

cogent case for the existence of "negative facts." These two articles cite many of the sources, and diverse attempts, that deal with this problem.

⁴ This is essentially the argument made by Wilfrid Sellars in his "On the Logic of Complex Particulars," *Mind*, n.s., 58(No. 231):306-38. See especially pp. 316-19. Though his treatment of "negative facts" is incidental to the development of the nature of basic particulars, it is especially interesting in that it denies an Ayer-type incompatibility view, replacing it by an account in terms of "otherness." An examination of this view is impossible within the limits of this paper.

⁵ See Sellars, *op. cit.*, p. 318.

⁶ Ayer, *op. cit.*, p. 802.

⁷ *Ibid.*, p. 803.

⁸ *Ibid.*, p. 813.

⁹ *Ibid.*, p. 814.

¹⁰ *Ibid.*, p. 815, ". . . it accounts for the belief that negative statements are somehow less directly related to fact than affirmative statements are. They are less directly related to fact just in so far as they are less specific." Again, ". . . we can account for the inclination that many people have towards saying that reality is positive. The explanation is that any information which is provided by a less specific statement will always be included in the information provided by some more specific statement."

¹¹ *Op. cit.*, pp. 52-53.

¹² *Op. cit.*, p. 815. "Neither, as has often been remarked, are negative statements, when characterized in this way, reducible to affirmatives." The trouble here is, though, that the negative, in Ayer's jargon, which cannot be reduced is the less specific undenied statement; it is not the denial to which it is equivalent.

Analytical Philosophy and Analytical Propositions

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IN THIS essay I shall argue that the propositions of analytical philosophy are altogether different from and ought not to be confused with analytical propositions. Eschewing technical refinements,¹ we may characterize an analytical proposition as one which is necessarily true because its denial involves a contradiction. The propositions of analytical philosophy are quite different, where we conceive analytical philosophy as the philosophical enterprise which aims at clarifying concepts by providing analyses of them.² To specify the difference more precisely, we must examine in detail the nature of analysis.

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Some insight into the process of analysis can be gained from a consideration of its products. The end results of philosophical analysis appear to be definitions of various sorts. These range from Berkeley's dictum that a physical object "is nothing but a congeries of sensible impressions"³ through Russell's paradigmatic contextual definition of "the so-and-so"⁴ to Quine's pronouncement that "to be is to be a value of a variable."⁵ We have been informed by Broad⁶ and Ramsey⁷ as well as Ayer⁸ that the proper task of philosophy is to provide definitions, and have been assured that the work of Plato was "predominantly analytic,"⁹ presumably because of the central position occupied by definitions in his dialogues.

But there are different kinds of definitions, and not all of them are relevant to the topic of philosophical analysis. A very useful and familiar type of definition is that found in dictionaries. These *lexical* definitions, which are empirical reports of actual word usage, serve the purpose of instructing people in the use of words with well-established meanings or usages. They are of no greater interest to the philosopher than they are to anyone else. A different type of definition is that which is given a word or symbol when it is first introduced. This may be either upon its invention, as when Gilbreth made up the word "therblig" for use in time and motion study, or upon its use in a new and special context, as when mathematicians gave a new sense to the old word "derivative" in the new context of the differential calculus. The philosopher is not interested in these merely stipulative definitions either. The aim of the analytical philosopher is to arrive at definitions of words with well-established usages, but not definitions which merely report what those usages are.

We can best explain the nature of the definitions sought by analytical philosophers by first discussing a certain type of definition which is important in science. An example is the chemist's definition of an acid as a substance which contains hydrogen as a positive radical.¹⁰ This definition is not a lexical one, for the ordinary nontechnical use of the word "acid" by housewives and mechanics has nothing to do with ionization theory. Nor is it a stipulative definition, for the term "acid" had a well-established usage before the ionization theory was promulgated, and everything which is correctly called an acid in ordinary usage is denoted by the term "acid" as defined by the chemist. The chemist's purpose in giving his definition of the term "acid" is to formulate a theoretically adequate characterization of the objects to which the term is customarily applied. The chemist's definition is intended to attach to the word, as meaning or connotation, that property which in the framework of his theory is most useful for understanding and predicting the behavior of those substances which the word denotes. To propose or accept a definition of this type is tantamount to proposing or accepting the theory which underlies it. Because of their

close connection with and dependence on theories, it will be convenient to refer to definitions of this type as "theoretical definitions."¹¹ To give a theoretical definition amounts to affirming the correctness of the theory in whose terminology the definition is formulated.

It is in connection with theoretical definitions that most disputing over definitions occurs. For a period in the history of physics there were two rival definitions of heat. One of them defined it to be a subtle imponderable fluid (caloric), the other defined it to be the average kinetic energy of molecules in random motion. When the researches of Rumford, Davy, and Joule established the (more probable) correctness of the kinetic theory, the definition of heat as caloric was abandoned and the theoretical definition of heat in terms of kinetic energy was accepted. When the kinetic theory was established as an adequate theory of heat phenomena, then the kinetic definition of heat was regarded as effecting a clarification of the concept of heat.

On the basis of his ionization hypothesis, the chemist has analyzed the concept of acid; and on the basis of his molecular theory, the physicist has analyzed the concept of heat. The results of their analyses have been formulated in theoretical definitions. The philosopher has only a methodological interest in such concepts and their analyses, since they belong to the various special sciences. But the philosopher has a profound and lively interest in the more general concepts of truth, of existence, of cause, of physical object, of property and relation, and the like. The aim of analytical philosophy is to analyze these concepts and to define them.

When a philosopher gives a definition of such a fundamental category-term as cause or physical object, his definition is neither lexical nor stipulative. He is proposing a theoretical definition, although the theory which underlies his definition is neither chemical nor physical, but philosophical. As in the sciences, so also in philosophy: to give a theoretical definition amounts to affirming the correctness of the theory in whose terminology the definition is formulated. The analytical philosopher affirms the truth of the propositions which embody the results of his analyses, but he need not, and generally does not, assert them to be analytical propositions.

It should be clear that most analytical philosophers do not believe their definitions to be analytical propositions. In the first place, many analyses are defended by elaborate arguments which appeal to empirical evidence of one sort or another (consider, for example, the arguments from relativity and the thermal paradox in Berkeley).¹² And in the second place, the method of proving a proposition to be analytical by deducing a contradiction from its denial is not at all the usual technique by which analytical philosophers attempt to show the correctness of their analyses.

There is, nevertheless, a tendency in some quarters to think either that

the definitions which embody analyses are analytical propositions, or that analytical propositions follow directly from them as necessary conditions. One or another of these erroneous views can be attributed to G. E. Moore. In the much-discussed Section 6 of *Principia Ethica* he asserts that good is unanalyzable and therefore cannot be defined, and asserts further that this amounts to saying that propositions about the good are all of them synthetic and never analytic.¹³ Moore appears to believe that *if* there were a correct analysis then that analysis would either be or would entail an analytical proposition. (Actually he seems to believe that *only* an analysis or the result of an analysis can be an analytical proposition, but we need not go into that further error.) However interesting in its own right may be the question of how an analytical proposition can be informative, it is the sheerest mistake to suppose that question to have any bearing on the method of analysis or the value of analytical philosophy. Yet in raising and pursuing that question under the rubric of the "paradox of analysis," a number of other philosophers seem to have followed Moore in his mistake.

The process of analysis is one of *changing* meanings to the end of embodying greater theoretical insight into the facts to which our language refers. As Broad has said: "What we believe at the end of the process and what we believed at the beginning are by no means the same, although we express the two beliefs by the same form of words."¹⁴ Since philosophical analysis does result in theoretical definitions of philosophical concepts rather than in analytical propositions, to appraise the correctness or adequacy of an analysis requires that we appraise the correctness or adequacy of the philosophical theory involved in that analysis. The latter is a very difficult task indeed, as all serious students of philosophy realize.

Because of the difficulty of the fundamental task, certain short-cut alternative methods of evaluating analyses are sometimes proposed. Perhaps the most popular of the current nostrums is the touchstone of clarity. One writer has recently given his opinion that "the fundamental requirement for correct analysis is that ideas in the analysans be clearer than those under analysis."¹⁵ However attractive this proposal may seem at first sight, it cannot be accepted.

Of the many shibboleths of the analytic school perhaps "clarity" itself is the least clear. The clarity of a concept to a philosopher is strictly relative to the general philosophical position or theory of that philosopher. Thus to a phenomenalist or quasi-phenomenalist like G. E. Moore, the term "sense-data" is presumably the last word in clarity. And so it seemed "quite certain" to him in his "Defense of Common Sense" that the analysis of propositions expressing perceptual judgments must be in terms of sense-data.¹⁶ But how clear is the notion of a sense-datum to a non-phenomenalist? No one who read Professor Bouwsma's essay in the Moore

volume could help but be amused at the good-natured bewilderment suffered by Bouwsma in his prolonged but unsuccessful attempt to follow out Moore's directions for finding the elusive sense-datum.¹⁷ And some of us remember the tremendous difficulty Moore and others have had in trying to understand the notion of *usefulness* as used by William James and other pragmatists, to whom that concept was the quintessence of clarity.¹⁸ No, clarity cannot be adopted as the criterion for appraising philosophical analyses, for the concept of clarity is too personal and subjective. It is incorrigibly relative; one man's light is another man's darkness.

Another criterion which is sometimes suggested for use here, at least by implication, is epistemological priority.¹⁹ But a moment's reflection will show that it too is unacceptable. There is too much disagreement in the field of epistemology. Hume said that he perceived *only* impressions. But the late Professor Reichenbach's experience was quite different: he saw tables and houses and many other things, but never saw his impressions. He did not deny that he had impressions, but they were not *sensed*, they were rather *inferred* by him.²⁰ Bertrand Russell held sense-data to have the highest degree of epistemological priority;²¹ John Dewey insisted that they were rather the conclusions of psychological theory.²²

One other criterion is often used but never explicitly formulated. That is "ordinary language" as the ultimate test for the correctness of philosophical analysis. But this mistakes the purpose of the entire enterprise. We have ordinary language, and what we lack will be graciously supplied to us by our colleagues the lexicographers. Were we satisfied with it we should attempt no analyses, but rest content with what we have. We can perfectly well understand a person's preferring "plain English" to the more technical discourse of the philosopher. But such a person should have the sense to restrict his conversation to plain Englishmen, rather than to condemn the philosopher for failure to achieve what never was his goal.

The adequacy of a proposed analysis cannot be evaluated on ground of clarity, epistemological priority, or consonance with ordinary language. An analysis presupposes and reflects a theory, and must be appraised together with the theory upon which it is based. Theories are intended to explain or to account for facts, and so a theory has merit to the extent to which it squares with and accounts for the facts. Broad has put the matter very well, writing:

When we say that Philosophy tries to clear up the meaning of concepts we do not mean that it is simply concerned to substitute some long phrase for some familiar word. Any analysis, when once it has been made, is naturally expressed in words; but so too is any other discovery. When Cantor gave his definition of Continuity, the final result of his work was expressed by saying that you can substitute for the word "continuous" such

and such a verbal phrase. But the essential part of the work was to find out exactly what properties are present in objects when we predicate continuity of them, and what properties are absent when we refuse to predicate continuity. This was evidently not a question of words but of things and their properties.²³

Philosophers are of course interested in analyzing many concepts. There is a certain obvious danger here which it is well to remark. When two different concepts are analyzed, and two different theoretical definitions are proposed for them, we must be on guard that the theories involved are not inconsistent with each other. As more and more concepts are analyzed the underlying theories will become more and more numerous or extensive. The ultimate goal is to achieve analyses of *all* philosophical concepts; and of course it is desirable that the theories which underlie their definitions should be not just mutually consistent, but actually integrated into a single unified theory. So the goal of analytical philosophy is the achievement of a philosophical theory which shall be adequate to answer all philosophical questions by providing analyses of the philosophical concepts involved. That, however, is the traditional goal of speculative, systematic, synoptic philosophy. It would be invidious to say that either one is "really" the other. But it is heartening to remark that the perennial goals of philosophy are, if not nearer, at least unchanged.

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NOTES

¹ Such as the view that analyticity is always relative to a language, which is ably defended by Professor R. M. Martin in his article "On 'Analytic'," *Philosophical Studies*, 3:42-47 (April 1952). If Professor Martin's view is correct—as I believe it to be—then a fortiori the conclusions of the present article are correct also.

² In this essay I shall be concerned only with such analytical philosophers as Russell, Moore, and Broad. My remarks are not directed toward the Oxford-centered writers of the ordinary language cult, for whom the term 'analytical philosophers' does not seem altogether appropriate.

³ *Three Dialogues between Hylas and Philonous*, Third Dialogue. Berkeley's view has been reformulated by latter-day phenomenologists as a (contextual) definition of the term 'material thing' or 'physical object.' Cf. A. J. Ayer, *Language, Truth and Logic*, pp. 54ff; "Phenomenalism," *Aristotelian Society Proceedings*, 47:169 (1946-47); and Paul Marhenke, "Phenomenalism," *Philosophical Analysis* (edited by Max Black), pp. 299ff.

⁴ "On Denoting," *Mind*, n.s. 14:479-93 (1905). Reprinted in *Readings in Philosophical Analysis*, edited by H. Feigl and W. Sellars, pp. 103-15.

⁵ *Methods of Logic*, p. 224. Cf. also Quine's "On What There Is," *Review of Metaphysics*, 2:21-38 (1948).

⁶ *Scientific Thought*, p. 18.

⁷ *The Foundations of Mathematics*, pp. 263-69.

⁸ *Language, Truth and Logic*, p. 68.

⁹ *Ibid.*, p. 59.

¹⁰ *Smith's College Chemistry*, by James Kendall, p. 268.

¹¹ A more detailed discussion of this type of definition is presented in Chapter 4 of my *Introduction to Logic*.

¹² *Op. cit.*, First Dialogue.

¹³ *Principia Ethica*, pp. 6-7.

¹⁴ *Op. cit.*, p. 14.

¹⁵ Review by Morton G. White, *Journal of Symbolic Logic*, 13:126 (June 1948).

¹⁶ "A Defense of Common Sense," by G. E. Moore, in *Contemporary British Philosophy* (Second Series), edited by J. H. Muirhead (London: Allen and Unwin, 1925), p. 217.

¹⁷ "Moore's Theory of Sense-Data," by O. K. Bouwsma, in *The Philosophy of G. E. Moore*, edited by P. A. Schilpp (Evanston and Chicago: Northwestern University Press, 1942), pp. 203-21.

¹⁸ "William James' 'Pragmatism'," by G. E. Moore, in *Philosophical Studies* (London: Routledge and Kegan Paul, 1922, 1948), pp. 97-146.

¹⁹ As in *Mysticism and Logic*, by Bertrand Russell (New York: W. W. Norton, 1929). See especially pp. 126ff.

²⁰ *Experience and Prediction*, by Hans Reichenbach (Chicago: University of Chicago Press, 1938), p. 164.

²¹ *Op. cit.*

²² *Logic: The Theory of Inquiry*, by John Dewey (New York: Holt, 1938), p. 151.

²³ *Op. cit.*, p. 17.

Essay Competition

The editors of *Philosophical Studies* take pleasure in announcing the fourth annual essay competition sponsored by this journal. Prizes will be given for the best brief essays (not to exceed 2500 words) of an analytical character on a philosophical topic postmarked on or before June 15, 1954, by a graduate student in this country or abroad who does not, at the time he submits his essay, have the Ph.D. degree or its equivalent.

FIRST PRIZE: Publication in *Philosophical Studies*, a \$50 United States Government Defense Bond (or, for foreign students, its equivalent), and a ten-year subscription to *Philosophical Studies*. **SECOND PRIZE:** A \$25 United States Government Defense Bond (or its equivalent) and a ten-year subscription to *Philosophical Studies*. **THIRD PRIZE:** A five-year subscription to *Philosophical Studies*. One- and two-year subscriptions will also be awarded to essays receiving honorable mention. The editors reserve the right to publish any essay submitted in the competition. Candidates who are not notified by December 1, 1954, of intent to publish are free to submit their manuscripts for publication elsewhere. Judges for the competition will be announced in an early issue.

Entries should be typewritten, double-spaced, on one side of the paper only, and should be submitted in triplicate. The three copies of the manuscript should be signed with a pseudonym, sealed in an envelope marked "Essay Competition," and enclosed in an envelope for mailing together