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Is a Science of Religion Possible?

Hans H. Penner and Edward A. Yonan

Debate in the study of religion outside the social sciences continues to revolve around the meaning of *Religionswissenschaft.*[1] The discussion involves a consideration of such questions as: Can religion be defined? Is religion irreducible? Can religion be explained? Is there a special method of understanding religion?[2] The discussion of these questions often appears deadlocked because of a lack of clarification concerning the exact meaning of the key terms being employed. Nevertheless, there is a recognition of the essential importance of the problems of definition, reduction, explanation, and understanding. The truth of this observation can be easily confirmed by a quick survey of books and articles dealing with the study of religion.

Once having recognized the importance of definition, reduction, explanation, and understanding, it seems odd that there has been so little explicit analysis of these problems. Only recently have a few scholars attempted to delineate and clarify what is at stake when these problems are confronted directly.[3] It is interesting that the burden of their analyses depends upon the continuing discussion of these crucial

[1] By *Religionswissenschaft,* we mean the science of religion as a discipline which restricts itself to the study of religions as such. We find the translation of the term as the "history of religions" too narrow, since it usually excludes the study of Judaism and Christianity. This science, however, is not to be confused with anthropology, psychology, or sociology, since their primary concern is not the analysis of religious data.

[2] Cf. Joachim Wach, "Introduction: The Meaning and Task of the History of Religions (Religionswissenschaft)," in *The History of Religions: Essays on the Problem of Understanding,* ed. Joseph M. Kitagawa (Chicago: University of Chicago Press, 1967), pp. 1–19; Joseph M. Kitagawa, "Gibt es ein Verstehen fremder Religionen?" in *Joachim Wach-Vorlesungen,* ed. Ernst Benz (Leiden: E. J. Brill, 1963), vol. 1; Erwin R. Goodenough, "Religionswissenschaft," *Numen* 6–7 (1959–60): 77–95; Willard G. Oxtoby, "*Religonswissenschaft* Revisited," in *Religions in Antiquity,* ed. Jacob Neusner (Leiden: E. J. Brill, 1968), pp. 590–608.

[3] See, for instance, Frederick Ferré, *Basic Modern Philosophy of Religion* (New York: Charles Scribner's Sons, 1967), pt. 1; J. Milton Yinger, *The Scientific Study of Religion* (New York: Macmillan Co., 1970), pp. 1–23.

problems as they are explicated in the natural and social sciences. This new development manifests an encouraging sign that a move is under way to overcome the dogmatic separation between the so-called *Natur* and *Geisteswissenschaften.*

It is evident that the critical work, progress, and precision concerning definition, reduction, and explanation are produced mainly by scholars in the natural and social sciences. We believe that this work can be used to break the deadlock that exists in the methodological reflections on the science of religion. For example, such work shows us that it is first of all necessary to have a clear understanding of the meaning of definition and reduction as such.

To construct definitions and reductions of religion is dependent upon the requirement that prior clarification of these terms be advanced in order that a judgment can be made as to their validity in relationship to religion. In this context, we are in complete agreement with Yinger's observation that "many studies of religion stumble over the first hurdle: the problem of definition."[4] There are indeed significant studies which see the hurdle and run the risk of stumbling. In most cases, however, scholars see the hurdle and run around it in order to reach the goal of explaining religion, but disqualify themselves in doing so. A good example of such a maneuver can be found in Ringgren and Strom's recent study of the religions of mankind. On the first page of their study, they see the hurdle by asking the question: "When, then, is religion?"[5] They then proceed to run around the hurdle by declaring that "hardly any other concept has been more difficult to define."[6] They justify this procedure by citing a psychologist who fifty years ago collected forty-eight definitions of religion. Citing none of them, they then move on to a brief consideration of two psychological definitions of religion. From these definitions, they extract four "essential elements of religion" that are purportedly used to answer the original definitional question.[7] The problem with this procedure is that it represents the attempt to answer the definitional question of religion in terms of nondefinitional descriptions. In other words, descriptions of religion are used as substitutes for answers to definitional questions.

[4] Yinger, p. 3.

[5] Helmer Ringgren and Aka V. Strom, *Religions of Mankind* (Philadelphia: Fortress Press, 1967), p. xvii.

[6] Ibid.

[7] Ibid., pp. xvii–xviii.

One of the concerns of this essay will be the clarification of the following question: What is a definition? Until this question receives widespread attention, the study of religion will continue to be defined by means of established taxonomies of religion. A historical examination of the various definitions and uses of "religion" may be of some significance. But it cannot serve as a substitute for the definitional problem itself. No science worthy of its name succeeds in defining its terms and the scope of its data by appealing to a classification of past definitions. Furthermore, we are convinced that the constant debate over the "field" of religion and its proper subdivisions is an exercise in wasted energy unless it is preceded by, and directed toward, a careful consideration of the definitional task. To argue that the "field" of religion is, or is not, constituted by the history, psychology, sociology, ecology, phenomenology, and theology of religion is in itself dependent upon some common agreement as to the exact nature of religion. Without this agreement, we will continue to have constant bickering over what disciplines are workers in the "field" and who among them is sovereign. To carry this analogy one step further, it makes no sense to start a revolution by insisting that the "field" of religion consists of nothing more than a plurality of workers using different tools in order to cultivate the same field. It makes no sense because the use of different tools presupposes the formulation of different tasks that often lead to a basic contradiction in understanding the field.

If studies of religion stumble over or run around the first hurdle (of definition), it is surely the case that the same failure will be repeated when the second hurdle of reduction is confronted. Using the language of Fenton, it is certainly descriptive to say that the words "reduction" and "reductionistic" function as "boo-words" in many approaches to the study of religion.[8]

The exact meaning and operation of reduction are never clearly specified, and the term functions as a metaphor in the disapproval of theories which attempt to explain religion. We wish to show in this essay that "definition," "reduction," and "explanation" are positively implicated in each other and that this implication is negated when "reduction" is employed as a negative metaphor. That is to say, reduction functions as a cover for undefined or hidden definitions that are exempted from explicit explanations. When the terms "reduction"

[8] John Y. Fenton, "Reductionism in the Study of Religions," *Soundings* 53 (1970): 62.

or "reductionistic" are construed metaphorically as "boo-words," we find that the basic terms necessary for an adequate theory of religion remain undefined. We will show that this viewpoint is classically represented in those theories which speak of religion as *sui generis* and, therefore, irreducible.

In order to fully explicate and confirm the problems and issues already mentioned, Part I of this essay is devoted to statements from scholars of religion on definitions of religion and the objectives of a science of religion. Part II involves a careful examination of what outstanding philosophers of science think is entailed in the problems of definition, reduction, explanation and understanding. Part III includes a critical clarification of the issues raised in Part I by an appeal to the insights derived from the descriptions of philosophers of science. We wish to emphasize that the motivation for this procedure is based upon the fact that very little work has been done in advancing the discussion of theoretical problems in religion. We hope that the description of similar theoretical problems in the sciences will provide some illumination for breaking the deadlock that prohibits progress in most studies of religion. Finally, we are not offering new definitions of religion; nor are we claiming that the study of religion is a natural or social science. All we claim is the modest point that such a comparative analysis is a good exercise (i.e., prolegomenon) for clearing some of our methodological hurdles.

I

In a number of outstanding cases, scholars refer to the bewildering variety of definitions of religion as an argument for the notoriously difficult, if not impossible, task of defining religion. One classical proof text cited as support for this kind of argument is Leuba's forty-eight definitions of religion published in 1912.[9] For example, such an argument and the proof text for it prompted Winston L. King to say:

> If religion has not yet been satisfactorily defined it has not been for lack of effort. One might regard the many books dealing with religion as definitions of it, though rather long-winded. But neither have there been lacking short, concise definitions of sentence length. Every man has tried his hand at defining in a few well-chosen words the essence of this unity-in-diversity that we call religion. In his *A Psychological Study of Religion*, James Leuba

[9] James H. Leuba, *A Psychological Study of Religion* (New York: Macmillan Co., 1912), pp. 339–61.

lists some fifty such definitions, yet by no means includes them all. Perhaps the effort clearly to define religion in short compass is a hopeless task. The difficulties are immense.[10]

Or to summarize this argument in the words of Joseph M. Kitagawa, "No one has as yet proposed a satisfactory definition of the term 'religion' that is acceptable to everyone concerned."[11]

It is obvious from such statements that an appeal to the *history* of definitions of religion becomes a substitute for the actual operation of defining "religion." Furthermore, it is assumed that a definition must win universal acceptance and also remain unchanged in the future. Even more disturbing is that upon closer scrutiny this argument is contradictory and leads to a pervasive mood of defeatism.

It is taken as axiomatic that methodological pluralism is necessary for an adequate study of religion. This axiom rests on the questionable assumption that it is both necessary and sufficient that a definition be acceptable to everyone and that such a definition be constituted by a multiplicity of methods. We wish to argue, on the contrary, that a definition of religion acceptable to everyone entails one valid method, and that a multiplicity of definitions implies a multiplicity of methods. It would be contradictory to assume that a definition of religion acceptable to everyone entails a multiplicity of methods. We wish to emphasize that we are not opposed to a multiplicity of definitions. Rather, we are opposed to the assumption that a definition of religion must be acceptable to everyone. As we shall point out in Part II, this assumption misconceives the purposes of a definition.

Given the above contradiction and misconception, it should come as no surprise that the definitional task in the study of religion remains bewildering and hopeless. This state of affairs could easily lead to utter pessimism if it were not that a comprehensive reading of current scholarship reveals a surprising kind of consenus on certain definitions of religion. In order to confirm this, it is sufficient for our analysis to select those outstanding scholars in the field of religion who have offered (1) widely accepted definitions of religion and (2) objectives for the science of religion. These definitions and objectives can be classified as follows:

[10] Winston L. King, *Introduction to Religion* (New York: Harper & Bros. 1954), p. 63.

[11] Joseph M. Kitagawa, "The History of Religions in America," in *The History of Religions: Essays in Methodology*, ed. Mircea Eliade and Joseph M. Kitagawa (Chicago: University of Chicago Press, 1959), p. 39.

[1.1] Religion, in the largest and most basic sense of the word, is ultimate concern.[12]

[1.2] The religious significance of things, therefore, is that on which no wider nor deeper meaning whatever can follow. It is the meaning of the whole: it is the last word. . . . HOMO RELIGIOSUS thus betakes himself to the road to omnipotence, to complete understanding, to ultimate meaning. . . . But there is also a vertical way: from below upwards, and above downwards. . . . [It is] not a phenomenon at all, and it is neither attainable nor understandable; what we obtain from it phenomenologically, therefore, is merely its reflection in experience.[13]

[1.3] Religious experience is a response to what is experienced as ultimate reality; . . . it is a total response of the total being to what is apprehended as ultimate reality . . . [it] is the most intense experience of which man is capable . . . [it] can never become the object of direct observation.[14]

[1.4] But the value of the religious phenomena can be understood only if we keep in mind that religion is ultimately a realization of a transcendent truth.[15]

[1.5] Any religion is man's experience of, response and commitment to, ultimate reality, in a specific historic situation.[16]

[1.6] Religion is interest in what is regarded as most important in the universe. . . . Religious interest is an interest in something more important than anything else in the universe. . . . Someone is religious if in his universe there is something to which (in principle) all other things are subordinated.[17]

[1.7] Religiousness is a mental quality which modifies certain aspects of the life of individuals (and through individuals of groups); this quality must have each of the following characteristics in some degree: a belief-attitude that the ultimate for man exists . . . and that certain aspects of life derive from the ultimate; a belief-attitude that the derivation (from the Ultimate) of these aspects of life is beyond empirical demonstration; a belief-attitude that these aspects of life are of supreme importance . . . for the concern of the individual.[18]

[12] Paul Tillich, *Theology of Culture* (New York: Oxford University Press, 1959), pp. 7–8.

[13] G. van der Leeuw, *Religion in Essence and Manifestation*, trans. J. E. Turner (New York: Harper & Row, 1963), 2: 680.

[14] Joachim Wach, *Types of Religious Experience: Christian and Non-Christian* (Chicago: University of Chicago Press, 1951), pp. 32, 34; and *Sociology of Religion* (Chicago: University of Chicago Press, 1944), p. 13.

[15] C. J. Bleeker, "The Future Task of the History of Religions," *Numen* 6–7 (1959–60): 227.

[16] Kitagawa, "The History of Religions in America," p. 28.

[17] William A. Christian, Jr., "A Definition of Religion," *Review of Religion* 5 (1940–41): 412; and *Meaning and Truth in Religion* (Princeton, N.J.: Princeton University Press, 1964), pp. 60–61.

[18] J. Paul Williams, "The Nature of Religion," *Journal for the Scientific Study of Religion* 2 (1962): 8.

[2.1] For if there be any single domain of human experience that presents us with something unmistakably specific and unique, peculiar to itself, assuredly it is that of the religious life. . . . I shall speak, then, of a unique "numinous" category of value and of a definitely "numinous" state of mind, which is always found wherever the category is applied. This mental state is perfectly SUI GENERIS and irreducible to any other; and therefore, like every absolutely primary and elementary data, while it admits of being discussed, it cannot be strictly defined.[19]

[2.2] A religious phenomenon will only be recognized as such if it is grasped at its own level, that is to say, if it is studied *as* something religious. To try to grasp the essence of such a phenomenon by means of physiology, psychology, sociology, economics, linguistics, art or any other study is false; it misses the one unique and irreducible element in it—the element of the sacred.[20]

[2.3] We gain a different conception of the "holy" when we take the reality of the believer's faith as our starting point. . . . This reality proves to be self-subsistent and absolute; it is beyond all our rational criticism. The only difficulty for us is to form an accurate conception of this reality and to understand it from within.[21]

[2.4] From what has been discussed, it should be clear that the central concern of *Religionswissenschaft* must be the understanding of other religions.[22]

[2.5] There are three essential qualities underlying the discipline of the history of religions: First is a sympathetic understanding of religions other than one's own. Second is an attitude of self-criticism, or even skepticism, about one's own religious background. And third is the "scientific" temper.[23]

[2.6] The function and goal of *Religionswissenschaft* is to come better to understand the homo religiosus.[24]

[2.7] 1 . . . "Comparative Religion" is a well-recognized scientific discipline . . . , but whose aim is clearly a better understanding of the nature of the variety and historic individuality of religions, whilst remaining constantly alert to the possiblity of *scientifically legitimate* generalizations concerning the nature and function of religion. 2 . . . The common ground on which students of religion *qua* students of religion meet is the realization that the awareness of the numinous or the experience of transcendence are

[19] Rudolf Otto, *The Idea of the Holy*, trans. John W. Harvey (New York: Oxford University Press, 1957), pp. 4, 7.

[20] Mircea Eliade, *Patterns in Comparative Religion*, trans. Rosemary Sheed (New York: Sheed & Ward, 1958), pp. xi, 1.

[21] W. Brede Kristensen, *The Meaning of Religion*, trans. John B. Carman (The Hague: Martinus Nijhoff, 1960), p. 23.

[22] Wach, "The Meaning and Task of the History of Religions (Religionswissenschaft)," p. 23 (see n. 2 above).

[23] Kitagawa, "The History of Religions in America," p. 15.

[24] E. R. Goodenough, "Religionswissenschaft," p. 86 (see n. 2 above).

—whatever else they may be—undoubtedly empirical facts of human existence and history, to be studied like all human facts, by the appropriate methods. 3 . . . The facts and analyses of *Religionswissenschaft* may become the raw material for a *theologia naturalis* or for any other philosophical or religious system. But this is already outside the terms of reference of *Religionswissenschaft* and therefore no longer the concern of the student of religion.[25]

[2.8] Faith is a quality of men's lives. . . . We are studying, then, something not directly observable. . . . The externals of religion—symbols, institutions, doctrines, practices—can be examined separately; . . . But these things are not in themselves religion. . . . The student is making effective progress when he recognizes that he has to do not with religious systems basically but with religious persons; or at least with something interior to persons.[26]

II

As the above classification indicates, "definition," "reduction," "explanation," and "understanding" are terms deeply imbedded in any science of religion. In most cases, these terms are never clarified and they remain vague and ambiguous. This lack of precision has led to much oversimplification, confusion, and misunderstanding of these terms. It will be necessary to take a detour into an examination of the meaning and complexity of these terms as they have been analyzed carefully by eminent scholars in the areas of logic and philosophy of science in order to arrive at some terminological precision.

Definition

Many scholars acknowledge the fact that it is difficult, if not impossible, to arrive at a definition of religion acceptable to everyone. The difficulty arises when it is assumed that this is the sole purpose of a definition. Nevertheless, it is evident that the science of religion creates its own difficulty by showing little interest in the task of constructing adequate definitions.

The subject of definition is complex but its treatment always includes

[25] Statement on the minimum presuppositions for the study of religion, signed by seventeen distinguished scholars at the tenth IAHR Congress, Marburg, 1960. Quoted by Annemarie Schimmel, "Summary of the Discussion," *Numen* 6–7 (1959–60): 236–37.

[26] Wilfred Cantwell Smith, "Comparative Religion: Whither and Why?" in *The History of Religions: Essays in Methodology*, ed. Mircea Eliade and Joseph M. Kitagawa (Chicago: University of Chicago Press, 1959), pp. 34–35.

some description of the nature, purpose, rules, and types of definition. Philosophers usually maintain that the nature of definition is to explain the meaning of a term.[27] This means that all definitions must have a definiendum (the term to be defined) and a definiens (the defining statement). According to Copi, definitions serve five main purposes: (1) to increase vocabulary, (2) to eliminate ambiguity, (3) to clarify meaning, (4) to explain theoretically, and (5) to influence attitudes.[28] The rules governing these purposes of definition can be stated as follows:

1. The definiens should state the conventional connotation of the definiendum. Stipulative definitions are often exempted from this rule.
2. The definiens must not be wider than the definiendum.
3. The definiens must not be narrower than the definiendum.
4. The definiens must not include any expression that occurs in the definiendum, or that could be defined only in terms of it.
5. The definiens must not be expressed in ambiguous, figurative, or obscure language.
6. The definiens should not be expressed negatively unless the definiendum is negative.[29]

The history of various types of definition manifests both the development of the logic of definition and the disagreement among logicians

[27] Max Black, *Critical Thinking* (New York: Prentice-Hall, Inc., 1946), pp. 187, 382; Max Black, *Problems of Analysis* (Ithaca, N.Y.: Cornell University Press, 1954), p. 24; James D. Carney and Richard K. Scheer, *Fundamentals of Logic* (New York: Macmillan Co., 1964), p. 97; Morris R. Cohen and Ernest Nagel, *An Introduction to Logic and Scientific Method* (New York: Harcourt, Brace & Co., 1934), pp. 224–25; Hubert G. Alexander, *Language and Thinking* (New York: D. Van Nostrand Co., 1967), p. 243; Henry S. Leonard, *Principles of Reasoning* (New York: Dover Publications, 1967), p. 271; Irving M. Copi, *Introduction to Logic* (New York: Macmillan Co., 1964), pp. 89 ff. Torgny T. Segerstedt, *Some Notes on Definitions in Empirical Science* (Uppsala: Boktryckeri Aktiebolag, 1957), p. 3; Jack Pitt and Russel E. Leavenworth, *Logic for Argument* (New York: Random House, 1968), p. 44; and Willard V. Quine, *From a Logical Point of View* (Cambridge, Mass.: Harvard University Press, 1953), pp. 24–27.

[28] I. M. Copi, pp. 89 ff.

[29] These six rules can be found, with some variations, in the following works on the logic of definition: I. M. Copi, pp. 123–27; H. S. Leonard, pp. 352 ff.; Herbert L. Searles, *Logic and Scientific Methods* (New York: Ronald Press, 1968), pp. 47 ff.; L. S. Stebbing, *A Modern Introduction to Logic* (New York: Harper & Bros., 1961), pp. 424–25; Thomas S. Vernon and Lowell A. Nissen, *Reflective Thinking: The Fundamentals of Logic* (Belmont, Calif.: Wadsworth Publishing Co., 1968), pp. 137–39; M. Black, *Critical Thinking*, pp. 191–95; M. Cohen and E. Nagel, p. 238; H. G. Alexander, pp. 254–56.

concerning definitional problems. The various classifications are dependent upon the logicians' answers to what is being defined: words, things, or concepts? In his study of *Die Definition*, Dubislav suggested that there were four answers to this question in the history of definitional theory. He categorized them as *Wesensbestimmung*, *Begriffsbestimmung*, *Feststellung der Bedeutung*, and *Festsetzung über die Bedeutung*.[30] In Robinson's book, *Definition*, the types of definition are reduced to real and nominal definitions. A real definition (thing-thing) attempts to define "things" or "essential realities." A nominal definition (word-word, word-thing) has to do with the relationship that obtains between names, symbols, and their referents. After insisting that "word-word" definitions are of slight importance, Robinson subdivides nominal definitions into lexical and stipulative definitions. In conclusion, he argues that real definitions are at best confused nominal definitions.[31] This conclusion is accepted by most modern logicians. In fact, a real definition is spoken of at present as being like a nominal definition where the term (the definiendum) is defined "by means of an equivalent group of words [definiens]. But, and this is the important point, the definiens is an analysis of the idea, form, type, or universal symbolized by [the definiendum]."[32]

A definition cannot be construed without giving due consideration to the purpose and rules of a definition. Equal consideration must also be given to the various types of definition. We will rely on Copi's classification as the basis for our description.[33] He divides definitions into five types: (1) Stipulative definitions are nominal or verbal definitions which introduce new symbols and meanings. (2) Lexical definitions are definitions about the established usage of terms and can be either true or false. (3) Precising definitions are definitions of established terms that are either vague or borderline cases. They are not stipulative because they do not introduce new meanings. And they are not lexical because they are not restricted to established usage. (4)

[30] Walter Dubislav, *Die Definition* (Leipzig: Felix Meiner, 1931), pp. 17, 131.

[31] Richard Robinson, *Definition* (Oxford: Clarendon Press, 1950), pp. 18, 19, 149–92. For an excellent historical analysis of definition, see William Kneale and Martha Kneale, *The Development of Logic* (Oxford: Clarendon Press, 1962), pp. 6, 21, 22, 94, 316, 334, and 373.

[32] M. Cohen and E. Nagel, p. 230.

[33] I. M. Copi, pp. 100–104. For some variations on Copi's classification, see Carl G. Hempel, *Philosophy of Natural Science* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966), pp. 85–86; J. D. Carney and R. K. Scheer, pp. 97 ff.; M. Cohen and E. Nagel, p. 227; H. L. Searles, pp. 43 ff.; H. S. Leonard, pp. 273–300; T. S. Vernon and L. A. Nissen, pp. 133 ff.; H. G. Alexander, pp. 248 ff.

Theoretical definitions are definitions "of a term intended to formulate a theoretically adequate characterization of the objects to which that term applies [and] accepting a theoretical definition involves accepting as correct some theory in whose terminology the definition is formulated." (5) Persuasive definitions are definitions that are expressive in function and are intended to influence attitudes as well as to instruct by the use of emotive language.[34]

For the sake of brevity, our description of the purpose, rules, and kinds of definition has omitted a number of technical issues in the logic of definition. Although these issues are important, they are based upon the requirements we have specified. It is sufficient for our purpose to point out that a good definition must at least satisfy these minimum requirements in order to explain the meaning of a term.

Reduction and Explanation

We have found the discussion on reduction and explanation notoriously difficult. This does not mean that the subject is unimportant or that it should be avoided. As we argued earlier, metaphorical defenses against reduction in the study of religion will simply not do. This only compounds the confusion and leads to an evasion of the problem altogether. We consider it important to confront the problem directly, at least for the purpose of understanding what is implied by reduction. And we make no pretense of resolving the issues which are raised in the contemporary debate.

In his work on the structure of science, Nagel offers the following definition of reduction: It is "the explanation of a theory or a set of experimental laws established in one area of inquiry by a theory usually though not invariably formulated for some other domain. For the sake of brevity, we shall call the set of theories or experimental laws that is reduced to another theory the 'secondary science,' and the theory to which the reduction effected or proposed the 'primary science.'"[35] He

[34] Irving M. Copi, "Further Remarks on Definition and Analysis," *Philosophical Studies* 7 (1956): 19. The quotation used here is Copi's revised formulation of a theoretical definition presented as a result of Michael Scriven's critique of an earlier version. Cf. Michael Scriven, "Definitions in Analytical Philosophy," *Philosophical Studies* 5 (1954): 36–40. Arthur Pap refines Copi's theoretical definition by dividing it into: (*a*) theoretical definitions of empirical propositions about scientific objects, and (*b*) explicit analyses of concepts. Cf. Arthur Pap, "Theory of Definition," *Philosophy of Science* 31 (1964): 49–53.

[35] Ernest Nagel, *The Structure of Science* (New York: Harcourt, Brace & World, 1961), p. 338.

goes on to state that, "a reduction is effected when the experimental laws of the secondary science (and if it has an adequate theory, its theory as well) are shown to be the logical consequences of the theoretical assumptions (inclusive of the coordinating definitions) of the primary science."[36]

It is quite clear that, according to Nagel's definition, reduction is defined as the explanation of one theory by some other theory. To clarify, Nagel means what Hempel and Oppenheim have characterized as a "scientific explanation." They divide an explanation into two parts: (1) the explanandum, which is the sentence describing the phenomenon to be explained, and (2) the explanans, which is a class of sentences advanced to account for the phenomenon. These sentences are divided into two classes: those which state the antecedent conditions of the phenomenon to be explained and those which state the general laws or theories of the phenomenon. The explanandum, a description of the empirical phenomenon to be explained, is logically deduced from the explanans.[37] A valid explanation must satisfy four necessary conditions: (1) the explanandum must be a logical consequence of the explanans; (2) the explanans must contain general laws [or theories]; (3) the explanans must have empirical content; and (4) the sentences constituting the explanans must be true.[38] Some scholars have revised the last condition on the grounds that it is too restrictive.

As we have pointed out, reduction, for Nagel, is a certain kind of explanation. Following Nagel, we distinguish between two types of reduction. The first is called "homogeneous reduction." He says that, "in reductions of this sort, the laws of the secondary science employ no descriptive terms that are not used with approximately the same meanings in the primary science. Reductions of this type can therefore be regarded as establishing deductive relations between two sets of statements that employ a homogeneous vocabulary."[39] The second is called "inhomogeneous reduction." Nagel states that, "in reductions of this type the secondary science employs in its formulations of laws and theories a number of distinctive descriptive predicates that are not included in the basic theoretical terms or in the associated rules of

[36] Ibid., p. 352.

[37] Carl G. Hempel and Paul Oppenheim, "The Logic of Explanation," *Readings in the Philosophy of Science*, ed. Herbert Feigl and May Brodbeck (New York: Appleton-Century-Crofts, 1953), pp. 321–22; Carl G. Hempel, *Aspects of Scientific Explanation* (New York: Free Press, 1965), pp. 247–49.

[38] Ibid.

[39] Nagel, p. 339.

correspondence of the primary science."[40] To put it somewhat more precisely, "Two theories will be said to be homogeneous if they share the same conceptual apparatus, and inhomogeneous if one contains a concept not found in the other."[41]

Before entering into a brief description of some of the problems and the controversy concerning reduction, we must pause in order to emphasize an important point. A study of reduction indicates very clearly that what is being reduced is a theory, not a phenomenon or a property. It is not by accident, we believe, that Nagel entitled his chapter on reduction "The Reduction of Theories." This point will be crucial for statements we will make in Part III, and it is worth both time and space to quote Nagel concerning it. Stressing the fact that his discussion of reduction was based on the "deduction of one set of empirically confirmable statements from another set," he cites examples which continue to interpret reduction as if it were a process of deriving one set of properties from the subject matter of another. He then states that this

> conception is misleading because it suggests that the question of whether one science is reducible to another is to be settled by inspecting the "properties" or alleged "natures" of things rather than by investigating the logical consequences of certain explicitly formulated theories (that is, systems of statements). For the conception ignores the crucial point that the "natures" of things and in particular of the "elementary constituents" of things, are not accessible to direct inspection and that we cannot read off by simple inspection what it is they do or do not imply. Such "natures" must be stated as a theory and are not the objects of observation.[42]

In an earlier article he argued that "it is clearly a slipshod formulation, and at best an elliptic one, which talks about 'deduction' of properties from one another—as if in the reduction of one science to another one were engaged in the black magic of extricating one set of phenomena from others incommensurably different from the first."[43]

In the modification of Nagel's definition of reduction, Kemeny and Oppenheim state that reduction can be described as a certain kind of scientific progress in general. This progress is viewed as:

[40] Ibid., p. 542.

[41] Lawrence Sklar, "Types of Inter-Theorectic Reduction," *British Journal for the Philosophy of Science* 18 (1967): 110.

[42] Nagel, p. 364.

[43] Ernest Nagel, "The Meaning of Reduction in the Natural Sciences," *Science and Civilization*, ed. Robert C. Stauffer (Madison: University of Wisconsin Press, 1949), p. 131.

(1) an increase in factual knowledge, by the addition to the total amount of scientific observation; (2) an improvement in the body of theories, which is designed to explain the known facts and to predict the outcome of future observations. An especially important case of the second type is the replacement of an accepted theory (or body of theories) by a new theory (or body of theories) which is in some sense superior to it. Reduction is an improvement in this sense.[44]

They modify the concept of reduction by insisting that observational data must be included in the concept. That is to say, reduction cannot be understood by comparing theories alone. Oppenheim and Putnam summarize this modification of reduction as follows: "Given two theories T_1 and T_2, T_2 is said to be reduced to T_1 if and only if: (1) The vocabulary of T_2 contains terms not in the vocabulary of T_1. (2) Any observational data explainable by T_2 are explainable by T_1. (3) T_1 is at least as well systematized as T_2."[45]

Schaffner has shown that "there are a number of interrelated problems that cluster around the issue of reduction in the sciences. The logical analysis of theory, the meaning of theoretical terms, the nature of scientific explanation, and various theses concerning the nature of scientific progress, are all closely connected with the problem of intertheoretic reduction."[46] It should be mentioned at this point that these problems have been hotly debated by contemporary philosophers of science. The spectrum of their arguments extends from the orthodox position, represented by Nagel, Oppenheim, and Kemeny, to the unorthodox stance held by Karl Popper, Thomas Kuhn, and Paul Feyerabend.

Since Feyerabend is the most outspoken contemporary critic of the orthodox position, a synopsis of his stance will provide a reference point for the possible differences that exist between them. We are in basic agreement with his penetrating criticisms. It is unfortunate that space does not allow for a more extensive consideration of his thought. For our purpose, it is sufficient to single out three of his main arguments that are directed toward the orthodox position on reduction. First, Feyerabend denies the comparability doctrine assumed by Nagel and

[44] John C. Kemeny and Paul Oppenheim, "On Reduction," *Philosophical Studies* 7 (1956): 6–7.

[45] Paul Oppenheim and Hilary Putnam, "Unity of Science as a Working Hypothesis," in *Minnesota Studies in the Philosophy of Science* (Minneapolis: University of Minnesota Press, 1958), 2: 5.

[46] Kenneth F. Schaffner, "The Watson-Crick Model and Reductionism," *British Journal for the Philosophy of Science* 20 (1969): 325.

others. This doctrine asserts that two theories, T_1 and T_2, are comparable by means of the formal conditions of "connectability" and "derivability."[47] These conditions rest upon the requirement (described above) that in any explanation, the explanandum must be a logical consequence of the explanans. Or, to quote Nagel, "The objective of the reduction is to show that the laws, or the general principles of the secondary science, are simply logical consequences of the assumptions of the primary science."[48] Feyerabend denies the validity of the "comparability doctrine" because it can be shown that the laws of the secondary science are not simply logical consequences of the primary science. In fact, he argues that the relation between T_2 (the reducing theory) and T_1 (the reduced theory) are asymmetrical.

Second, he denies the principle of "meaning invariance." This principle states that observational data and experimental laws retain "a meaning that can be formulated independently of the theory; and it is based on observational evidence that may enable the law to survive the eventual demise of the theory."[49]

In an "inhomogeneous" reduction, the reduction of T_2 by T_1 assumes that O (observational data) is invariant and that T_1 remains unchanged even though "bridge laws," "reduction rules," or "synthetic-identities" are necessary to connect them. This produces an asymmetrical relation between T_1 and T_2, since T_2 is corrected by T_1, that is to say, "the original ontology of T_2 is replaced by T_1."[50] Feyerabend denies "meaning invariance" on the grounds that observational data and laws are dependent upon theory. Thus observation data O_1 imply T_1 and O_2 imply T_2, or, observation and theory are not distinct.

Third, Feyerabend argues against the claim of logical consistency in the reduction of a secondary science to a primary science. The reason he gives is "simply that T′ [the successor of T] being a critic of T, is also inconsistent with T . . . [that] the change of rules accompanying the transition T→T is a fundamental change, and that the meanings of all descriptive terms of the two theories, primitive as well as defined terms, will be different: T and T′ are *incommensurable theories*."[51]

[47] Ernest Nagel, *The Structure of Science*, pp. 353–55. See the important footnote on page 355 where connectability and derivability are carefully explained.

[48] E. Nagel, "The Meaning of Reduction in the Natural Sciences," p. 119.

[49] E. Nagel, *The Structure of Science*, pp. 86–87.

[50] Nils Roll-Hansen, "On the Reduction of Biology to Physical Science," *Synthese* 20 (1969): 282.

[51] Paul K. Feyerabend, "Reply to Criticism," in *Boston Studies in the Philosophy*

Critics have pointed out that it is paradoxical to admit incommensurable theories into the class of alternatives of a given theory. This is due to the fact that two theories which have nothing in common can neither contradict nor imply each other. Indeed, theories that do contradict each other assert some common meaning. Feyerabend agrees, but argues that methods are available by which "it *is* possible to use incommensurable theories for the purpose of mutual criticism."[52]

The debate on reduction will undoubtedly continue. All we have attempted to do is show what it is about.

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of Science, ed. Robert S. Cohen and Marx E. Wartofsky (New York: Humanities Press, 1965), p. 231.

[52] Ibid., pp. 231–34. Criticism of Feyerabend's argument on the incompatibility of scientific theories can be found in Peter Achinstein, "On the Meaning of Scientific Terms," *Journal of Philosophy* 61 (1964): 497–509. Feyerabend's reply can be found in "The Meaning of Scientific Terms," *Journal of Philosophy* 62 (1965): 266–74. In addition, see Robert E. Butts, "Feyerabend and the Pragmatic Theory of Observation," *Philosophy of Science* 33 (1966): 383–94; Dudly Shapere, "Meaning and Scientific Change," in *Mind and Cosmos*, ed. Robert G. Colodny (Pittsburgh: University of Pittsburgh Press, 1966), pp. 41–85. For other criticisms of Feyerabend's position, see the essays by J. J. C. Smart, "Conflicting Views about Explanation"; Wilfrid Sellars, "Scientific Realism or Irenic Instrumentalism"; and Hilary Putnam, "How Not to Talk about Meaning," in *Boston Studies in the Philosophy of Science*, ed. Robert S. Cohen and Marx W. Wartofsky (New York: Humanities Press, 1965), 2:157–222; J. J. C. Smart, *Between Science and Philosophy* (New York: Random House, 1968), pp. 78–88; Jarrett Leplin, "Meaning Variance and the Comparability of Theories," *British Journal for the Philosophy of Science* 20 (1969): 69–70.

On the problem of reduction and other related issues in the philosophy of science, see Carl G. Hempel, "Reduction: Ontological and Linguistic Facets," in *Philosophy, Science, and Method*, ed. Sidney Morgenbesser et al. (New York: St. Martin's Press, 1969), pp. 179–99; Arthur I. Fine, "Consistency, Derivability, and Scientific Change," *Journal of Philosophy* 64 (1967): 231–40; Kenneth F. Schaffner, "Approaches to Reduction," *Philosophy of Science* 34 (1967): 137–47; Jaegwon Kim, "Reduction, Correspondence, and Identity," *Monist* 52 (1968): 424–38; Richard Jessor, "The Problem of Reductionism in Psychology," *Psychological Review* 65 (1958): 170–78; P. K. Feyerabend, "Problems of Empiricism," in *Beyond the Edge of Certainty*, ed. Robert G. Colodny (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965), pp. 145–260; P. K. Feyerabend, "Explanation, Reduction, and Empiricism," in *Minnesota Studies in the Philosophy of Science*, ed. Herbert Feigl and Grover Maxwell (Minneapolis: University of Minnesota Press, 1962), 3:28–97; P. K. Feyerabend, "How to Be a Good Empiricist? A Plea for Tolerance in Matters Epistemological," in *Readings in the Philosophy of Science*, ed. Baruch A. Brody (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), pp. 319–42; C. G. Hempel, *Philosophy of Natural Science*, pp. 101–10 (see n. 33 above); C. G. Hempel, "The Theoretician's Dilemma," in *Minnesota Studies in the Philosophy of Science* (Minneapolis: University of Minnesota Press, 1958), 2:37–98; G. Schlesinger, *Method in the Physical Sciences* (New York: Humanities Press, 1963), pp. 45–72.

Explanation and Verstehen

An analysis of the meaning of *Verstehen* is no less difficult than an examination of reduction and explanation. The difficulty is compounded by the suspicious equivocation of the term. We can avoid such equivocation by focusing our attention upon the technical use of the word *Verstehen* as it is employed in the cultural sciences. The term "understanding" will be used, therefore, as a translation for *Verstehen* in its technical sense, and cultural sciences will mean what is generally referred to as *Geisteswissenschaften.* Without entering into a historical investigation of the various uses of this term, it is sufficient for our purposes to point out that understanding in its technical sense means an operation used to distinguish a method that is different from the methods in the natural sciences. As Dilthey once said, "We explain nature, but we understand man."[53]

The exponents of understanding have argued that the natural sciences deal with the lawlike relations of phenomena which are external, uniform, and repeatable in experiment. By contrast, the cultural sciences study human expressions which are neither uniform nor repeatable.

Since cultural phenomena are different from natural objects, this view contends that cultural expressions can only be known through operations variously called, "projecting," "reproducing," "reliving," "intuiting," or "empathizing."[54] As many critics have pointed out, these operations of understanding are never clearly defined, and they remain hopelessly vague for a method that claims to have "scientific" status. Nevertheless, when Dilthey maintained that we explain nature, but understand man, it must be made clear that he did not mean that we understand man by means of some spontaneous, mystical flash of insight. In his essay on "understanding life-expressions" he explicitly states that "without an explanation which can tie together circumstances, ends and means, and life-structure, no total understanding of the inner life from which they spring is possible."[55] In other words, understanding is construed as a kind of explanation. It should be

[53] Quoted in Trygve R. Tholfsen, *Historical Thinking* (New York: Harper & Row, 1967), p. 242.

[54] Wilhelm Dilthey, "The Understanding of Other Persons and Their Life-Expressions," in *Theories of History*, ed. Patrick Gardiner (Glencoe, Ill.: Free Press, 1959), pp. 220 ff.

[55] Ibid., p. 214. Cf. H. P. Rickman, "The Reaction against Positivism and Dilthey's Concept of Understanding," *British Journal of Sociology* 11 (1960): 307–18.

obvious, however, that Dilthey did not intend understanding to be identified with the kind of explanation employed by the natural sciences.[56]

Max Weber advanced the discussion on understanding by insisting that contradictory sciences (viz., logically different in principle) are impossible. All science must be subject to the tests of verification and proof. It follows from this that Weber's two types of understanding, the "observational" and "explanatory," are governed by these tests.[57]

For those theories that draw a radical distinction between the natural and cultural sciences, the human datum is always to be understood as irreducible and *sui generis*. The operation of understanding, however, remains incredibly obscure. Because of this obscurity there are three criticisms of understanding which continue to be the subject of debate.

The first criticism is directed at the notion of the *sui generis* nature of culture. The argument for the irreducible nature of culture is based upon the claim that human events and expressions are unique actions, statements, and thoughts which cannot be explained as physical events. Furthermore, these events have a depth, richness, and complexity that elude the precision aimed at in the natural sciences. Critics have shown that this claim concerning irreducible reality involves a circular argument. It has also been shown that the qualities of uniqueness and complexity are not restricted to human events.[58]

Given the argument that cultural phenomena are *sui generis*, it is maintained that a special operation is required in order to understand such phenomena. In other words, understanding is construed as a way by which the feelings, thoughts, and actions of another can be known. It is at this point that such an operation is described in terms of "intuition," "empathy," and "reliving." Outside of determining the exact criteria to be used for sympathetically reproducing another person's feelings, thoughts, and actions, the second criticism against this process maintains that it does not in itself constitute knowledge. It

[56] H. A. Hodges, *Wilhelm Dilthey: An Introduction* (London: Kegan Paul, Trench, Trubner, & Co., 1944), pp. 14–21, 159–60.

[57] Max Weber, "The Interpretive Understanding of Social Action," in *Readings in the Philosophy of the Social Sciences*, ed. May Brodbeck (New York: Macmillan Co., 1968), pp. 25–27. Cf. Julien Freund *The Sociology of Max Weber*, trans. Mary Ilford (New York: Random House, 1969), pp. 45–46, 87–131.

[58] Arguments for the irreducible nature of cultural phenomena can be found in the classical works of Dilthey and Collingwood. See H. A. Hodges, p. 142; R. G. Collingwood, *The Idea of History* (New York: Oxford University Press, 1956), pp. 217–20. For a criticism of these claims, see Patrick Gardiner, *The Nature of Historical Explanation* (London: Oxford University Press, 1952), pp. 28–64.

is at best an attempt at reproducing and thereby knowing the phenomenon by means of an appeal to personal experience. Obviously, this argument concerning understanding can only confirm what we already know in the personal domain. The epistemological circularity of this argument makes it impossible to independently validate or verify thoughts, feelings, and actions other than our own.[59] Recourse to a metaphysical "uniformity of a human experience" as an escape from this predicament leads to the elimination of empathy as a necessary condition of knowledge. In both cases, the knowledge acquired is neither explanatory nor can it ever lead to new knowledge of phenomena.

The problems inherent in the procedure of understanding culminate in a third criticism. If the notion of a *sui generis* reality is circular and if it can be claimed that empathetic understanding is explanatory, then understanding cannot be used as a method. It is nothing more than a technique and should never be confused with a method. Understanding is simply a heuristic device that may lead to discoveries which in turn must be validated by a method of inquiry. All too often this basic distinction has not been recognized. In fact, many proponents of understanding have taken empathy to be a method for the validation and justification of knowledge.[60]

Although our analysis of understanding is brief, it could not be concluded without mentioning some significant revisions that have taken place in the last decade. These revisions and the controversy surrounding them center on the thought of two prominent scholars, Carl Hempel and William Dray.

True to his usual form, Hempel wrote what is now considered an influential essay on the function of general laws in history. In it he argued the thesis that historical research has as much of a concern with the function of general laws as do the physical sciences. Insofar as this is the case, he asserted that historians either tacitly assume these general

[59] Cf. Theodore Abel, "The Operation Called Verstehen," in *Readings in the Philosophy of Science*, ed. H. Feigl and M. Brodbeck (New York: Appleton-Century-Crofts, 1953), pp. 684–86; E. Nagel, "The Subjective Nature of Social Subject Matter," *Readings in the Philosophy of the Social Sciences*, ed. May Brodbeck (New York: Macmillan Co., 1968), pp. 43–44; Rolf Gruner, "Understanding in the Social Sciences and History," *Inquiry* 10 (1967): 156–58.

[60] Richard S. Rudner, *Philosophy of Social Science* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966), pp. 151–54; R. Gruner, pp. 151–54; E. Nagel, "The Subjective Nature of Social Subject Matter," p. 44; Jane L. Martin, "Another Look at Verstehen," *British Journal for the Philosophy of Science* 20 (1969): 53.

laws or find it difficult to formulate them.[61] Since we have already analyzed Hempel's account of the deductive model of explanation and its necessary conditions, it will suffice to say that a general law in history must satisfy the same deductive conditions. Hempel has consistently argued that a deductive-nomological explanation "effects a deductive subsumption of the explanandum under principles that have the character of general laws. Thus a D-N explanation answers the question 'Why did the explanandum-phenomenon occur?' by showing that the phenomenon resulted from certain particular circumstances, specified in $C_1, C_2, \ldots, C_k$ in accordance with the laws $L_1, L_2, \ldots, L_r$ [thus] . . . the explanandum is a logical consequence of the explanans."[62] Given this model, the historian must either formulate complete explanations based on universal laws related to antecedent conditions, or offer partial explanations that are, at best, vague explanatory sketches.

When an explanation is conceived in this way, it is most difficult for a practicing historian to formulate historical laws that can be used in explaining why specific events occur. This is precisely the problem that William Dray has drawn much attention to in his book *Laws and Explanation in History*.[63] A summary of Dray's argument inevitably involves a simplification of the complexity and depth of his analysis. We must, nevertheless, briefly describe his argument: (1) He accepts the standard criticism of understanding as heuristic. (2) He denies the Hempelian view that historical explanations are based exclusively on universal-causal laws. In fact, he argues that, "what we very often want is a reconstruction of the agent's *calculation* of means to be adopted toward his chosen end in the light of the circumstances in which he found himself. . . . Only by putting yourself in the agent's position can you understand why he did what he did."[64] (3) The revision takes place by transforming empathetic understanding into a necessary condition for rational explanation, and emphasizes the calculation of the *reasons* why an actor did what he did.

Hempel has responded by saying that, although Dray's substitution of "rational explanation" for "covering laws" has contributed to the

[61] Carl G. Hempel, "The Function of General Laws in History," in *Theories of History*, ed. Patrick Gardiner (Glencoe, Ill.: Free Press, 1959), pp. 344 ff., 352–53.

[62] Carl G. Hempel, *Aspects of Scientific Explanation*, p. 337 (see n. 37 above).

[63] William Dray, *Laws and Explanations in History* (London: Oxford University Press, 1957), pp. 1–12.

[64] Ibid., pp. 122, 128.

clarification of many issues in historical inquiry, such a substitution still fails to explain why an actor in fact did what he did. This is so because Dray's "evaluative principle of action" cannot provide necessary and sufficient conditions for the explanation of why an actor performed a certain action.[65]

This does not mean that Hempel has had the last word. On the contrary, the debate as to whether the deductive-nomological or rational-normic model provide good grounds for historical explanation continues to refine itself and keeps the discussion alive. The very fact that this discussion continues clearly indicates that it is premature to state, as some have, that the deductive-nomological model has been subjected to devastating criticism.[66]

III

Now that we have clarified some crucial terms, let us apply what we have discovered to studies of religion.

On Definitions of Religion

As we have found, definitions are offered for specific purposes. In order for these purposes to be fulfilled, certain rules must be followed. In citing the various definitions of religion, we pointed out that there was

[65] Carl G. Hempel, "Reasons and Covering Laws in Historical Explanation," in *Philosophy and History*, ed. Sidney Hook (New York: New York University Press, 1963), pp. 152–55.

[66] Further study on the complexity of this debate can be pursued by examining the following important works: Karl Popper, *The Open Society and Its Enemies* (Princeton, N.J.: Princeton University Press, 1950); Karl Popper, *The Poverty of Historicism* (London: Routledge & Kegan Paul, 1961); William Dray, ed., *Philosophy of History* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964); William Dray, ed., *Philosophical Analysis and History* (New York: Harper & Row, 1966); Michael Scriven, "Truisms as the Grounds for Historical Explanations," in *Theories of History*, ed. P. Gardiner (Glencoe, Ill.: Free Press, 1959), pp. 443–75; Morton White, *Foundations of Historical Knowledge* (New York: Harper & Row, 1965); Carey B. Joynt and Nicholas Rescher, "The Problem of Uniqueness in History," *History and Theory* 1 (1961): 150–62; Maurice Mandelbaum, "Historical Explanation: The Problem of 'Covering Laws,'" *History and Theory* 1 (1961): 229–42; John Passmore, "Explanation in Everyday Life, in Science, and in History," *History and Theory* 2 (1962): 105–23; Samuel H. Beer, "Causal Explanation and Imaginative Re-Enactment," *History and Theory* 3 (1963): 6–29; Alan Donagan, "Historical Explanation: The Popper-Hempel Theory Reconsidered," *History and Theory* 4 (1964): 3–26; Paul J. Dietl, "Deduction and Historical Explanation," *History and Theory* 7 (1968): 167–88; C. J. Arthur, "On the Historical Understanding," *History and Theory* 7 (1968): 203–16; Viktor Kraft, "Geschichtsforschung als Strenge Wissenschaft," in *Logik der Sozialwissenschaften*, ed. Ernst Topitsch (Cologne: Kiepenheuer & Witsch, 1968), pp. 72–82.

a consensus on the ultimate as the defining characteristic of religion. For the sake of brevity, these definitions can be compressed into a definition which reads as follows: Religion is a relation to the ultimate. Terms such as "concern," "meaning," "response," "realization," and "interest," are used in various ways to define such a relationship to the ultimate.

The first step in judging a good definition is to determine whether or not it violates any of the rules mentioned above in Part II, Definition. In our judgment, the above definition violates the second rule which states that the definiens must not be wider than the definiendum. This is the case because the word "ultimate" in the definiens connotes that which is incapable of further specification. One way to circumvent this violation is simply to assert that the definiendum is itself beyond all specification. This is certainly a perplexing alternative, since it leaves us with a definiendum that is beyond definition. Paradoxically enough, this seems to be precisely what some scholars are emphatically suggesting when they insist that religion cannot be defined and then proceed to describe it. The alternative leads to the rather disturbing conclusion that the term "religion" is meaningless. But even if it is taken as a definition, it is quite clear that "ultimate" in the definiens can only be defined in terms of religion. This violates rule four, which stipulates that the definiens must not include any expression that occurs in the definiendum, or any expression that can be defined in terms of it. In short, a definition must not be circular.

If, on the other hand, we are mistaken in our judgment, it is certainly not because the rules for definition are unintelligible. In fact, all the definitions in Part I violate rule five because of the incurable obscurity of the definiens. We do not underestimate the problems involved in determining what can or cannot be considered as religious; this is indeed the problem in any study of religion. To begin with an obscure definiens, however, simply compounds the difficulty; in fact, such a definiens is useless in formulating a definition of religion.

Given these violations, it becomes extremely difficult to determine the precise techniques used in such definitions. These violations could lead to the conclusion that they are not definitions at all. Perhaps we have misunderstood the meaning of the terms employed in such kinds of definitions. Let us assume for the moment that the meaning of the terms is clear to the definers that use them. If so, we should be able to apply another well-established technique of analysis to determine if this is in fact the case.

A traditional and widely used technique of defining is by division into genus and differentia. This technique is applicable to the five types of definition we have mentioned. Using this technique, the terms employed in the definiens can be divided into genus and differentia. Using our version of the definitions of religion, the words "concern," "meaning," "response," "realization," and "interest" function as genus terms. The terms, "ultimate," "transcendent truth," and "most important" operate as differentia. The employment of such genus terms is entirely legitimate because the word "concern," for example, is not only a class term but it can also serve as a differentia term for some other genus. Genus and differentia terms are relative to each other. But what can be said about the differentia in these definitions? Since the rule concerning the differentia states that they can be further subdivided, do terms such as "ultimate," "transcendent truth," and "most important" satisfy this rule? How can the differentia, "transcendent truth," be differentiated? And if the term "ultimate" means that which is beyond further differentiation, it becomes clear that it cannot serve as a differentia for any genus. In fact, it would appear to be a universal term of all properties, that is, a genus. If so, it violates the technique *per genus et differentia*, because one cannot differentiate a genus by another genus.

In the face of these insurmountable violations, we would propose that definitions of this kind be avoided. This does not mean, as some scholars have claimed, that the task of defining religion is hopeless. In fact, there are definitions of religion that satisfy the rules of defining and thereby qualify as good definitions. For example, Ferré defines one's religion as "one's way of valuing most intensively and comprehensively."[67] His careful analysis of the definiens into genus and differentia is one of the best we have found. He offers this definition for discussion and test in order to advance the interests of clarity and precision in determining what religion is. Another equally good definition of religion that serves a different purpose is offered by Spiro with the same careful attention to the rules which must be followed. He defines religion as "a cultural system consisting of culturally patterned interaction with culturally postulated super-human beings."[68] Both

[67] Frederick Ferré, "The Definition of Religion," *Journal of the American Academy of Religion* 38 (1970): 11.

[68] Melford E. Spiro, "Religion and the Irrational," *Symposium on New Approaches to the Study of Religion*, Proceedings of the 1964 Annual Spring Meeting of the American Ethnological Society, ed. June Helm (Seattle: University of Washington Press, 1964), p. 103.

definitions fulfill the purposes of defining and thereby establish the first step in determining the referent of religion.

The choice between either perpetuating pseudodefinitions or claiming no definitions is spurious. Good definitions are essential for the identification and progress of any science, including *Religionswissenschaft*. The deciding factors in making a choice between definitions are dependent upon their being both logically satisfactory as well as necessary and sufficient for explaining the meaning of "religion."

Reduction and Explanation in Religion

The vagueness and obscurity of definitions are correlated with the paucity of interest in the construction of theories of religion. We believe that this reticence is the basis for the widespread metaphorical hostility directed toward the word "reduction." It has led to the emphatic claim that reduction is a process by which the data of religion are explained and thereby evaporated into other data. This point of view is maintained by many students of religion. In Part I we have quoted two influential scholars of religion who explicitly advocate such a point of view. Both Rudolf Otto and Mircea Eliade maintain that religion is irreducible on the grounds that the "numinous" or "sacred" is a unique category. Eliade asserts that any attempt to grasp the "essence" of religious phenomena by means of other disciplines is false. He does not deny the usefulness of approaching the religious phenomenon from "different angles," but, insists that "it must be looked at first of all in itself."

Those who share this point of view argue that religious phenomena are *sui generis*, unique and irreducible. Thus a reduction of religious phenomena demeans, levels, simplifies, or explains them away in terms of other kinds of phenomena. "Reductive," "reductionism," and "reductionistic" are words often used to express the resistance to reduction as a procedure which leads to results implied by the above terms.

Our analysis of reduction in Part II indicates that these views of reduction clearly misunderstand what is implied by that procedure. By misunderstanding reduction, they falsify what other sciences mean by it. As we have shown, reduction is an operation concerned with theories or systems of statements, not with phenomena, data, or the properties of the phenomena. For as Nagel has said, "properties," or the "nature" of something, is always stated as a theory. None of the scholars we have examined in Part II state that reduction wipes out,

levels, or demeans the phenomena or data being explained. On the contrary, reduction in the sciences implies an *explanation* of one *theory* by the use of another in the same discipline (or, different disciplines). The sole purpose of reduction is to offer adequate theoretical explanations and to provide for the continued progress of scientific knowledge.

Although it is quite evident what philosophers of science mean by reduction, it is not by any means clear what scholars of religion mean by the term. The popular conceptions in studies of religion identify "reduction" with "reductionism" and apparently conclude that religious data cannot be reduced.[69] A second and more sophisticated interpretation of reductionism could mean that the phenomena along with religious theory are irreducible. Finally, reductionism might be taken to mean that the "essence of religion" is irreducible, not the data.

The popular conception is simply false, given the explicit meaning of reduction as it is employed in the sciences. The second interpretation is confused because it blurs religious data and theory, mixing them indiscriminately. The third alternative is dogmatic. The "essence" of something is always stated theoretically: thus this interpretation asserts that it is the *theory* that is *sui generis* and beyond explanation. The implications of this alternative are clear: in making a theory absolute, it becomes impossible to advance any new theories of religion and hence a science of religion is unnecessary.

To choose any of these alternatives is surely not a real option for those of us committed to the study of religion. What is needed is a serious concern for explicit theories of religion that can be discussed and tested. We should not fear the possible reduction of such theories, for it is precisely the construction of theories which continues to improve a science and its explanatory status. To remain theory-shy is to give up the very idea of a *Religionswissenschaft.*

Explanation and Understanding in Religion

From the problem of reduction, it is easy to see that the central idea of "understanding" as a methodological technique lies at the very center of most studies of religion. As the quotations in Part I indicate, understanding is the primary concern of the science of religion. The exact meaning of the operation of understanding, however, remains incredibly difficult to decipher.

[69] For an example, see Mircea Eliade, "History of Religions and a New Humanism," *History of Religions* 1 (1961): 5–6.

The defining characteristics that appear in all uses of the term are "sympathy," "intuition," and "reliving." The reasons for the primacy of understanding are due to the underlying conviction that religion as a subject is fundamentally different from any other, since it involves the entire man. It is precisely at this point that the method attempts to specify the referent of what is to be understood. There is unanimous agreement that the referent is always ultimate or transcendent reality. Proponents of this position are well aware of the difficulties inherent in such a method, for they all admit in one way or another that the ultimate, the transcendent, or the sacred cannot be understood as such. As our quotation from W. B. Kristensen states, "This reality proves to be self-subsistent and absolute; it is beyond all our rational criticism. The only difficulty for us is to form an accurate conception of this reality and to understand it from within." If the ultimate cannot be understood as such, the correlative claim demands that the task of the scholar of religion must be directed to an understanding of the experience, response, or realization of the ultimate. What makes such an understanding possible? In order not to be arbitrary or subjective, the answer to this quesion is based upon metaphysical and theological presuppositions. The metaphysical presupposition assumes that there exists a "uniformity of human nature" that makes understanding possible. Joachim Wach explicitly referred to this possibility as the "eternally human." The theological presupposition grounds such a possibility in a "transcendent reality." Thus *homo religiosus* becomes the model for a new natural theology.

We realize that many scholars have claimed the study of religion to be neither metaphysical nor theological. Yet, what possible meanings could be ascribed to a "uniformity of human nature" and/or a "transcendent reality" that are not metaphysical or theological? Here lies a partial answer to the question that has perplexed us: Why do scholars of religion remain shy of definitions and theories? It is due to the fact that the "something" which must be understood cannot in principle be given a definition or a theory.

Without the construction of theories in which the problems of "definition," "reduction," and "explanation" are resolved, this predicament will continue to persist and paralyze all methodological attempts to move beyond existing perspectives that see religion only in terms of the sacred. Among the many scholars who appeal to the sacred or the ultimate, not one deems it necessary to explain these terms. In fact, it was Wach who was the last great scholar of religion

that struggled with this issue. He recognized very clearly that what Otto characterized as the sacred ultimately defied any scientific description, analysis, or comprehension. He saw, with methodological clarity, the "vicious circle" involved in any attempt to analyze it. His scholarly efforts were directed toward a clarification of the *insight* necessary for an adequate understanding of both religious experience and its expressions.[70]

As plausible as it sounds, this kind of circularity ends in skepticism because both the expression and the experience of religion are understood in terms of a referent that cannot in itself be defined or understood. The attempt to move out of this circularity by turning to the methods of structure and function will not suffice, since these terms are logically related to theories concerning definition and explanation. It must be made clear that when a switch to the structure and function of religion is made, these terms become heuristic devices: they are as incapable of proof as the established definitions of the sacred which they intend to serve.

The standard criticism of the operation called *Verstehen* clearly shows that it is not a method used to obtain knowledge. It is at best a preliminary technique, and ought not to be confused with the logical procedures of validation and justification inherent in any scientific method. Our analysis shows that this criticism applies equally to studies of religion which assume "understanding" as the basis for a science of religion. We are not suggesting that "understanding" be eliminated. All we claim is that the use of "understanding" in religion must undergo a clarification and defense similar to Dray's revision of "understanding" as "rational explanation."

The problems and confusions of "definition," "reduction," "explanation," and "understanding" that we have attempted to explicate deserve the highest priority for discussion in the contemporary study of religion. For we are convinced that without valid definitions and theories, a science of religion is impossible. We are fully aware that there is a prevailing point of view which argues that a science of religion is not only impossible but unnecessary. Everything we have said is obviously irrelevant to this point of view. We wish to point out, however, that our argument checks the Fabian tactic of winning a methodological battle by avoiding it.

[70] Joachim Wach, *Sociology of Religion*, pp. 13–17 (see n. 14 above).