as analytic.

But, still, this is not really enough to characterize analytic statements. For we must also understand the meanings of "all" and "are." Words like these are usually called logical particles or logical constants. Among others, expressions like "if," "then," "no," "non-" and "un-" are also logical particles. These also play an important part in the notion of analytic statements. For example, we know that the statement:

(2) No non-banausiclites are banausiclites,

is true even though we might not understand the meaning of the word "banausiclite." Thus it is not enough, nor is it in itself always necessary, to understand the meanings of all the descriptive words (i.e., words which are not logical particles) in order to determine the truth or falsity of an analytic statement. But, generally speaking, an analytic statement is one whose truth-value can be determined by merely attending to the meanings of its terms and to pertinent rules of syntax (i.e. those rules which determine the correct usage of logical particles).

It may be noted, in passing, that the distinction between logical particles and descriptive terms leads to a distinction between two kinds of analytic statements.

First, there are logically true statements, i.e., statements which are substitution instances of the truths of logic. Second, there are statements which can be changed into logical statements by substituting synonyms for synonyms. Thus, statement (2) above represents an analytic statement of the first kind. Statement (1) represents a statement of the second kind. For, if we replace the expression "unmarried male" with its synonym "bachelor," we have the statement "All bachelors are bachelors" which is like statement (2). In this case, it represents a logical truth.

Loosely speaking, it may be said that an analytic statement is one whose truth-value can be determined solely by attending to the meanings of its terms, and a synthetic statement is one whose truth-value can be determined only by resorting to extralinguistic facts. Since analytic statements have their truth or falsity determined by linguistic convention (grammar, syntax), it is normally held that they are void of empirical content, that is, that they say nothing about empirical facts and that, in this sense, they are uninformative. Synthetic statements, however, are held to have empirical content; and in this sense, if they are true, are held to be informative.

The making of this distinction has played an important role in modern philosophy. It has appeared in the

writings of such authors as Hobbes, Locke, Berkeley, Hume, Leibniz, Kant, and, on the contemporary scene, in the works of the logical positivists, especially Ayer and Carnap, and in the works of many other empiricists. Recently, however, the distinction has been severely criticized as being ill-founded and untenable. With an end in view of determining whether these criticisms are wholly justified, it is the purpose of the following pages to examine some of the arguments which have been advanced in favor of abandoning the distinction. It will be contended that though the arguments advanced by the gradualists[1] impose serious problems, they do not justify a rejection of the distinction.

Before proceeding, however, it seems worth while to present a brief historical sketch of the development of this distinction in modern philosophy. This sketch, however, does not purport to be historical in the proper sense; it will not trace the origin and growth of ideas. Our chief concern is expository. This sketch will be useful in two ways. First, it will afford a better characterization of the distinction than the admittedly inadequate one offered above; and, second it will afford some picture of the significance which has customarily been associated with the distinction.

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[1]The name "gradualist" is used to refer to those who deny the tenability of the analytic-synthetic distinction. The name "dichotomist" is used to refer to those who maintain the tenability of the distinction.

II AN HISTORICAL SKETCH

It is exceedingly difficult to find any place in the history of philosophy to begin an account of the analytic-synthetic distinction. The words "analytic" and "synthetic" are old and have many meanings. However, we are not here concerned with the words but with what they mean in the sense described in the previous section. The first philosopher to use the words in this sense was probably Kant. But, clearly, Kant was not the first to recognize the distinction (though he thought to the contrary). The same, or at least a very similar notion, is found in the works of Leibniz, Hume, Locke and certainly in many lesser philosophers. The following exposition begins with the views of John Locke. However, the choice is not entirely arbitrary, for in Locke we find the first modern philosopher who is thoroughly concerned with language and its pervasive importance in any epistemological inquiry. But, we must be aware that Locke is not, in any sense, the originator of the distinction; for we can go as far back as the thirteenth century and find John Duns Scotus

concerned with the same dichotomy.[1] Indeed, we must assume that men have always been aware that some statements are true "just by definition," that some statements are "trivially true," and in this sense obvious.

For Locke, names are signs of ideas. Ideas, in turn are signs of things which affect the mind. This appears, today, as a rather naive and overly simple theory of language. Indeed, Locke encounters immediate difficulties in the absence of the type-token distinction. It would seem that he needed the distinction not only for names but also for ideas. This is especially true once he begins to deal with universals.[2] This,

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[1]Scotus argued that we should not admit a distinction between propositions which are analytic in themselves and propositions which are analytic "for us." Thus, that a greater or lesser number of persons do not possess the requisite understanding of a proposition's component terms does not affect its analyticity.

[2]It is intimated that Locke was completely unaware of a need for distinguishing between the sign-types and sign-tokens. This suggestion, however, is not entirely correct as can be seen in the following passage: "To return to general words, it is plain by what has been said, that general and universal belong not to the real existence of things; but are the inventions and creatures of the understanding, made by it for its own use, and concern only signs, whether words or ideas. Words are general, as has been said, when used for signs of general ideas, and so are applicable indifferently to many particular things; and ideas are general, when they are set up as the representatives of many particular things: but universality belongs not to things themselves, which are all of them particular in their existence; even those words and ideas, which in their signification are general." (John Locke, An Essay

however, is beside the point. Our interest is in Locke's concern with language. Clearly, in this respect, he was one of the first philosophers to recognize that the problems of language are inextricably bound up with those of epistemology. And, he further realized that language constitutes a major instrument for the acquisition and extension of knowledge. In this respect one cannot fail to appreciate his interest, acumen, and genuine contributions.

Locke classifies knowledge in several different ways: intuitive, demonstrative, sensitive; actual or habitual; real or trifling. We are here concerned with his distinction between real and trifling. Locke writes:

> Before a man makes a proposition, he is supposed to understand the terms he uses in it, or else he talks like a parrot, only making a noise by imitation, . . . ; but not as a rational creature using . . . [words] for signs of ideas which he has in his mind. The hearer also is supposed to understand the terms as the speaker uses them. . . . . And therefore he trifles with words who makes such a proposition, which when it is made contains no more than one of the terms does . . . ; v.g., "A triangle hath three sides,". . . . And this is no further tolerable than where a man goes to explain his terms to one who is supposed or declares himself not to understand them.[3]

Concerning Human Understanding, ed. A. C. Fraser, Oxford: Clarendon Press, n.d., Vol II, pp. 21-22.)

[3] Ibid., II, 298. Note in this passage Locke's insistence that words must have some mental counterpart, i.e., understanding or "idea." He is, I believe, quite right in making this demand. This sort of thing suggests the inadequacies of rigorous behaviorism. The problem of

He continues:

> . . . We can know then the truth of two sorts of propositions with perfect certainty: the one is, of those trifling propositions which have a certainty in them, but it is only a verbal certainty, but not instructive. And, secondly, we can know the truth, and so may be certain in propositions which affirm something of another, which is a necessary consequence of its precise complex idea, but not contained in it. . . .[4]

For our present purposes, the important point to note is Locke's attitude toward analytic (i.e., trifling) propositions.[5] The very terminology he uses suggests that he sees neither philosophical significance nor problems which might be associated with the distinction. He makes no attempts to offer a thoroughgoing justification for making the distinction. Nor can we say that he makes any serious attempt to define "trifling propositions" or "real propositions." For Locke it is perfectly obvious that some propositions are trifling; they say nothing about the world, and that is all there is to it. Their only justifiable use is in informing the linguistically uninformed.

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adequately describing "mental counterpart," however, remains unsolved.

[4] Ibid.

[5] Also, it is worth noting that Locke emphasizes the linguistic foundation of (at least some) "certain" propositions more than, for example, Hume does.

In turning from Locke to the writings of Hume, we find, on the other hand, great significance attached to the analytic-synthetic distinction. Indeed, it forms a pivotal part of his epistemology. We need not get into the involved task of giving an exposition of Hume's attempt to describe the difficult notion of "relation." The important point is that he makes a distinction between propositions expressing "matters of fact" and propositions expressing "relations of ideas" and that these notions correspond, roughly, to what have been characterized as "analytic statements" and "synthetic statements."

In the Enquiry Hume writes:

> All the objects of human reason, or inquiry may naturally be divided into two kinds, to wit, relations of ideas, and matters of fact. Of the first kind are the sciences of geometry, algebra, and arithmetic; and in short, every affirmation which is either intuitively or demonstratively certain. That the square of the hypotenuse is equal to the squares of the two sides, is a proposition which expresses a relation between these figures. . . . Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Though there never were a circle or triangle in nature, the truths demonstrated by Euclid would for ever retain their certainty and evidence.
>
> Matters of fact, which are the second objects of human reason, are not ascertained in the same manner; nor is our evidence of their truth, however great, of a like nature with the foregoing. The contrary of every matter of fact is still possible; because it can never imply a contradiction, and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality. That the sun will not rise tomorrow is no less intelligible a proposition, and implies no more contradiction than

> the affirmation, that it will rise. We should in vain, therefore, attempt to demonstrate its falsehood. Were it demonstratively false, it would imply a contradiction, and could never be distinctly conceived by the mind.[6]

One cannot fail to recognize the striking paralled between Hume's notion of "relations of ideas" and analytic propositions; and between his notion of "matters of fact" and synthetic propositions. This passage, no doubt, leaves much to be desired by way of clarity. Just what is meant by "intuitively or demonstratively certain" and "the mere operation of thought" is, to say the least, obscure. Whatever clarity the passage does have, arises through his characterization of matters of fact as being expressed by propositions which are neither themselves self-contradictory nor have as their denials self-contradictory propositions. This notion of self-contradiction, of course, was later to become a customary way of marking the analytic-synthetic distinction.

One more remark concerning this passage deserves to be made. In the Treatise Hume wrote and argued that geometrical propositions express matters of fact, not relations of ideas. It is generally agreed today that the view expressed later in the Enquiry is more nearly

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[6]David Hume, Enquiries Concerning the Human Understanding and Concerning the Principles of Morals, ed. L. A. Selby-Bigge, (2d ed.; Oxford: Clarendon Press, 1902), pp. 25-26.

correct. This is not the place for textual exegesis. However, it may be said that there are probably two reasons why Hume, in the Treatise, arrived at the conclusion he did. First, he failed to distinguish between "pure geometry" and "applied geometry." Second, he confused the logical questions of geometry with the problems of genetic psychology. Had Hume seen these distinctions more clearly, he probably would have contended from the start of his work that geometrical propositions express relations of ideas.

Whatever are the adequacies or inadequacies of Hume's distinction, our chief concern here is with seeing what significance he attached to these notions. In concluding his inquiry into human understanding, Hume writes:

> When we run over libraries, . . . , what havoc must we make? If we take in our hand any volume; of divinity or school metaphysics, for instance; let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames: for it can contain nothing but sophistry and illusion.[7]

This passage is to some extent reminiscent of the early searchings of logical positivism for a magical principle of verification. Though we cannot call Hume a logical positivist, the similarity is there. Essentially they

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[7]Ibid., 165.

are both concerned with the same problem. This is seen in A. J. Ayer's question concerning the above passage from Hume. "What is this but a rhetorical version of our own thesis that a sentence which does not express either a formally true proposition or an empirical hypothesis is devoid of literal significance?"[8]

Propositions to be meaningful (or, in Hume's language, not laden with "sophistry and illusion") must be either analytic or synthetic. That is they must express either relations of ideas or matters of fact. In the latter case, they have empirical content, i.e., they refer to ideas derived from primordial sense impressions. These propositions, however, are never completely confirmed, and we can never be certain about their truth. But, what then, about the truths of mathematics? These are not only believed to be true, but necessarily true. To say that they are synthetic is to say that they are not necessary. To say that they do not refer to experience is to say that they are not empirical. The only alternative for Hume was to say that they are analytic (i.e. that they express relations of ideas). Thus they are both meaningful and necessary..

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[8]A. J. Ayer, Language, Truth and Logic (2d ed.; New York: Dover Publications, Inc., 1947), p. 54.

In turning to the philosophy of Leibniz, one finds the highest of importance attached to the analytic-synthetic distinction. (He makes the distinction one between "truths of reason" and "truth of fact.") In expounding this view, however, there is some difficulty; for, as Bertrand Russell has pointed out, Leibniz had two systems of philosophy. One was exoteric and was "based on theological optimism" while the other was esoteric and "based on two premises, the law of contradiction and the law of sufficient reason."[9] We are concerned here chiefly with Leibniz's esoteric philosophy. This, of course, may not be entirely legitimate, for the Russellian interpretation may not be correct. However, this is a frequent problem in the history of philosophy.

Without getting into a lengthy discussion of metaphysics, we can briefly say that Leibniz was a kind of metaphysical atomist. The world consists of an indefinitely large number of infinitely small (i.e. unextended) spiritual substances. These substances are called monads. Each monad is "windowless." By "windowless" it is meant that each monad is complete in itself and unaffected from without (except, presumably, by God).

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[9]Bertrand Russell, A History of Western Philosophy: And Its Connection With Political and Social Circumstances From the Earliest Times to the Present Day (New York: Simon and Schuster, 1945), pp. 581-596.

Thus, if each monad is unaffected from without, all of its attributes are determined from within.

Russell succinctly states the relevance of the two premises mentioned above. "Both depend on the notion of an analytic proposition. . . . The law of contradiction states that all analytic propositions are true. The law of sufficient reason (in the esoteric system only) states that all true propositions are analytic."[10] Now, because every attribute of any substance (i.e., monad) is determined from within, it is necessary that each monad has those attributes which it actually does have; for if it did not, it would not be the same substance. As a result, it would be self-contradictory to deny, for example, that the Washington Monument is 555 feet and 1/8 inch tall. Thus, there are no truths of fact. Every truth is a truth of reason. But the distinction, however, still bears some significance. For, man in his finitude never has complete knowledge of any one substance; this alone would enable him to deduce knowledge concerning all of its attributes. Consequently, for man, there is a difference between truths of reason and truths of fact.

The foregoing remarks on Leibniz have necessarily been sketchy and incomplete. Perhaps his most

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[10]Ibid., 592.

important contribution, in respect to the topic with which we are concerned, is his definition of analytic propositions (i.e., truths of reason) as propositions whose contradictories are self-contradictory. We have already seen this suggested by Hume and we shall also see it suggested by Kant.

One thing that we must notice is that Leibniz attaches metaphysical as well as logical and epistemological importance to the analytic-synthetic distinction. And, we must further notice, that, although his notion of analytic propositions is similar to that of Hume and Kant, he is in radical disagreement with them as to which propositions are analytic.

In Kant, a similar distinction is made. He writes:

> Either the predicate B belongs to the subject A as something contained (though covertly) in the concept A; or B lies outside the sphere of the concept A, though somehow connected with it. In the former case I call the judgement analytical, in the latter synthetical. Analytical judgements (affirmative) are therefore those in which the connection of the predicate with the subject is conceived through identity, while others in which that connection is conceived without identity, may be called synthetical.[11]

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[11]Immanuel Kant, A Critique of Pure Reason, trans. Max Muller (2d ed. rev.; New York: Macmillan Company, 1927), p. 5.

This definition has often been criticized as being stated in metaphorical language. However, there is good indication that Kant had in mind a notion very similar to that of Leibniz.[12] Even if this were not true, there is no reason why the metaphor could not be given precision as, for example, C. I. Lewis has given some degree of precision to "inclusion."[13]

It is difficult to say precisely what importance Kant attached to this notion. A plausible answer might be that it merely sets the groundwork for his argument regarding the existence of synthetic a priori judgements. Another reason might be that he felt it to be descriptive of the mind in its act of judging. Some judgements, he writes, are ampliative. Others are explicative. Explicative judgements add nothing to the concept of the predicates. Yet they do seem to cast concepts into order. This presumably characterized the way the mind works (ought to work?).

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[12]For example, this is indicated when he writes: "For as it was found that all mathematical conclusions proceed according to the principle of contradiction (which is required by the nature of all apodictic certainty), it was supposed that the fundamental principles of mathematics also rested on the authority of the same principle of contradiction." (Ibid., 720) Many other examples could have been cited. For, an argument that Kant availed himself of two different principles, see: (Richard Robinson, "Necessary Propositions," Mind, LXVII (1958), pp. 289-304.)

[13]C. I. Lewis, "The Modes of Meaning," Philosophy and Phenomenological Research, IV, (1944), p. 240.

Kant, unlike Hume, does not identify mathematical propositions with analytic propositions. Here, then, is found an important clash of opinion. Analytic propositions are true by virtue of their meanings; they do not extend knowledge. Synthetic propositions are not true by virtue of their meanings and do extend knowledge. Yet there is disagreement as to which propositions are analytic and which are synthetic. This, in conjunction with the above remarks on Leibniz, serves as an indication that there might be something radically wrong with the distinction. That a lack of agreement is possible, undoubtedly, is one of the reasons which has occasioned recent criticisms of the notion.

Turning to Mill, we meet an altogether different situation. As a description of verbal (analytic) and real (synthetic) propositions he writes:

> An essential proposition, . . . , is one which is purely verbal, which asserts of a thing under a particular name only what is asserted of it in the fact of calling it by that name, and which, therefore, either gives no information, or gives it respecting the name, not the thing. Non-essential, or accidental propositions, on the contrary, may be called real propositions, in opposition to verbal. They predicate of a thing some fact not involved in the signification of the name by which the proposition speaks of it, some attribute not connoted by that name.[14]

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[14]John Stuart Mill, Philosophy of the Scientific Method, ed. Ernest Nagel (New York: Hafner Publishing Company, 1950, p. 87.

Furthermore, real propositions, "if true, add to our knowledge; they convey information not already involved in the names employed."[15] And he adds: "Accordingly, the most useful, and in strictness the only useful kind of essential propositions, are definitions which to be complete, should unfold the whole of what is involved in the meaning of the word defined, that is (when it is a connotative word), the whole of what it connotes."[16]

Mill is apparently in agreement with Locke in regard to analytic propositions and the extension of knowledge. Also, they appear to be in agreement over the uses of analytic propositions. For both philosophers, analytic propositions are pedagogical devices or definitions, but no more.

Mill says explicitly that the distinction he is drawing "corresponds to that which is drawn by Kant and other metaphysicians between what they term analytic and synthetic judgements."[17] The correspondence between the Kantian and the Millian notion also includes a general agreement as to the extension of these terms. This is true, at least, concerning the description of mathematical propositions. For both hold that mathematical propositions are synthetic. The similarity ends

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[15] Ibid., 88. [16] Ibid., 85. [17] Ibid., 88n.

here, however, since for Mill mathematical truths are well established generalizations from experience; and Kant, of course, takes them to be a priori truths.

On the contemporary scene the notions of analytic and synthetic statements have gained a great deal of attention; with this attention they have, of course, gained a greater degree of precision. A good example of recent concern can be found in A. J. Ayer's Language, Truth and Logic.

Ayer gives a cogent statement of his problem. The empiricist, he says, encounters difficulties in connection with the truths of formal logic and mathematics.

> For whereas a scientific generalization is readily admitted to be fallible, the truths of mathematics and logic appear to everyone to be necessary and certain. But if empiricism is correct no proposition which has a factual content can be necessary or certain. Accordingly the empiricist must deal with the truths of logic and mathematics in one of the two following ways: he must say either that they are not necessary truths, in which case he must account for the universal conviction that they are; or he must say that they have no factual content, and then he must explain how a proposition which is empty of all factual content can be true and useful and surprising.
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> If neither of these courses proves satisfactory, we shall be obliged to give way to rationalism. . . . Or else we must accept the Kantian explanation which, . . . only pushes the mystery a stage further back.[18]

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[18]Ayer, 72-73.

The problem Ayer is here concerned with is essentially the same as Hume's problem. Ayer, of course, has benefited from the knowledge of new discoveries in geometry and the work of Russell and Whitehead in logic and mathematics. The contention that mathematical propositions are analytic or tautologous became almost an irrevocable dogma of empiricism in the early part of the present century. This was largely due to Russell and Whitehead's Principia Mathematica (1910-1913) and Wittgenstein's Tractatus Logico-Philosophicus (1922). The former of these works is an attempt to prove that pure mathematics is deducible from logic. The latter work is concerned, in part, with clarifying the nature of tautologies. Although it is possible to question the complete success of these two works, one can dispute neither their significance, their contribution to the clarification of logical and mathematical problems, nor their influence on the thinking of contemporary philosophers. (White remarks that the only word to describe the achievement of the Principia is "monumental".)[19] Consequently, it is quite natural that Ayer should be more fully aware of the nature and gravity of the problem.

It will be worth while to see how Ayer attempts to give a solution to his dilemma.

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[19]M. G. White, Toward Reunion in Philosophy, (Cambridge: Harvard University Press, 1956), p. 290.

> The principles of logic and mathematics are true universally simply because we never allow them to be anything else. And the reason for this is that we cannot abandon them without contradicting ourselves, without sinning against the rules which govern the use of language, and so making our utterances self-stultifying. In other words, the truths of logic and mathematics are analytic propositions or tautologies.[20]

As for the surprising element in analytic statements, he writes that "they call attention to linguistic usages, of which we might otherwise not be conscious, and they reveal unsuspected implications in our assertions and beliefs."[21]

This view or very similar views have been quite popular in contemporary empiricism and especially in the movement of positivism. The only alternatives, it seems, are a Kantian view of the a priori, which is eschewed by logical positivism and really out of vogue for a great many of the other more liberal empiricists; or the Millian view that mathematical statements are highly probable empirical statements. The latter view is held to be wrong because it confounds the contexts of discovery and justification.[22]

If we turn to Ayer's definition of "analytic" and "synthetic," we see an attempt to give a sharper clarification to these notions than, for example, the

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[20] Ayer, 77. [21] Ibid., 79-80.

[22] For example, ibid., pp. 73-75.

Kantian definition, which uses such terms as "concept" and "judgement." These terms, needless to say, are held suspect by many contemporary empiricists.

"A proposition," Ayer writes, "is analytic when its validity depends solely on the definitions of the symbols it contains, and synthetic when its validity is determined by the facts of experience."[23]

This is an apparent improvement over the Kantian definition in that it eschews the above mentioned controversial notions. However, it still can stand improvement. For example, it ignores invalid propositions. We then have a three-fold division: analytic propositions; synthetic propositions; and invalid propositions. But this is not adequate, for we also want to speak a about invalid analytic and invalid synthetic propositions. For example, we want to say that "Not very many bachelors are married" is an invalid analytic proposition. Or, we could introduce a new term, for example, "self-contradictory proposition." But, then what do we call invalid synthetic propositions? Nor does Ayer seem to be in accord with customary practice when he speaks of invalid and valid propositions. Clearly, it would be less confusing to speak of analytically true propositions, analytically false propositions, and similarly

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[23] Ibid., 78.

for synthetic propositions. This point has been dwelt on because it seems to be an error into which many contemporary writers have fallen.

As has been said, the foregoing is admittedly a cursory examination of the analytic-synthetic distinction and its vicissitudes in the history of philosophy. Other figures could have been selected, perhaps, more judiciously. The opinions of rationalist philosophy, with the exception of Leibniz's, have been conspicuously omitted. And certainly, the discussion could have begun as far back as Aristotle and even further.

However, since we have not attempted to write history proper but to select a reasonable cross section of views, this method does not appear to be wholly unwarranted. And, moreover, it gives some indication of the relevance of the analytic-synthetic distinction in modern empiricism. For example, we see that there has by no means been a unanimity of opinion in connection with this problem. Nor can we ascribe the relevance associated with the distinction to a gradual historical development, with later empiricists attaching more significance to it than earlier empiricists. The similarity in this respect between Locke and Mill vitiates this view, unless, of course, we wish to count Mill as an exception.

Also, we see a wide divergence of opinion as to the extension of the word "analytic." Philosophers, as different as Mill and Kant, hold mathematical propositions to fall without the extension of "analytic", whereas for Hume and Ayer, they do not. And, even between Hume and Ayer there is a divergence of opinion. In the Treatise, as we have seen, Hume held that the propositions of geometry are synthetic; according to Ayer they are analytic. And, according to Leibniz, all true propositions are analytic with the exception of those which predicate existence of their subjects.

Often, when a doctrine in philosophy becomes fully established it is sometimes forgotten that the doctrine is by no means self-evident, but has merely become accepted unquestioningly through frequent use. This is perhaps the case with the analytic-synthetic distinction. And, it is a welcome contribution of those who have called the distinction into question. We must agree with this fact whether or not we accept the conclusions which they have drawn. In short, the thesis is not in any sense obvious, and consequently, it needs to be defended.

With this in mind, we may turn to an examination of the criticisms which have been advanced in favor of abandoning the distinction.

III RECENT CRITICISMS

In recent years, since the initial criticisms by W. V. Quine and M. G. White, there has been a barrage of discussions and learned articles concerning the traditional distinction between analytic and synthetic statements. We have witnessed proposals and criticisms, counter-proposals and counter-criticisms with such rapidity that the whole controversy is so absurdly chaotic, that it is extremely difficult to see just what the problem is. Moreover, there appears to be little agreement, even within the two aligned camps. Ostensibly, the problem is this: Is there an absolute dichotomy between analytic statements and synthetic statements? Or, on the other hand, is this a hazy distinction with no clear line of demarcation; that is, are some statements more or less analytic than others, and are others more or less synthetic than these? Is the distinction one of degree rather than kind? Again, ostensibly, the question seems quite clear cut and readily amenable to solution.

But this controversy has now been nurtured for quite some time, and the prospect of any reasoned

agreement seems very dim. One is not repulsed by the philosopher's inability to give a definitive answer to the "big" questions usually associated with his profession. We stoically resign ourselves to this fact. Though the recent controversy is not one of the "big" problems, it is concerned with an important one and it is closely related to "big" problems. For this reason one impatiently awaits a satisfactory solution. It is true that an inadequate distinction should be abandoned. This no one denies. But, it is equally true that a distinction which has proved as useful as the analytic-synthetic distinction, if it can legitimately be maintained, should not be abandoned.

The word "useful" demands some elaboration. From the foregoing historical sketch, we have seen some of the uses to which the distinction has been put. All of the men we have considered use it as a basis for a classification of knowledge. Locke, for example, was enabled to make a partial identification of "certainty" and "trifling." Hume and Ayer were able to identify mathematical propositions with analytic propositions. More recently, the distinction has led to a classification of the sciences into "formal" (logic, pure geometry, etc.) and "non-formal" (physics, astronomy,

etc.).[1] The distinction has also led to the identification of logical propositions with analytic propositions. For example, "p v -p" is said to be analytic or a tautology. Examples of these kinds, though they do not justify the analytic-synthetic distinction, do exhibit its usefulness.

The following section is devoted mainly to an exposition of the nature of the arguments which have been advanced to exhibit the untenability of maintaining the distinction. The arguments are those given by W. V. Quine in "Two Dogmas of Empiricism."[2] These arguments offer an excellent example of the misgivings of other authors, for example, Nelson Goodman and M. G. White.

Quine considers several definitions of "analytic":

(1) A statement is analytic if its denial is self-contradictory.

(2) A statement is analytic if it is true by virtue of its meanings and independently of fact.

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[1]For a discussion of the distinction between formal and nonformal science see the article "Formal and Factual Science," by Rudolph Carnap in: Herbert Feigel and May Brodbeck (eds.), Readings in the Philosophy of Science (New York: Appleton-Century-Crofts, Inc., 1953), pp. 123-128. Cf. Richard Rudner, "Formal and Nonformal," Philosophy of Science, XVI (1949), pp. 41-48.

[2]W. V. Quine, "Two Dogmas of Empiricism," From a Logical Point of View: Nine Logico-Philosophical Essays (Cambridge: Harvard University Press, 1953), pp. 20-46.

(3) A statement is analytic if it is a logical truth or can be turned into a logical truth by putting synonyms for synonyms.

(4) A statement is analytic if it is true in every state-description.

(5) A statement is analytic if it can be reduced to a logical truth by definition.

(6) A statement is analytic if and only if it is true according to the semantical rules of the language in which it appears.[3]

Definition (1) is of little value. For the notion of self-contradiction, "in the quite broad sense needed for . . . a definition of analyticity," Quine writes, "stands in exactly the same need of clarification as does the notion of analyticity itself. The two notions are but one side of a single dubious coin."[4]

As for definition (2), it confounds meaning with extension, and the sense of "meaning" presupposed is specious. It will be well to dwell on this objection for it has determined the direction of recent discussions of the issue.

Following Frege, Quine distinguishes between meaning and naming; or between meaning and extension.

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[3]Cf. Benson Mates, "Analytic Sentences," The Philosophical Review, LX (1951), pp. 525-534. Professor Mates considers Quine's criticism of these and two other definitions not listed above: "S is analytic if and only if S is true in all possible worlds" and "S is analytic if and only if S could not possibly be false."

[4]Quine, 20.

Quine writes that the class of all entities of which a term is true is called its extension. This is, presumably, offered as a definition. To show that the meaning of a term is not identical with its extension, Quine mentions Frege's example of "Evening Star" and "Morning Star," and several other examples showing that this distinction can be extended to cover not only singular terms but general and abstract terms as well. "Meaning," however, is left undefined. And we must be satisfied with Quine's association of "meaning" with "connotation" or "intension."

In a crucial passage he writes:

> For the theory of meaning a conspicuous question is the nature of its objects: what sort of things are meanings? A felt need for meant entities may derive from an earlier failure to appreciate that meaning and reference are distinct. Once the theory of meaning is sharply separated from the theory of reference, it is a short step to recognizing as the primary business of the theory of meaning simply the synonymy of linguistic forms and the analyticity of statements; meanings themselves, as obscure intermediary entities, may well be abandoned.[5]

Here Quine is expressing sentiments to be found in virtually all of the literature arguing the inadequacy of the analytic-synthetic distinction.

For example, White writes:

> Of all the "analyses" bequeathed to us by the age of meanings, those which introduce queer entities

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[5] Ibid., 22.

> are the most suspicious. They are all modeled after the reasonable analysis of what it means to say that Jones is a father. To say this is to say that Jones is a male and that there is someone whom Jones begat. Here no new kind of entity has been introduced for which we must invent a relation comparable to grasping a meaning or to whatever it is that we do to a sake. The son is as seeable, as touchable, and as smellable as the father, but meanings are unholy ghosts. The inflationary introduction of queer entities is best abandoned in philosophy as the early moderns abandoned occult qualities in physics. Instead of trying to account for the epistemological fact of understanding by inventing occult entities, we had best take the fact of understanding as unanalyzed or try to explain it, clarify it, illuminate it from a more helpful point of view.[6]

And Nelson Goodman writes of synonymy:

> Under what circumstances do two names or predicates in an ordinary language have the same meaning? Many and widely varied answers have been given to this question, but they have one feature in common: they are all unsatisfactory.
>
> One of the earliest answers is to the effect that two predicates have the same meaning if they stand for the same real Essence or Platonic Idea; but this does not seem to help very much unless we know, as I am afraid we do not, how to find out whether two terms stand for the same Platonic Idea.[7]

Along with Essences and Platonic Ideas, Goodman also rejects "images," "concepts," and "possibilities." Further examples which express these sentiments can be found in most of the gradualist's literature.

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[6] M. G. White, Toward Reunion in Philosophy, (Cambridge: Harvard University Press, 1956), pp. 39-40.

[7] Nelson Goodman, "On Likeness of Meaning" in: Leonard Linsky (ed.), Semantics and the Philosophy of Language (Urbana: The University of Illinois Press, 1952), p. 67.

From the above and the discussion in Section I, it can readily be seen why so much space has been devoted to the notion of synonymy. And this shows the importance of definition (3).

But, of definition (3) Quine writes, " we still lack a proper characterization of . . . analytic statements, . . . , inasmuch as we have had to lean on a notion of 'synonymy' which is no less in need of clarification than analyticity."[8]

Definition (4) is also inadequate. The notion of "state-description" in this definition is Carnap's. Quine generously observes that Carnap was under no illusions about this point. For, as Quine notes:

> . . . this version of analyticity serves its purpose only if the atomic statements of the language are, unlike 'John is a bachelor' and 'John is married', mutually independent. Otherwise there would be a state-description which assigned truth to 'John is a bachelor' and to 'John is married', and consequently 'No bachelors are married' would turn out synthetic rather than analytic under the proposed criterion.[9]

Note in this passage that Quine speaks of "version of analyticity." He admits that the notion makes sense in languages whose atomic statements are mutually independent. But is not the notion, then, given an adequate explication, at least for those languages?

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[8]Quine, 23. [9]Ibid.

Quine also finds difficulties concerning definition (5). For where, he asks, are we to find these definitions? Who defined them thus, and when?

> Are we to appeal to the nearest dictionary, and accept the lexicographer's formulation as law? Clearly this would be to put the cart before the horse. The lexicographer is an empirical scientist, whose business is the recording of antecedent facts; and if he glosses 'bachelor' as 'unmarried man' it is because of his belief that there is a relation of synonymy between those forms, implicit in general or preferred usage prior to his own work.[10]

There is essentially the same difficulty with the notion of explication; for explication rests upon pre-existing synonmies. Both definition and explication, consequently, rest upon synonymy rather than explaining it.

However, Quine curiously adds:

> There does, however, remain still an extreme sort of definition which does not hark back to prior synonymies at all: namely, the explicitly conventional introduction of novel notations for purposes of sheer abbreviation. Here the definiendum becomes synonymous with the definiens simply because it has been created expressly for the purpose of being synonymous with the definiens. Here we have a really transparent case of synonymy created by definition; would that all species of synonymy were as intelligible.[11]

I believe that Quine has here misconstrued his own problem. The problem is not how terms become synonymous (though this is an interesting and important one). That is, that the logician may make synonyms by pure fiat (this is not always the case, for even the logician

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[10] Ibid., 24. [11] Ibid., 25-26.

has certain strictures) is not of concern here. Nor is the problem to be associated with the issue of whether the lexicographer makes expressions synonymous or whether he merely discovers and records synonyms. These alternatives are not exclusive, and probably both contain an element of truth. However, these questions are really beside the point. For the lexicographer's dictionary is certainly a language and is composed of definitions which consist of synonymous expressions in their definiens and definiendum. We might find good reasons for **not** employing "his language"; still, in relation to it, the synonymy of expressions is quite explicit. The problem in the context we are considering, generally speaking, is: What is it that the logician means when he states, for example, that the expression "p ⊃ q" is synonymous (or equipollent) with the expression "-p v q"; or what is it that the lexicographer means when he states that the expression "sib" is synonymous with the expression "blood relation"?

Definition (6), according to Quine, is faulty in depending upon the speciously clear notion of "semantical rule." Let us suppose, he says, that we have an artificial language L_o whose semantical rules have the form explicitly of a specification, by recursion or otherwise, of all analytic statements in L_o. The rule

tells which statements of L_o are analytic and which are not. But the rules contain the word "analytic" which we do not understand. We might "view the so-called rule as a conventional definition of a new simple symbol 'analytic-for-L_o', which might better be written unten-dentiously 'K' so as not to seem to throw light on the interesting word 'analytic'."[12] Here we have explained 'analytic-for-L_o' and not 'analytic for' or 'analytic'. It would be better according to Quine if we "just stop tugging at our bootstraps altogether."[13]

It has been suggested, in the above exposition of Quine's criticisms, that the terms "logical truth," "self-contradiction," "synonymy," "analytic," and "neces-sity," are but one family of terms intimately associated. Indeed, Quine says that if he is given an intelligible description of any of the last four notions, he will find the others intelligible. It would then seem desir-able to show just how these notions are related. For example, the statement:

(7) It is not the case that if a woman is a spinster she is a spinster,

is the contradictory of the statement "If a woman is a spinster, she is a spinster" which is a substitution instance of the logical truth:

(8) If p, then p.

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[12] Ibid., 33. [13] Ibid., 36.

Therefore, statement (6) is said to be self-contradictory. But the statement:

(9) It is not the case that if a woman is a spinster, she is an unmarried woman,

which is the contradictory of the statement "If a woman is a spinster, she is an unmarried woman" is not a substitution instance of the logical truth (8). However, because "spinster" means "unmarried woman," we want to say that statement (9) is also self-contradictory. Clearly there are two distinct notions of self-contradiction here. This is what Quine is suggesting when he says that "the notion of self-contradictoriness, in the quite broad sense needed for . . . a definition of analyticity, stands in exactly the same need of clarification as does the notion of analyticity itself."[14] He is not at this point, at least, troubled by the self-contradictory character of statement (7), but with the self-contradictory character of statement (9). This leads to the importance of synonymy. For if we substitute in statement (9) the word "spinster" for the synonymous expression, "unmarried woman," we change statement (9) into statement (7).

If we define "analytically true statement" as the converse of "logically contradictory statement," the

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[14]Ibid., 20. Italics added.

same remarks hold, mutatis mutandis, for "analytic." Thus "analytic" and "self-contradictory" (in the sense of statement (9) above) can be defined as each other's denial. And, an adequate explanation of synonymy will afford an adequate explanation of either analyticity or the broad sense of self-contradictoriness.

Quine notes that an adequate explanation of analyticity or self-contradictoriness will also afford an adequate explanation of synonymy. For, to say that "All and only spinsters are unmarried woman" is analytic, is to say that "spinster" and "unmarried women" are synonymous expressions.

Moreover, "necessary" and "impossible" are often identified with "analytic" and "self-contradictory." Consequently, these notions can be explained in terms of each other.

Therefore, with the exception of "logical statement" (logically true or logically self-contradictory statement), all of these notions are interdefinable. It is not certain whether Quine has similar misgivings about the notion of logical truth as he does about the notion of analyticity. His attempts to reduce analytic truth to logical truth through the notion of synonymy would seem to suggest that he does not. However, when

he remarks that "no statement is immune to revision"[15] it would seem that he does. If he does have misgivings about logical truth, it might have been better if he had directed his arguments toward this notion rather than analyticity. One consequence of abandoning the analytic character of logical statements is that the statement "a=a" is theoretically subject to the same corrigibility as "Snow is white." A further consequence of this is that no matter how clear one makes the notions of "synonymy," "meaning" or "necessity," he will not satisfy Quine's demands. For the notion of logical truth, and thereby the notion of analyticity, remains obscure. Consequently, Quine's argument would have been just as effective had he directed it toward the notion of logical truth and it would have caused less concern over analyticity and synonymity. However, had he done this, we might not have benefited from his insights into the genuine difficulties these other notions do present.

In this section, we have seen the central arguments which Quine brings to bear against the dichotomist's thesis. The list is surely not complete. Quine has many other interesting remarks which are concerned with the notions of "meaning," "synonymy" and "necessity."

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[15] Ibid., 43.

And we have ignored Quine's conclusion that the abandonment of the distinction leads to "another shift toward pragmatism".[16] Quine's brand of pragmatism is a peculiar one and will demand attention in later sections. We have also seen how the family of terms, "synonymy," "analyticity," "self-contradiction," "logical truth" and "necessity" are interrelated.

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[16] Ibid., 20.

IV AN EXAMINATION OF THE CRITICISMS

The reaction to the criticisms advanced by Quine and other similar criticisms has been violent. The philosophical world, it seems, has been divided into two camps; one arguing that the distinction is tenable and the other arguing that it is not. As has been said, the problem does not, at first glance, seem to be one of the "big problems." Consequently, we are somewhat ill at ease as we sojourn in this atmosphere of violent disagreement. However, it is only partially true that this is not a "big problem." The question is larger than whether some statements are trivially true while others say something about empirical facts.

That this is true can be seen if we note some of the pivotal terms which constantly recur in discussions of this problem. A statement is often said to be <u>analytically true</u>, when by substituting <u>synonyms</u> for synonyms, it becomes a <u>logical truth</u>. But synonymy does not help. For synonymy is customarily defined as sameness (identity or similarity?) of <u>meaning</u>, a notion which is equally vague. Or again, a statement is said to be analytically true if it is true by virtue of its

meanings or by definition; or, again, a statement is analytically true when its denial is self-contradictory. But it is said that we cannot understand "analytic" for these notions are viciously circular and are explained only in terms of one another. Thus, it is said that we need a more satisfactory criterion in order to make these notions understandable. That is, without a more satisfactory explanation, the distinction cannot be justifiably maintained. Thus, we are to regard the distinction as only a pseudo-distinction rather than an absolute and real dichotomy (dualism?). And, if the distinction is abandoned, we are led in "another shift toward pragmatism." It has long been customary to identify necessity or certainty (two different problems) with analyticity. Thus, it is said that there are no necessary truths nor can we have certain knowledge. Consequently, according to the gradualist, the statement "If it is a clear day, then it is a clear day" is on the same plane as the statement "If it is a clear day, then it will snow tomorrow." Neither statement is necessary. Indeed, no statement is necessary.

One can see that these notions have long been chief concerns of philosophy. Some, of course, are of more recent interest than others, but this is beside the point. What is important is that they have long

been of concern in philosophical debate. Aristotle went to great length defending the law of self-contradiction. But in the end, he says, it cannot be defended but must be accepted as a first principle. And certainly Plato was concerned with a crude form of pragmatism when he pictured Socrates debating with Protagoras or Gorgias. We can see that the analytic-synthetic problem converges at some point with almost every central discipline in philosophy. When it is asked whether "meanings" are to be countenanced, a question of ontology and thereby a question of metaphysics is being asked. When the problem is concerned with "ideas" as meanings or "images" or with certainty, it is in the heart of epistemology. And, surely, the whole question is concerned with the making of decisions--decisions which may be either right or wrong. For example, we must decide what are to be taken as the requirements which must be satisfied for a given congerie of events if it is to be called a language. Some decisions will be arbitrary; others will not. Here we are involved in normative questions.

Thus, the problem we are concerned with is not really a peripheral or merely a technical one. Nor should one be surprised that there can be such pervasive disagreement over a question which might seem, prima facie, simple and unimportant.

Since this problem is to a certain extent involved in traditional problems of philosophy, it is only reasonable to expect that it should take on their character. A definitive solution like those of other philosophical problems must wait, so to speak, until all the work is done. This, of course, seems impossible. And, here lies the difficulty of the problem. As one cannot do logic, epistemology, or metaphysics in isolation, neither can this problem be discussed wholly in isolation. This is perhaps the dilemma of philosophy. But this is not to say that the problem cannot be fruitfully discussed. The only alternative seems to be Pyrrhonism.

Consequently, our concern now is: If the problem we are presently considering is intimately associated with other "insoluble" (I use this word with reserve) problems, how can it be fruitfully discussed? The answer to this, I believe, is that the analytic-synthetic distinction must be discussed in a more limited way than has been customary. When one speaks of "analytic" with the view of making it apply universally to all statements of all languages, the notion is bound to be somewhat foggy. Fruitful discussion must wait until the problem is made more specific. This is done by relating it to specified languages, for example, as

Carnap has done with the notion of state-description. The notion of state-description is quite senseless when it is applied to, say, "plain English." Though the notion cannot be applied with cogency to all languages, it can be applied to specific languages. Similarly, I believe that one must realize that any one definition of "analytic" will not apply to all languages--though there might be some common core of meaning which is to be found in all ("some" would be strong enough) specific notions of analyticity. This approach is akin to what White has labeled "finitism." Instead of viewing "analytic" as a term which is peculiarly sacrosanct and standing outside all others, we must regard it as applying to specific languages with, perhaps, different meanings in each of these languages. We may, as Quine suggests, abandon the term "analytic" for one less tendentious, for example, "true in all state-descriptions." The appropriate term will, of course, vary from language to language. This is the only way to fruitfully speak about the notion (or rather the notions), and it is senseless to attempt to find some meaning of "analytic" which will apply to all languages. This is quite as senseless as saying that "thing" means the same thing in a "phenomenalistic language" as it does in a "thing" language." Though the words are the same, they do not have the same meaning. The following section will be

concerned with exhibiting the futility of attempting to have "analytic" apply univocally to all languages.

With this by way of justification, we now turn to an examination of recent criticisms. A few preliminary remarks seem in order so as to prevent later confusion. There are several senses in which all statements can be said to be synthetic. But, as I shall attempt to show, these are not concerned with the tenability of maintaining the analytic-synthetic distinction.

It is a basic tenet of empiricism that all knowledge is occasioned by experience. This would be one belief which is embraced by all of the divergent schools of empiricism. But, without experience, statements would not be possible, for there would be nothing to express. However, if from this we were to conclude that all statements are synthetic, it would be to miss the point. For this would be to confound origin with validation. The question is not whether all knowledge is occasioned by experience but whether, given experience, some statements are self-justifying; that is, whether some statements, though occasioned by experience, are true independently of experience. This is similar to Kant's problem. But it is different in the respect that he argued that truth can be obtained independently of experience and yet say something about experience. Analytic statements, however, purport to say nothing about experience.

Another, similar error would be to say that all statements are synthetic because we can never be certain that we perceive (hear, see, or feel) them veridically. Every statement has as its vehicle of communication some physical--sensible--thing. Thus, when one reads a book, he is perceiving physical configurations of ink. And when one listens to a lecture, radio, television or what have you, he is perceiving (hearing) certain sounds which are transmitted in waves. Or when a blind person is reading braille, he is perceiving certain configurations of physical bumps. Thus, there is always the possibility that what one perceives is not veridical. For example, one might read the statement "Misery and suffering are prerequisites of salvation" as "Misery and suffering are perquisites of salvation." However, to offer evidence such as this for the synthetic character of all statements would be to misconstrue the problem. This, again, would be to confuse origin and validation. But there is an additional error in that this objection confounds the psychological notion of certainty with the logical and epistemological notion of analyticity. One can feel certainty with respect to any statement, even with respect to self-contradictory ones, just as one may doubt the truth of analytic statements. Thus it must be presupposed or established that there has been veridical perception of a sentence-token before one can proceed to

argue that it is analytically (or synthetically) grounded. Once this is seen, we see that the only sense in which certainty can fruitfully be brought into the present question is through identifying it with the logical notion of necessity. And, then to say that analytic statements can be doubted (i.e., that they are not certain) is self-contradictory. In view of this anomalous consequence, it would not seem advisable to identify certainty with necessity, a term which is confused enough as it is. Or, if "certainty" is being used in a psychological sense, the central question, as we have seen, is being ignored.

These points are obvious enough. I believe that they would be subscribed to by most empiricists. However, the presuppositions necessary for making the analytic-synthetic distinction are not limited to those mentioned above. This point will be made clearer in what follows.

It appears that Quine has fallen into a similar error--though his reasons are more subtle--when he says that "no statement is immune from revision." His reasons for making this remark are, in part, identical with his reasons for rejecting the analytic-synthetic dichotomy. As further evidence, he writes, "revision even of the law of excluded middle has been proposed as a means

of simplifying quantum mechanics."[1] This is true. But the decision appears to be one of convenience. And, it is quite aside from the problem of the analytic. The problem, in recent contexts has presupposed the law of excluded middle. This presupposition seems entirely warranted. Moreover, we have no reason to believe that there would not be analytic statements if the law were abandoned.

For these reasons, I believe, reference to "immunity from revision" has no important place in discussing the tenability of the analytic-synthetic dichotomy. That no statement is immune from revision is not a particularly alarming truth. The reasons for this, to repeat, are due to the possibility of non-veridical perception, or the fact that the law of excluded middle might possibly be abandoned. In the latter case, however, it is not individual statements which will be abandoned, but whole bodies of statements. What should still be maintained is that if the law of excluded middle were true, then such and such statements should have been analytic. Consequently, I believe, it would be better not to speak of "certain statements" or

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[1]W. V. Quine, "Two Dogmas of Empiricism," From a Logical Point of View: Nine Logico-Philosophical Essays (Cambridge: Harvard University Press, 1953), p. 43.

"statements immune from revision" in conjunction with the present problem.

The arguments advanced by the gradualists are not so easily put aside as those which we have just been considering. Some of the gradualist's arguments are, of course, more biting than others. But, they do not, I believe, offer sufficient evidence for rejecting the analytic-synthetic dichotomy. There are, it seems, several prima facie reasons why the distinction should not be abandoned too hastily.

First, the distinction has enjoyed being a part of a long philosophical tradition. When men of such intellectual stature as Locke, Hume, Kant, Ayer and Carnap defend a thesis, I believe, one should think twice before abandoning it. It is true that some philosophers have regarded it with importance while others have attributed it with little significance. Most of them, however, have recognized a difference. This is the important point.

Second, there has been a wide concordance of opinion as to the respective extensions of the terms "analytic" and "synthetic." There are, of course, differences of opinion as we have seen. For example, Kant regards mathematical statements as synthetic whereas

Hume and Ayer do not. But if this is true, it is also true that there is wide agreement. For example, it is generally agreed that statements like "All bachelors are males" represent an analytic truth; and it is agreed that statements like "The Washington Monument is over thirty feet tall" are synthetic. Thus, it seems that we not only have to account for disagreement about the extension of "analytic" but also for agreement. There must be something which leads us so consistently towards this agreement. If it is not that one kind of statement says nothing about empirical facts while another kind does, then what is it? If the distinction is abandoned, this question must be answered.

Third, there is an intuitive feeling that there are some statements which are trivially true and say nothing about facts of experience. Even Locke and Mill, who attached little significance to these notions, felt a need to take cognizance of their existence.

Finally, the notion has proved to have a high heuristic value. This can be seen in its use as conceived by Hume, Ayer and a great many other empiricists.

The above remarks do not in any way offer a complete justification of maintaining the distinction. That is, the analytic-synthetic dichotomy might be completely illusory, and this fact would not be incompatible with

the above facts. What these remarks do show, however, is that the distinction should not be abandoned too hastily.

One cannot fail to be impressed by the frequent recurrence of the word "understand" in the writing of Quine. He says that he does not understand the terms "analytic," "self-contradiction," "necessity" and "synonymy." These terms, he says, are interdependent and each is in exactly the same need of clarification as the others. Many who would argue in favor of the gradualist doctrine hold, on the contrary, precisely the opposite, that is, that they understand these notions perfectly well and that there is no need of radical clarification in order to make their position tenable. M. G. White anticipates such a rejoinder and writes:

> We begin by saying that we do not understand. But our opponents may counter with Dr. Johnson that they can give us arguments but not understanding. And so it ought to be said that the objection is a little less meek; the implication is that many who <u>think</u> they understand really don't either.[2]

Volumes have been written on the human understanding. And it would be unfortunate if one had to wait for a definitive solution of these difficulties before he could tackle the present problem. Unless the word understand" is to be a mere subterfuge, it seems highly

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[2] M. G. White, "The Analytic and the Synthetic: An Untenable Dualism," in Sidney Hook (ed.), <u>John Dewey: Philosopher of Science and Freedom</u> (New York: Dial Press, 1950), p. 319.

desirable to see just what Quine and White do understand. However, the two philosophers differ as to what sort of explanation they would take as establishing satisfactory understanding. Quine wants a definition of "analytic" which would permit his "making sense of the idiom 'S' is analytic for (language) 'L', with a variable 'S' and 'L'."[3] Or in terms of synonymy, presumably, we must be able to make sense of the idiom 'A' in 'L_1' is synonymous with 'B' in 'L_2', with a variable 'A', 'B', 'L_1' and 'L_2'. This, of course, does not preclude 'L_1' and 'L_2' being the same language. Moreover, he prefers that the definiens of the definition be stated in behavioristic terms.

White's demands are more lenient. He will be satisfied with a term which is extensionally equivalent with "synonymous with." That is, he will be satisfied with a criterion. The difficulty here, however, is that he must be able to <u>understand</u> the criterion better than "synonymy."[4]

One is reminded in these discussions of the long debates over the question of whether we are justified in believing that the future will resemble the past. Very few of these discussions bothered to consider

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[3]Quine, 33.

[4]White, Analytic and Synthetic, 320.

what sort of justification would be taken as adequate. The next question, of course, is what sort of criteria are we to take as justifying our criteria for believing that the future will resemble the past. Clearly, this could continue forever without being fruitful. But there does seem some such legitimacy in asking the first question, i.e., what would justify our believing that the future will resemble the past.

Similarly, it is fruitful to ask what sort of evidence would be adequate to support the contention that the analytic-synthetic dichotomy is tenable. There seems to be some evidence that Quine's demands are too severe. Many would claim that we do not need such a definition to justify maintaining the distinction. Many might hold that "natural language" is not the sort of thing which can be subjected to the rigor of absolute criteria. They might hold that this is not necessary. And, all that is necessary is that we have some sort of idea of "synonymy" as it occurs in artificial language. Indeed, there is some evidence that the entire controversy is not concerned so much with the intelligibility of the old definitions as with the implications which are to be drawn from the distinction.

A clear formulation of a problem, is essential to any adequate discussion of the problem. This seems

trivially true. Yet it is precisely this important element which has most conspicuously been absent from discussion in the recent controversy. And, this, perhaps, has precluded even a tentative solution. That this is the case can be seen from a remark made by White:

> After presenting [gradualist] views like these I frequently find philosophers agreeing with me. Too often they are the very philosophers whose views I had supposed I was criticizing. Too often, I find, the criticisms I have leveled are treated as arguments <u>for</u> what I had supposed I was opposing.[5]

Clearer evidence could not be given that something is amiss. It is indeed odd that trained logicians should construe the same arguments to support incompatible conclusions. This would not be a fruitful supposition. But it is not so strange that one and the same argument can be viewed as leading to different but compatible conclusions. In the recent discussions, this latter, I think, might very well be the case, and it exhibits the necessity of a precise statement of the problem. Not only would a precise statement tend to preclude the possibility of similar arguments supporting supposedly incompatible conclusions, but it would also make the problem more manageable and amenable to solution. We cannot say that the whole problem is merely verbal and that there is really no controversy at all. This would certainly be a paradoxical conclusion.

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[5] <u>Ibid</u>., 328-329.

A great part of the difficulty in reaching a reasonable agreement can be attributed to the notion of language. "Language," in itself, is an elusive term. We know pretty well what an artificial language is. This is due to the very fact that it is artificial. We do not, however, understand the nature of natural language as well. Is natural language to be identified with the actual physical phonemes, words or statements uttered? Or must meaning of some sort or another be brought into the picture? Is there one natural language or are there many? If there are many, must we also call each dialect of each language a language? Must we speak of communication between animals as a language? Does each species have a different language? If so, do they also have different dialects? Must we go further and distinguish private from public language? Embarrassing questions like these can be created at will and considerably extended. It is quite evident that "language" is not as intelligible as might at first be believed. And it is equally evident that to make this concept understandable in any rigorous sense, one must make certain arbitrary decisions. These decisions, however, are not always entirely arbitrary, for certain heuristic considerations are bound to be of some significance. The probable reason for the need to make these decisions is that there is no single language which is referred to by "language."

It is not meant that the term "language" should be preserved only for rigorously defined concepts. For, I believe, we must retain non-rigorous senses of "language." There must be some systematic ambiguity. For example, I should like to think of dogs as communicating. And, I should like to think that there is a dog-language. But, I hardly suspect that dogs make analytic utterances. What is necessary is that when one asks for an explication of a semantic concept, he should specify what he means by language, in this context, and give some indication of what language(s) he is concerned with. That all of these difficulties have been resolved in some sense has been an unwarranted presupposition in recent discussions by both the gradualists and the dichotomists. And this, it would appear, has made fruitful communication virtually impossible. This has important consequences. For it shows that some decision must be reached as to the range of applicability of the predicate "language."

If we consider these difficulties in connection with the demands made by Quine, the problem becomes one of determining what sort of things fall within the variable 'L'.[6] Even, if this problem can be given a satisfactory solution, we have no right to assume that there

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[6]It is interesting to speculate whether (or how) Quine would quantify over L's.

will not be some language in which the concept of analyticity has no meaning. Nor can we assume that the concept will apply in every language. That is to say, there very well may be some "languages" in which there are no statements which are analytic. There are also problems of translatability here, for it is possible that there could be a language in which the word "analytic" cannot be translated, i.e., the notion may be ineffable in some languages. This, however, is not to say that there might not be a meta-language in which statements in the object language could be properly identified as analytic (or synthetic). When it is said that these matters are possible, it is meant that there is no logical contradiction involved. It may very well be that such language never occurs, but this is beside the point. This seems to be the question: Is a notion intelligible only if the same explication of it can be used for all "languages"?

Failure to take account of the great variety of referents assignable to the term "language" is not the only ground for the controversy under review. The controversy seems also to have been assimilated to the ancient nominalist-realist feud. Thus, Quine, White, and Goodman are antecedently hostile to any proposed solution which features hypostatized meanings and propositions. Ruling out "obscure intermediary entities," Quine takes the primary object of the theory of meaning

to be the synonymy of linguistic forms and the analyticity of statements. This attitude, as has been suggested, characterizes the gradualist's position.

Surely, though, the frequent use in the literature of the terms "meaning" and "proposition" suggest that they have certain heuristic value, even when employed in an "hypostatizing" way. And, how would one justify a sweeping injunction against hypostatization? Hypothetical entities do respectable work in other disciplines and it is entirely conceivable that they might be of use in the theory of language. Nor does it seem pure obscurantism to declare that these entities exist "after a fashion" or "in a certain sense." There are difficulties with these phrases, but, then so are there difficulties with the word "exist." And, it is not really consistent with finitistic principles (White's, for example) to insist upon a univocal interpretation of "exist."[7] Nor does it seem consistent with pragmatism to ignore the heuristic aspects of a platonistic use of "meaning" and "proposition."

For by hypothesizing "meanings," one gains a certain degree of explanatory ability just as one gains a degree of explanatory ability by hypothesizing atoms.

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[7]M. G. White, "A Finitistic Approach to Philosophical Theses," The Philosophical Review, LX (1951), pp. 299-316.

latter hypothesis admittedly has proved more fruitful. But this is perhaps because the former has not been taken more seriously. Both hypotheses seem fully consonant with pragmatism. I do not know whether meanings or atoms exist, however, I do know that the latter enables scientists to make certain predictions (and explanations), and, I can see no reason why the former should not prove equally fruitful. Quine writes that a conspicuous question for semantics is the nature of its objects. Carrying this query further, I believe that it may be asked, in the same sense, what is the nature of atoms. The truth of the matter is that one knows atoms and meanings only in an indirect way. To be sure, such hypotheses have many difficulties. It would be useless to deny this. But no one could reasonably reject explanations of this general kind as intrinsically wrong-headed. And it does seem that the investigation of the possibilities in the use of meanings and propositions as hypothetical entities has been prematurely abandoned by many thinkers.

Quine desires to have "significance" (i.e., "having meaning"), "synonymy" and "analyticity" explained in terms of behavior. Yet, he also says that "we are not concerned with synonymy in the sense of complete identity in psychological associations or poetical quality; indeed,

no two expressions are synonymous in such a sense. We are concerned only with what may be called cognitive synonymy."[8] He does admit that he does not know just what cognitive synonymy is. Yet it does seem to be a little gratuitous to assume that such notions (i.e., "analyticity," etc.) can be explained entirely in behavioral terms, that is, to assume that such notions can be defined without the assistance of some concepts which cannot be defined in behavioral terms. That this is presumptuous can be seen by noting the difficulty, and most likely the impossibility, of maintaining a distinction between cognitive and non-cognitive synonymy on purely behavioral grounds. The argument against behaviorism sometimes takes the form of stating that introspection often yields evidence or reveals data inaccessible to an outside observer.[9] This argument, I believe, is entirely tenable.

However, even if this evidence is too subjective, Quine's behaviorism founders on other rocks. It is non-finitistic. I do not mean to suggest that Quine subscribes to White's finitism. However, it is against such views

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[8]Quine, 28.

[9]For example, see: Bertrand Russell, Human Knowledge: Its Scope and Limits, (New York: Simon and Schuster, 1948), pp. 45-47, 50-51.

as behaviorism that finitism is most biting. And here White's argument applies most cogently.

Quine, as we have seen, makes a distinction between what he calls "theory of reference" and "theory of meaning." "Meaning," he says, "is not to be identified with naming." To illustrate his point he considers as examples '9' and 'the number of the planets'. Now, both of these terms denote the same abstract entity. But, they cannot both be said to have the same meaning; for observation of the planets was needed and not mere reflection on meanings, to determine this sameness.

Now, I do not wish to deny that there is a distinction here; nor do I want to suggest that it is not necessary that we make the distinction. But, I should say that Quine's choice of words is misleading. What he calls meaning is no doubt not the same as naming. But, both of these are modes or kinds of what we would normally call meaning. This suggests that there is more than one mode or kind of synonymy. So long as "synonymy" is defined as sameness of meaning, we will have as many kinds of synonymy as we have meaning. For example, we might say that "Morning Star" is extensionally synonymous with "Evening Star"; or we might say that "bachelor" is intensionally (and extensionally) synonymous with

"unmarried male."[10] To be sure this will not always be in accordance with our practice in the use of natural language, and we will come up with some weird specimens of synonymy. Distinguishing between modes of synonymy certainly does not lessen the burden of giving Quine a general (if not universal) criterion for determining synonymy.

Similarly, it is difficult to understand how Quine and others can distinguish between the theory of reference and the theory of meaning on purely behavioral grounds. They can indicate that meaning is not the same sort of thing as naming. But can a behavioristic criterion be given which will distinguish the two? For example, can one (attending to overt behavior only) sharply distinguish the occasions when someone is using, in the "naming way," expressions like "nine" or "the number of

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[10]I do not say that these are the only kinds of synonymy. For example, one might speak of two words (expressions or sentences) as being synonymous: (a) if they evoke the same (or similar to a high degree) behavioral responses; (b) if they are verified in the same (or similar) ways; (c) if they have the same deductive power in conjunction with certain other sentences. The qualifications noted in (a) and (b) above are necessary. For unless we allow some leniency along these lines, we are in the ludicrous position of not only failing to understand what it means to say "A is synonymous with B" but also failing to understand what it means to say "A has the same meaning as A." This applies especially to those who with Quine would demand that the general criterion be behavioral.

The kinds of synonymy suggested above, of course, do not purport to be exhaustive.

the planets" from those other occasions when he is attending to "meaning" proper? Perhaps this difficulty vanishes when spoken and written utterances are lumped under overt behavior, but any pragmatic basis for distinguishing behavioristic procedures vanishes at the same time. Considerations like these may account for Quine's dissatisfaction with the notions of analytic and synthetic and the related one of synonymy.

With these points in mind, we may turn to a consideration of one attempt to offer a satisfactory solution to the problems of analyticity and synonymity. Carnap has recently proposed a procedure for empirically testing hypotheses concerning the intension ("meaning" in Quine's sense) of a term. This procedure, he claims, enables us to determine empirically "the general concept of the intension of any predicate in any language for any person at any time," and that these intensions have a clear, empirically testable sense. Once he has outlined this procedure, he is able to define our troublesome terms.

"Two expressions are synonymous in the language L for X at time t if they have the same intension in L for X at t.

"A sentence is analytic in L for X at t if its intension (or range of truth-conditions) in L for X at t comprehends all possible cases."[11]

The procedure and definitions are explicitly said to comprise a refutation of Quine's position. The following is a brief resume of the salient features of Carnap's outlined procedure: It is agreed that the determination and analysis of extension for a natural language is methodologically a sound scientific procedure. The problem is: If a linguist can determine the extension of a given predicate, how can he go beyond this and also determine its intension? For example, suppose that two linguists have reached complete agreement on the extension of a given predicate (say "Pferd") in a given language (say German) for a given person (say Karl), and the one writes in his lexicon:

(1) Pferd, horse,

and the other writes:

(2) Pferd, horse or unicorn.

Since (1) and (2) have identical extensions, what empirical data can we consider to determine its intension? None of Karl's reactions when he is confronted with a Pferd will assist the linguists in their endeavor. The

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[11]Rudolph Carnap, "Meaning and Synonymy in Natural Languages," Philosophical Studies, VII (1955), p. 45.

answer is that they must take in to account not only actual cases but also possible cases. This is done either by drawing a picture of a unicorn or describing one (in German) and then asking Karl if he is willing to apply the word "Pferd" to a thing of this kind. Using a similar procedure we can determine the intension of any term.

This outline, of course, suffers from oversimplification and a great deal of expatiation would be necessary to make it a completely accurate statement of Carnap's proposal. But it is sufficient and accurate enough to show that Quine's requirements for an adequate criterion of analyticity are not satisfied.

To begin with, there is some difficulty concerning what sort of things the variable L is to refer to. This is true of both Quine's formulation of the problem and Carnap's proposed definition. Thus, there is some possibility that Quine and Carnap do not mean the same thing by "language." This is suggested by Carnap defining analyticity not merely for a given language, but for a given language for a given person at a given time. On the whole this procedure seems preferable. For it allows us to account for the changing of meaning and the possibility of a statement being analytic for one person but synthetic for another. Quine's formulation

of the problem, which does not take note of variable "persons" or variable "times," however, apparently makes the implicit assumption that words do not change in meaning; that they mean the same thing for everybody; and that every statement which is analytic for one person is analytic for everyone else. This seems to me to be obviously false.

However, if these difficulties are put aside (illegitimately, of course), it can readily be seen that Carnap's proposals do not satisfy the requirements stipulated by Quine. The most obvious indication that this is true is Quine's general hostility towards the notions of "intension" and "proposition." I can see no reason why he should not find Carnap's use of these terms equally objectionable, for, the ontological question still remains unanswered. But, a more important objection for our present concern is that the above definitions do not give "analyticity" and "synonymy" the universality which is demanded. Obviously, there are some languages, namely, purely extensional languages, which do not make use of intensional concepts. In these languages Carnap's definition finds no application. Thus, even though Carnap has defined these concepts for some languages (the adequacy of his definition is not of immediate concern), he has not defined them for <u>all</u> languages.

So far it has been argued that the demand to make the analytic-synthetic distinction apply to all languages is too stringent. Our main presumption has been that the wide variety of things which might be taken as possible referents of the term "language" make these demands vague, unreasonable, and in fact, impossible. It is suggested, however, that "analytic" can fruitfully be applied to languages of a restricted range. The difficulty Quine has with this view, as we have seen, is that he does not understand "rule for L." Though "rule for L" does impose problems (those pointed to by Quine), I do not believe his criticism can be taken as sufficient reason to reject "analytic" as it applies to some languages. This can be seen from the very fact that if the evidence is taken as sufficient, we are not only rejecting "analytic" but also all artificial languages. For, certainly, artificial languages are governed solely by their rules. Heuristic considerations, alone, make this alternative undesirable, or more correctly, absurd.

In the remaining section it will be argued that, though "analytic" is not a perfectly precise notion as it is applied to natural languages, it is not entirely senseless to speak of analytic statements in natural languages. By natural languages we intend languages like English, French, etc.

V ANALYTICITY AND NATURAL LANGUAGE

The arguments advanced by Quine and other gradualist authors have consisted largely of destructive criticism. They have been directed at showing the untenability of maintaining a sharp distinction between analytic and synthetic statements. If these arguments are taken to be successful, abandonment of the distinction leaves a vacuum which has previously been filled with an explanatory tool. It was observed in earlier sections that the notion of analyticity had been generally taken to throw light on such terms as "necessary," "contradiction," and "logical truth." If the analytic-synthetic distinction is abandoned, these notions also must be abandoned, or at least, given radically new meaning. For the purpose of the present section, attention will be directed toward a single lacuna which, if the distinction is abandoned, calls for especial consideration.

As we have seen, statements which occur in a natural language like:

(1) A rose is a rose,

the same time, attending to it's positive side. That is, it might be argued that the two are identical. This, however, does not follow. For all things which are not dichotomous certainly do not, necessarily, differ in degree. Think of two different specimens from one lot of telephone poles; we would not speak here of two kinds of telephone poles, but neither would we speak of them as representing different degrees of telephone-poleness. It is true that in some cases differences, which are not differences of kind, are differences of degree. This is particularly noticeable in cases where measurement is applicable, for example, temperature. One hundred degrees Fahrenheit is certainly different from thirty degrees Fahrenheit. But we do not say that this represents a difference of kind. We say that it represents a difference of degree, namely, warmer than. We might notice, however, that this interpretation is not necessary; and that to say there is not a difference of kind is not to say that there is a difference of degree, for, clearly, there may be no difference at all (other than numerical).

Yet, the gradualists do not deny that there is a difference between statements like, for example, (1) and (2). It does not, then, seem unreasonable to request an explanation or an account of this difference.

And it is precisely such an explanation (or justification) which is conspicuously lacking. However, to this end there seem to be several possibilities which should be examined.

For example, it might be said that statement (1) is more analytic than statement (2). But this is of very little help. For it is exactly the notion of analyticity which has so severely been called into question. We cannot understand what it means to say that one statement is more necessary than another, or that one expression is more synonymous with a second expression than with a third expression, unless we understand what it means to say that a statement is analytic, or that a statement is necessary, or that one expression is synonymous with another. Nor is the difficulty here to be associated with the word "understanding"; for were we seeking a definition or criterion of "more analytic," we should be confronted with the same situation. There are, however, certain conditions which limit the truth of this statement.

Admittedly, if we take "more analytic" as the fundamental concept in the field (in the way in which some ethical speculation takes "better than" instead of "good" as its basic notion) the above objections would lose force. And something very like this is

involved in proposals that we substitute "nondescriptive" for the more familiar "descriptive" accounts of analyticity.

Thus, White suggests that perhaps our criterion of self-contradiction should not be conceived in its usual "question begging manner." He remarks that all:

> . . . it [self-contradiction] has to do is to produce a certain feeling of horror or queerness on the part of people who use the language. They behave as if they had seen someone eat peas with a knife. Such an approach is very plausible and I would be satisfied with an account of the kind of horror or queer feelings which people are supposed to have in the presence of the denials of analytic statements.[1]

And horror is pretty obviously a matter of degree. That Quine is sometimes thinking along similar lines can be seen in his talk about centrality in a conceptual scheme and immunity from revision.[2] The possibilities of these suggestions are developed more fully in Bernard Peach's "A Nondescriptive Theory of Analytic."[3] Indeed, he seems to be the first to make the distinction between descriptive and nondescriptive theories of analyticity

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[1]M. G. White, "The Analytic and Synthetic: An Untenable Dualism," in Sidney Hook (ed.), John Dewey: Philosopher of Science and Freedom (New York: Dial Press, 1950), pp. 324-325.

[2]W. V. Quine, "Two Dogmas of Empiricism," From a Logical Point of View: Nine Logico-Philosophical Essays (Cambridge: Harvard University Press, 1953), pp. 42-46.

[3]Bernard Peach, "A Nondescriptive Theory of Analytic," The Philosophical Review, LXI (1952), pp. 349-367.

explicit. The following is a loose synopsis of what Peach takes to be the character of the distinction between these two kinds of theories.

In general, he writes, a descriptive theory of the analytic is one that claims to describe the nature of analyticity, or to reveal the essence of analyticity. It puts primary emphasis on classification, assuming that analyticity is understood, when on the basis of knowing that a statement has a nature N, it is known to belong to a category K. Descriptive theories emphasize inspection and understanding of a statement. Nondescriptive theories, however, emphasize actions or attitudes that are correlated with, but go beyond "mere" inspection and understanding. They do not emphasize classification. A nondescriptive theory will emphasize non-logical correlations between statements and the attitudes or actions of people, who are concerned with them within some context, rather than syntactical characteristics and logical relations between statements. It is based on the notion of willingness to act or maintain an attitude in accordance with a conviction.

I find it difficult to take such a proposal seriously. Some of the reasons for this are listed by White. Who, he asks, is supposed to feel the horror in the presence of the denial of an analytic statement?

And, further we must distinguish between firmly believed synthetic statements and analytic statements. For example, there are persons who are not one bit horror-stricken by the denial of "It is either raining outdoors or not," whereas they could not possibly bear the thought that there might not be tables and chairs. They can readily think up a third alternative for the first statement, for example, that it is snowing. On the other hand, to say that there are not chairs is clearly absurd, they hold, for what do we sit in every day unless they be chairs? To say that they do not understand what is meant by "not raining" in this instance is clearly to beg the question. It is not a very good explication of analyticity which makes the notion deviate so far from its common understanding. The flaws in this notion are obvious and they can readily be multiplied. Perhaps the most important is a pragmatic one. What good is it? What purpose does it serve? Why not say "more firmly believed" rather than "more analytic"? Clearly, analyticity loses philosophical significance when it becomes nondescriptive.

There remains one further proposal which is to be examined. This is presented in Nelson Goodman's "On Likeness of Meaning."[4] There are two aspects of

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[4]Nelson Goodman, "On Likeness of Meaning" in: Leonard Linsky (ed.), Semantics and the Philosophy of

his paper; one is negative and the other is positive. The negative side is characterized by arguments against the use of such notions as Essence, Platonic Ideas, images, concepts or possibilities in explaining the notion of synonymity. The positive side is found in his suggestion that "we might try the very different and radical theory that two predicates have the same meaning if and only if they apply to exactly the same things--or in other words, have the same extension."[5] Here we shall be concerned with the positive side of Goodman's thesis. Its essence is suggested in the following quotation:

> . . . although two words have the same extension, certain predicates composed by making identical additions to these two words may have different extensions. It is then perhaps the case that for every two words that differ in meaning either their extensions or the extensions of some corresponding compounds of them are different. If so, difference of meaning among extensionally identical predicates can be explained as difference in extension of certain other predicates.[6]

For example, the predicates "centaur" and "unicorn" have the same extension, namely the null extension. This Goodman calls its primary extension. But it is not the case that, for example, "unicorn-picture" (i.e., a picture of a unicorn) has the same extension as "centaur-picture." These are what Goodman calls

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Language (Urbana: The University of Illinois Press, 1952), p. 67-74.

[5] Ibid., 69. [6] Ibid., 71.

secondary extensions (of "unicorn" and "centaur"). It is important to note that Goodman does not intend to limit secondary extensions to pictures:

> . . . for the secondary extensions . . . consist also of the extensions of "Q-diagram," "Q-symbol," and any number of other such compound terms. Indeed actual word-inscriptions are as genuine physical objects as anything else; and so if there is such an actual physical inscription that is a P-description and is not a Q-description, or vice versa, then "P" and "Q" differ in their secondary extensions and thus in meaning.[7]

Unfortunately, a consequence which follows from this procedure is that no two words have the same meaning, for there is always a phrase like "P-description which is not a Q-description" to which applies "P-description" but not "Q-description." Further, it has been shown by Richard Rudner in "A Note On Likeness of Meaning"[8] that this program does not allow for any two tokens of the same type to have the same meaning. For instance, consider statement (1) in conjunction with the predicate "a rose description which occurs in the fifth place in (1)." This predicate is applicable to the fifth word in (1) but not to the second. Consequently, the second and fifth words in (1) are not synonymous, nor is the statement analytic. I believe that this line of thought

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[7] Ibid., 72.

[8] Richard Rudner, "A Note on Likeness of Meaning," Analysis, X (1950), pp. 115-118.

can be carried even further and that it can be shown that a given token is not even synonymous with itself. Consider, for example, the predicate "a rose description which occurs in the fifth place in (1) at time t_o." Now, this predicate applies to the fifth word in (1) at time t_o but not at t_1. Therefore we can assume, if Goodman's analysis is accepted, that not only do two word-types have the same meaning, but also that two tokens of the same type do not have the same meaning, and further that the same word-token does not have the same meaning at different times. (Perhaps it would be desirable to so define token that we cannot legitimately speak of the life-span of a given token. In other words, "token" could be defined in such a way as to make the first instance of the word "rose" in (1) a different word-token now than it was when it was first written.)

That these facts might compose a reductio ad absurdum of Goodman's thesis need not at the moment delay us, for we are here concerned in seeing whether a case can be made out for synonymy which can be interpreted as a matter of degree.

This, is, indeed, the conclusion which Goodman draws. ". . . we should do better never to say that two predicates have the same meaning but rather that they

have a greater or lesser, or one or another kind, of likeness of meaning."[9] And, also the most we can say about statements is that they are more or less nearly analytic. And, similarly for "necessary" as it applies to statements. It is not facetious to ask how are we to tell when an expression A is more synonymous with an expression B than an expression C. That is, we need some sort of workable criterion. What we are in need of here is not a definition of "synonymous with"; Goodman has provided us with this (two expressions are synonymous when they have the same primary and secondary extensions). What we do need is a definition of the expression "is more (or less) synonymous with." Goodman's solution of this problem is that it would be best to construe degree of synonymy as degree of interreplaceability (in non-intensional contexts). I am not too sure of what is meant by degree of interreplaceability. I believe it must be something like this: An expression A has a higher degree of interreplaceability than an expression B for an occurence of an expression C, if and only if, when A and B are substituted for C, those contexts in which A yields the same truth-value as C are more numerous than those contexts in which B yields the same truth-value as C. How can we speak of interreplaceability at all? We cannot literally pick

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[9]Goodman, 73.

up the fifth word-token in statement (3) and replace it with the second word-token, for in this very process the token is changing its meaning (i.e., its location is different and the process presumably takes time). Should token be redefined as was suggested above, we could not speak of interreplaceability at all. I find the notion of interreplaceability or substitution a mysterious enough process without the additional problems which it accumulates from Goodman's analysis. Similarly, we find troubles with the distinction between sentence-token and sentence-type. I believe we must admit that this analysis allows of no substitution, for there is really nothing to substitute, nor, if there were, any place to substitute it.

It might plausibly be said that this argument is merely eristic. I cannot decide myself whether it is or not. Yet, if it is, I can find no line where constructive criticism ends and "logic chopping" begins. It is conceivable that certain rules might be advanced with regard to identity of sign-tokens or the legitimacy of considering time factors. But, I believe such procedures would be wholly arbitrary. Furthermore, this procedure begs the question. For we must choose those rules which will determine what we had presystematically believed about synonymy.

But, even if all of these problems are disposed of, another fact demands consideration. Quine and White have denied that they (or anyone else) really understand analyticity. But here we have a perfectly understandable notion as it is drawn out by Goodman. As was indicated above, it is not without serious problems, but nevertheless "we get distinctions that are as fine as anyone could ask."[10] Now, the important point to be noted here is that in order for Goodman to define "more synonymous with," he had to define "synonymous with." Synonymity is consequently a well "understood" notion. But the fact is that there are no synonymous expressions. (And, as I have attempted to argue, there can be no expression more synonymous with another than that other is with a third.) And I believe that we can assume that White cannot legitimately presume "that a suitable criterion is likely to make the distinction between analytic and synthetic a matter of degree."[11] For he cannot presume that a suitable criterion which

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[10] Ibid., 73. The distinctions are fine. However, we might ask whether a standard workable criterion for determining secondary extensions could be given. How, for example, do we know whether a given description is a description of a unicorn? The extension of a term is often taken to be determined by its intension. In Goodman's analysis, though, there are no intensions. Thus, does the primary extension of a term determine its secondary extension; or is it the other way around?

[11] White, Analytic and Synthetic, p. 330.

will make the distinction a matter of degree, will not also (and more appropriately) make it a dichotomy.

There is an important point here which should be noted. One can always ask, concerning a definition or criterion, to what extent it applies to the actual universe. For example, Goodman's criterion makes the distinction a sharp one. But as it turns out, his criterion finds no application. Or, better it finds application but makes all statements synthetic and merely contingent. This statement is obvious, but it is also often overlooked. The geometrician deals with the admittedly idealized notions of "point" and "straight line." Though points and straight lines have never been found to be manifest in the empirical world, these notions have proved fruitful and even necessary not only in carpentry and other banausic arts, but, also in surveying, astronomy, and a myriad of other empirical sciences. In the light of these facts, I do not believe that the logician, semanticist, or linguist should be overly chagrined if he fails to find that the semantical notions of "analyticity" and "synonymity" do not apply with absolute precision to natural languages. The justification of applying notions in natural language is largely a pragmatic one. And, even if there were no synonymous terms or analytic statements (which I doubt), the necessary use of these

semantical notions is determined largely by pragmatic considerations. The ubiquitous employment of dictionaries is sufficient evidence for this statement.

However, should one still insist that the analytic-synthetic distinction be abandoned, it should perhaps be best if it were abandoned wholeheartedly. And it should be better to quit talk of degrees of (more or less) analyticity, etc. This kind of talk hurts the ear and seems to vitiate against the meaning of the terms in question.

VI SOME CONCLUDING REMARKS

No single conclusion is to be drawn from the discussion of the foregoing sections. Although the general tone has been to suggest that the distinction drawn between analytic and synthetic is a sound methodological procedure, it cannot be said that this belief has been adequately defended or proved to be "right." The reasons for this should now be evident. The foremost of these reasons is the extreme complexity of the problem. We have attempted to exhibit this by cursorily discussing some of the attitudes of different men in the history of philosophy toward this and related concepts. It has been shown that the distinction has engendered disagreement in the past. The disagreement has taken essentially two forms. First, there has been a division of opinion as to the importance of the distinction and, second, there has been general disagreement as to the extensions of the two terms, "analytic" and "synthetic." These facts have been taken as evidence to support the contention that the distinction is by no means self-evident or as obvious as might sometimes be believed. We have attempted to show that the distinction

is important due to its frequent recurrence in the writings of modern philosophers. This suggests that the problem is not one so simple or isolated that it can be posed as "Is it true that every statement is analytic or synthetic but not both?" The very complexity of the problem seems to demand that it be given a clear formulation. This, however, is conspicuously lacking. As a result one cannot make up his mind as to who is defending what, and just what is the disagreement.

That the problem is not an isolated one suggests that an adequate defense can be given only when it is incorporated into a full-grown theory of metaphysics and epistemology. If this is true, then it is likely that different solutions are determined to some extent by temperament and even the philosopher's social environment. How much influence this has cannot be said. But it would be futile were anyone to deny it. For one cannot deny that these factors play an important part in the formation of one's metaphysic. It is true that the philosopher attempts to diminish the influence of these factors. But it is equally true that he never wholly succeeds. This can be seen to be true merely by gazing our eyes upon the divergent schools of contemporary philosophy.

More specifically it has been suggested that the trouble is not so much with the terms "analytic" and "synthetic" as it is with the term "language." This view is not particularly original. It has been argued by Benson Mates[1] and Richard Martin.[2] The important point to realize, in this respect, is that there is no one right analysis of language. The relationship between one analysis and another is not that the one might be right while the other is wrong, but that one is better than the other. I do not know what criterion we should use to determine which of any two proposed analyses of language is the better. But certainly there will be some pragmatic factors involved.

The general sentiments that there is no single right analysis of language are expressed by both Carnap and Lewis. Lewis writes in "The Modes of Meaning":

> I should like to express my conviction that if there be any one analysis of meaning in general which is correct, then any number of other analyses will be possible which are equally correct: for much the same reasons that if any set of primitive ideas and primitive propositions are sufficient for a mathematical system, then there will be any number of alternative sets of primitive ideas and propositions which likewise are sufficient.[3]

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[1] Benson Mates, "Analytic Sentences," Philosophical Review, LX (1951), pp. 525-34.

[2] Richard Martin, "On 'analytic'," Philosophical Studies, III (1952), pp. 42-47.

[3] C. I. Lewis, "The Modes of Meaning," Philosophy and Phenomenological Research, IV (1944), p. 236.

And Carnap writes in "Empiricism, Semantics, and Ontology":

> For those who want to develop or use semantical methods, the decisive question is not the alleged ontological question of the existence of abstract entities but rather the question whether the use of abstract linguistic forms or, in technical terms, the use of variables beyond those for things (or phenomenal data), is expedient and fruitful for the purposes for which semantical analyses are made, viz. the analysis, interpretation, clarification, or construction of languages of communication, especially languages of science. . . . [The question] is not a question simply of yes or no, but a matter of degree.[4]

We have also argued that difficulties of abandoning the distinction are as great as those of maintaining it. It is usually agreed that there is a difference between statements like "Fido is Fido" and "Light travels at a speed of approximately 186,000 miles per second." If it is maintained that the difference is not one of kind, the difference still remains to be explained. To say that the difference is one of degree does not help the issue. For we must ask the question, degree of what? And this problem seems to be as perplexing as the other. Such a proposition must be defended. Nor does it seem adequate to describe the difference merely as different feelings people have about statements.

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[4]Rudolph Carnap, "Empiricism, Semantics, and Ontology," Revue Internationale de Philosophie, IV (1950), p. 39.

We must recognize, too, that abandoning the distinction has consequences in fields outside linguistic and logical studies. Suppose we agree that it is an "ill-founded dogma" and discard it. Will it still be possible to give the phrase "empirical philosophy" any halfway determinate meaning? Quine has given us a well-known metaphor describing human knowledge. Knowledge, he writes, is one gigantic conceptual scheme, ". . . a field of force whose boundary conditions are experience. A conflict with experience at the periphery occasions readjustments in the interior of the field. Truth values have to be redistributed over some of our statements. Reevaluation of some statements entails reevaluation of others, because of their logical interconnections--the logical laws being in turn simply certain further statements of the system, certain further elements of the field."[5] This sort of holism is sometimes convincing. And the metaphor may be apt. But the fact remains that it is a metaphor and needs detailed defense and explanation (as does the term "analytic"). Nothing in this passage suggests that its elaboration would result in a theory of knowledge which could be called "empirical" rather than, say, "idealistic."

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[5]W. V. Quine, "Two Dogmas of Empiricism," From a Logical Point of View: Nine Logico-Philosophical Essays (Cambridge: Harvard University Press, 1953), p. 42.

Rather the contrary, what Quine says would work quite smoothly into the context of a Hegelian or neo-Hegelian epistemology, with a coherence-theory for estimating the amount of truth achieved at a certain moment in a dialectical process.

Abandonment of the distinction is said to lead to a more thoroughgoing pragmatism. In the words of Peirce we may ask, what are its practical consequences? Is not Quine, for example, still teaching logic, as is, for example, Carnap? And would not Carnap's students do as well on Quine's examinations as Quine's students would do on Carnap's examinations? At a lower level still, Quine's recommendations would leave the evidence-gathering situation unaffected. In the teeth of the difficulties he adduces, we would validate "A rose is a rose" by analytic methods involving reference to synonymity.

In the light of these facts it is hard to take seriously the proposal that the distinction should be abandoned. Yet this is not to say that the gradualist critique has been both senseless and futile. Nothing could be further from the truth. For certainly the gradualist arguments have brought into view genuine difficulties. Perhaps the most important consequence of their criticism is its exhibition that one cannot,

in clear conscience, speak indiscriminately of the analytic-synthetic dichotomy. The gradualist contribution is one of bringing a central tenet of empiricism (a tenet which had, in fact, become dogmatic) into the open, not for rejection, but rather for re-examination, reevaluation and polishing. And thus, due to the wide variety of possible referents of the term "language," it can be seen that one ought to be more specific when he speaks of "analytic" (or "synthetic"). The distinction, appropriately, applies with greater facility to artificial languages than to natural languages. This was to be expected. But, as we have seen, the distinction is not purely senseless even when applied to the flexible and somewhat erratic field of natural language.

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