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Traditional Controversies in The Scientific Status of Marketing Theory-A Popperian Analysis

By

Deborah Heffez

Abstract

During the past five decades, considerable academic debate in the field of marketing surrounded the controversy of "Is marketing a science?". Much of the debates in field tried to answer this question. More recently, however, the focus of the debate has shifted to the fundamental issue of which philosophical approach should be adopted in marketing. This paper will review and discuss the scientific status of marketing and its components as seen by prominent marketing scholars, and thus try to build a framework for evaluating the current methodological trends in marketing research from a philosophy of science perspective.

Key Words

Science, Theory, Laws, Philosophy of Science, Marketing Science

1. Introduction

Can marketing be qualified as science? Can the marketing discipline pass the rigorous tests in order to be admitted to the "scientific field elite?". The answer to this question is crucial when we think about the future developments in the field, as the specific philosophy perspective that will be selected will inevitably influence which theories, facts and research methodologies will prevail in the marketing discipline.

The introduction of philosophy of science in marketing and the role it played in influencing each of the current research methodologies in the field, will inevitably affect the appropriateness of each of these methodological trends in guiding research in the field. Therefore, in order to relate the main tenets of philosophy of science to the current trends in marketing research methodology, there is a need to look into the scientific status of marketing in general, and into terms such as 'science' and 'theory' as they are applied in marketing in particular.

This paper will be divided into three sections. The first will review and discuss the scientific status of marketing and its components, as seen by prominent scholars in the marketing field. The second section will analyze the role of science in marketing. The final section will provide conclusions concerning the usefulness of philosophy of

science in marketing.

2. Is Marketing a Science? – Controversial Issues

2-1. Is Marketing a Science? – An Earlier Debate

The debate concerning the scientific status of marketing was fueled by the article ‘The Development of the Science of Marketing—an Exploratory Survey’ written by Converse in 1945. By conducting this survey Converse hoped ‘to stimulate thought and research’ in marketing.¹ Though scholars such as Alderson, Cox, and Baumol published articles dealing with the scientific status of marketing, their analysis focuses on terms such as ‘theory’ and ‘science’ as they pertain to the field of marketing.²

Bartels asserts that marketing, more than often, not being characterized as a science results from two factors. First, not always the objectives of science are achieved in marketing study. In addition, it has not always been the intention of marketing men to develop a science of marketing.³ The hesitancy regarding the scientific status of marketing is a by-product of the scientific status of the social sciences in general. Critics often point at the undefined scientific status of the social sciences and at the narrowness of the marketing field as grounds for not granting the field of marketing a scientific status. Bartels asserts that this critique brings to light the question of:

Whether the development of science is contingent primarily upon the nature of the subject studied, upon the method of analysis employed, or upon the definitive nature of the generalization derived.⁴

Generally, the objective of scientific research is the derivation of laws and principles, which is based on the uniformity of the phenomena investigated. However, marketing being a social science is not highly uniformed, and therefore the objective methods of the natural sciences, which are considered standard in scientific research, cannot be applied in the field in order to obtain the reliable generalizations, which are identified with the scientific status of a field. While Bartels raises the above issue in his article, he emphasizes that it is correct only to some extent as:

The stability of the behaviour of *groups* and the tendency of individuals to conform to the group pattern constitute a uniformity sufficient for making valid predictions.⁵

Bartels points at the fact that science is not judged only by the nature of its generalizations, but also by its subject matter and by the research methodology applied. Though some methods of the physical sciences are regarded as inapplicable to the social sciences, it does not necessarily mean that the social sciences are less scientific. In order to overcome these methodological “barriers”, new methods, which

¹Paul D. Converse, “The Development of the Science of Marketing—An Exploratory Survey,” *The Journal of Marketing*, (vol.10, 1945), pp.14-23.

²A detailed analysis of the view of these scholars will be the subject of a separate section of this article. At this point, their names are mentioned in order to create a continuum in the analysis of the debate concerning the scientific status of marketing.

³Robert Bartels, “Can Marketing Be a Science?,” *Journal of Marketing*, (vol.15, January 1951), p.319.

⁴*Ibid.*, p.319.

⁵*Ibid.*, p.320.

are more suitable to the fields of inquiry of the social sciences have been developed, and these methods combined with older techniques, which are adapted to the new needs, form the increasingly scientific foundations of the marketing field.⁶

Furthermore, associating the term 'marketing' to concepts such as 'science', 'discipline', 'philosophy' and 'art', may clarify the issue of whether marketing is a science or not. Correspondence to any of the above concepts is a viable option, yet the possibility that marketing is in fact a combination of the above classifications should not be overlooked.⁷

Science is "any branch or department of systematized knowledge considered as a distinct field of investigation or object of study, . . . A branch of study which is concerned with observation and classification of facts, especially with the establishment of verifiable general laws, chiefly by induction and hypotheses; . . . Specifically, accumulated and accepted knowledge which has been systematized and formulated with reference to the discovery of general truths or the operation of general laws; knowledge classified and made available in work, life, or the search for truth";

Philosophy is "the science which investigate the most general facts and principles of reality and of human nature and conduct; . . . The body of principles or general conceptions underlying a given branch of learning, or major discipline, a religious system, a human activity, or the like, and the application of it; as, the *philosophy* of history, Christianity, or of business";

A *Discipline* is "that which is taught to pupils: teachings; learnings; doctrine. . . . A subject that is taught; a branch of knowledge; also, a course of study";

Art is "a branch of learning; a science; especially, a science such as grammar, logic, or mathematics, serving chiefly as a discipline or as an instrument of knowledge; . . . The general principles of any branch of learning or of any developed craft; a system of rules or of organized modes of operation serving to facilitate the performance of certain actions; . . . Systematic application of knowledge or skill in effecting a desired result."

The above definitions emphasize different aspects of marketing. Nevertheless, if marketing is to become a science, it should possess the characteristics of a scientific subject, i.e., it should become a systematic body of knowledge extensive in scope, yet applicable to the solution of various problems. Accordingly, the requirement for a broader science of marketing stems from a situation in which the current 'body of marketing knowledge' is unsuited for solving new problems that arise in the field. Yet, according to Bartels, the correct approach to a science of marketing should be composed of 'sound theories as well as from tested facts'.⁸

⁶Ibid., p.321.

⁷Ibid., p.322. Bartels measures marketing against the definitions, as they appear in the Webster's Unabridged Dictionary. The New Oxford Dictionary of English as published in 1998, defines the above terms as follows: *Science* ■ the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiments. ■ A particular area of this: *veterinary science* ■ a systematically organized body of knowledge on a particular subject (the origin of the word can be found in the Latin word *scire* 'know').

Philosophy ■ a set of views and theories of a particular philosopher concerning such study or an aspect of it: *a clash of rival socialist philosophies*. ■ the study of the theoretical basis of a particular branch of knowledge or experience: *the philosophy of science*, (originates from the Greek word *philosophia* 'love of wisdom').

Discipline ■ a branch of knowledge, typically one studied in higher education: *sociology is a fairly new discipline*, (originates from the Latin word *disciplina* 'instruction, knowledge').

Art ■ subject of study primarily concerned with the process and product of human creativity and social life, such as languages, literature, and history (as contrasted with scientific or technical subjects): *the belief that the arts and sciences were incompatible*, (originates from the Latin word *ars*, art-). Additional definitions of the above concepts are omitted as they are not pertinent to the topic of this dissertation.

Though Bartels concludes that marketing is a science and should be regarded as such, Hutchinson points out that the disagreement over the scientific nature of the marketing field can be related to the heterogeneity of the activities, which constitute the term marketing. He further points out, that marketing activities can be divided into three distinct groups:

The first group, those whose job it is to distribute goods, almost no one would contend seriously that they are engaged in some sort of scientific endeavor; wholesalers and retailers hardly fit the mold of scientists. Neither the second group, the teachers, nor the third group, the market research men, are so easily disposed of, particularly since some of them are concerned with systematizing the subject. All are interested in employing scientific methodology in the field.⁹

The process of demonstrating that marketing is indeed a science can be divided into the 'the semantic approach' and the 'economic approach'. The first approach consists of twisting the meaning of terms used in science, to the point where, finally, marketing fits into their definitions, and can thus be considered as having certain scientific characteristics. However, this approach is too vague and should not be considered as useful in trying to make marketing a science. An additional approach is the 'economic approach', which consists of referring to neo-classical economic theories in order to learn about marketing theories. According to Hutchinson, inapplicability of these theories to the field of marketing has led marketing theorists to take a critical approach. However, he stresses that criticism alone will not foster the development of a theory of marketing, and therefore the critical approach should be complemented by positive contributions within the field of marketing. Finally, Hutchinson concludes that:

Marketing is not a science. It is rather an art or a practice, and as such much more closely resembles engineering, medicine, and architecture than it does physics, chemistry, or biology.¹⁰

Employment of the scientific method which consists of a systematic approach to problems (formulation of hypotheses, fact gathering and testing of hypotheses), does not necessarily imply that the field in which the method is applied is a *science*. Furthermore, immediate action as practiced in fields such as engineering or medicine or even marketing (assuming that marketing is an art or a practice), is not scientific. The urgency required in solving the problem at hand, rules out the lengthy research that is required in order to develop human knowledge as a primary goal of science. Consequently, even a scientist, who temporarily abandons his line of research in favor of dealing with a practical problem, momentarily becomes a practitioner.

Hutchinson points out that though marketing is not a science it derives useful concepts from the scientific fields. Yet, at the same time it can contribute to science by focusing the attention of the scientists to the inadequacy of certain scientific concepts in solving practical problems, and thus contribute to the development of scientific knowledge.¹¹

⁹Robert Bartels, "Can Marketing Be a Science?," *The Journal of Marketing*, op. cit., pp.322-328.

¹⁰Kenneth D. Hutchinson, "Marketing as a Science: An Appraisal," *Journal of Marketing*, (vol.16, January 1952), p.287.

¹¹*Ibid.*, pp.288-289. (Quotation on p.289).

¹¹*Ibid.*, p.292.

Buzzell adds an important point to the debate concerning the scientific status of marketing. He stresses that the emergence of a science of marketing and the application of scientific methods in marketing research are two separate issues:

It is useful to keep these two points separate. First, we can consider whether or not there is such a thing as a science of marketing, comparable in some sense to the sciences of physics, biology, and so on. Secondly, there is still remaining the question of how and to what extent scientific techniques can be applied to marketing—whether or not it is, or may be, a science in itself.¹²

Buzzell asserts that, though the development of a science of marketing and the formulation of a sound theoretical basis in marketing will have a 'positive' influence not only on the research aspect of marketing, but also on its practical side, it is evident that there are difficulties inherent to the process. According to Buzzell, there are three schools of thought on this issue:

1. Science in marketing can be achieved by applying methods of other scientific fields, yet difficulties will arise when trying to achieve satisfactory results because of the complexity of marketing phenomena.
2. Marketing phenomena are not similar to physical sciences' phenomena, and therefore different methods should be applied.
3. Marketing can never become a science because of its inherent elusiveness. Consequently, the process of trying to achieve scientific objectives in marketing will inevitably fail.¹³

Nevertheless, Buzzell assumes that these difficulties can be overcome and that marketing can become a full-fledged science. Thus, once the field of marketing has achieved its scientific status, the next task facing marketing practitioners (managers) will be to evaluate to which extent developments in marketing science can be applied to practical decisions.¹⁴

Previously, Bartels has claimed that marketing could be a combination of science, art, discipline, and philosophy. Halbert adds that if the distinction between discipline and science is based on the grounds that the former supplies the techniques while the latter supplies the theories, then it implies that techniques supply answers to questions while theories supply the evaluation criteria for those answers.¹⁵

Furthermore, a science of marketing should include three major concepts from the social and behavioral sciences:

1. Explanation and understanding of human behavior cannot be simplified, and therefore the physical and biological sciences cannot explain behavioral phenomena, which are the concern of marketing investigation.¹⁶
2. Scientific research methods in marketing should focus not only on the 'external' marketing systems, but also on the 'internal' aspect of the field, i.e., on the assumptions and the various approaches taken by the scientists investigating the phenomena.

¹²Robert D. Buzzell, "Is Marketing a Science," *Harvard Business Review*, (vol.41, January–February 1963), p.33.

¹³*Ibid.*, p.40 and p.166.

¹⁴*Ibid.*, pp.36–39 and pp.166–170.

¹⁵Michael H. Halbert, "The Requirements for Theory in Marketing," in *Theory in Marketing*, Reavis Cox, Wroe Alderson, Stanley J. Shapiro, eds., (Homewood, Illinois: Richard D. Irwin, Inc., 1964), p.24.

¹⁶Here Halbert emphasizes his personal opinion regarding the role of psychologism in marketing science. Nevertheless, we would like to stress that we do not need to follow psychologism in marketing science.

3. Development of concepts and techniques for 'the study of on-going real systems involving people in their normal interactive environment'.¹⁷

It is evident that Halbert relies heavily on the behavioral sciences, as a source for a science of marketing, thus, taking, according to Popper, an unacceptable position.¹⁸ However, he emphasizes the importance of being able to distinguish between methodological and content sciences, in order to learn about a viable science of marketing. Any science should have a 'content' part and a philosophy. While the content refers to the phenomena investigated, the philosophy of any science refers to 'the rules by which one can test statements concerning the phenomena under study'.¹⁹

He concludes that inability in distinguishing between methodological and content sciences leads to confusion regarding the scientific status of marketing:

It is often stated that marketing will never be a science like physics and that unless it is it will not be a "real" science. Remarks of this type indicate confusion between the methodological sciences and the content sciences. Physics is a content science no less than is marketing. It has been able to employ more adequately the techniques of logic and mathematics and it is on *this* ground rather than because physics deals with material objects that it deserves accolade as an exemplary science.²⁰

It can thus be inferred that in order to become a science, marketing should not borrow from other sciences concepts that can be applied to marketing as a 'content' science, but rather adopt concepts and methodologies which are essential to the development of any science regardless of its content.

According to Taylor, putting the debate 'Is Marketing a Science?' in a new perspective should 'relieve some of the tension of the "schizophrenia" resulting from the two opposing views'.²¹ Marketing is both a 'science' and an 'art'; while the term 'science' emphasizes the knowledge-related aspect of the field, 'art' emphasizes the doing-related aspect of marketing. These two aspects of marketing are interdependent, therefore *being a science does not imply not being an art or vice versa*.

Knowledge makes it possible to improve the skill in doing; and doing serves as a means of testing and enhancing knowledge. . . Science in marketing will provide guides to more efficient action and a means of sharpening skill.

The act of marketing is an art. The practitioner as such is not a scientist. Yet in the course of his work he may publish observations and conduct experiments. To the extent that he does so and contributes to the fund of conceptual schemes that are fruitful and that extend the range of theory in marketing, he functions as a scientist.²²

2-2. An Earlier Debate—Summary

The above pages outlined some of the debate concerning the scientific status of marketing. A hint of an anti-naturalistic position can be discerned in the writings of some of the discussants referred to above. Taking an anti-naturalistic stance in marketing relies on the initial assumption that natural sciences and social sciences

¹⁷Ibid., p.28.

¹⁸According to Popper, psychology should be treated as one of the social sciences, but not as the basis of all social sciences, as several marketing scholars tend to believe.

¹⁹Ibid., p.29.

²⁰Ibid., p.30. Content sciences include fields such as chemistry, physics, biology and marketing, while methodological sciences include fields such as mathematics, logic, epistemology and so on.

²¹Weldon J. Taylor, "Is Marketing a Science?" Revisited," *Journal of Marketing*, (vol.29, July 1965), p.49.

²²Ibid., p.53.

differ in nature and therefore different methods should be applied. We consider this assumption as erroneous and agree with Popper that natural and social sciences are similar in nature, as both make use of laws and hypotheses. The main differences between the two fields are differences of degree rather than of kind, and do not imply the application of an anti-naturalistic approach in the social sciences in general and in marketing science in particular.

The debate which remained unsettled during the 1950' and most of the 1960' took a new turn with the emergence of the debate on the 'nature of marketing' as fueled by marketing scholars such as Kotler, Levy, Lazer, Luck and Dawson. However, before examining the direction and changes that the debate regarding the scientific status of marketing has taken, we need to look into the role that marketing theory played in contributing to the development of a 'science of marketing'.

2-3. Theory in Marketing—a Scientific Prerequisite

As already mentioned before, substantive interest in terms such as 'science' and 'theory' in the field of marketing can be accredited to Alderson and Cox. According to Alderson and Cox, the lack of adequate marketing theories serving as a basis for the explanation of marketing phenomena leads to 'accepted uncritically conclusions resting upon misleading assumptions'.²³ Therefore, if marketing is to attain a scientific status, a prerequisite is the formulation of a sound marketing theory.

When dealing with the formulation of marketing theory, there is a need to look into the adequate sources for such a theory, and into the components of the theory itself. Alderson and Cox stress that marketing should draw upon the intellectual disciplines when searching for concepts and procedures, which will serve as guidelines for the formulation of hypotheses and collection of data in the field. Furthermore, marketing theory needs to meet several tests:

- (1) It should give promise of serving the variety of needs that have created the current interest in marketing theory.
- (2) It should be able to draw in a comprehensive way upon the starting points for theory already available in the literature.
- (3) It should provide a consistent theoretical perspective for the study of all the major classes of significant entities in marketing.

For, according to Alderson and Cox, if marketing theory is to attain the status of a scientific theory, the underlying assumptions 'must spring from careful empirical generalizations'. In addition, data collection should be increasingly pertinent to hypotheses formulated on a theoretical basis.²⁴ Although the requirement for a sound theoretical ground is emphasized, it is evident that the authors stress the importance of an inductive empirical approach in marketing, as a condition for becoming scientific. Nevertheless, according to a Popperian perspective, induction in science is logically

²³Wroe Alderson and Reavis Cox, "Towards a Theory of Marketing," *The Journal of Marketing*, (vol.13, no.2, October 1948), pp.140-141.

²⁴*Ibid.*, p.142. The authors stress that general economic theory is an obvious source for marketing theory. However, also other social sciences such as anthropology, sociology and social psychology can serve as viable sources for the formulation of a meaningful theory of marketing. See also Johan Arndt, "The Political Economy Paradigm: Foundation for Theory Building in Marketing," *Journal of Marketing*, vol.47, fall 1983, pp. 44-54. In this article, Arndt proposes the 'political economic paradigm' as an appropriate paradigm for theory building in marketing.

impossible, therefore making it difficult for us to accept Alderson and Cox's assertion that careful empirical generalizations should form the basis for a marketing science.

Baumol also stresses the importance of a sound theoretical basis in marketing, as a prerequisite for achieving a scientific status. He stresses that the requirement for a theory emerges from the need for explanations. As data alone do not provide satisfactory explanation of phenomena, theory must be formulated in order to describe them. However, it does not mean that 'nontheoretical research is undesirable or even less desirable than the work of the theorist. Their purposes are different—one supplies the data; the other, the explanations.'²⁵

From the above it can be inferred that Alderson, Cox, and Baumol conclude that theory and empirical generalizations in marketing are complementary, and cannot contribute to our understanding of marketing phenomena when treated separately. Though empirical data can provide information regarding a certain situation at the time, theoretical constructs will bring about an understanding of the structure of the situation, and will provide an answer for the 'Why is it happening?' kind of question.

Baumol adds that though the usefulness of theory is unquestioned, 'questions are sometimes raised about the possibility of a distinctive marketing theory'.²⁶ In order to provide explanations of marketing phenomena, researchers usually refer to the already developed theories of other social fields, such as economics, sociology, or psychology. However, he emphasizes that:

Economics and psychology may more usefully be taken to provide some bricks for the construction of marketing theory rather than constituting its sum and substance. . The appropriate choice of theory is, as I have emphasized, a matter of the problem in which the investigator is interested. It must surely be admitted that marketing has its special problems and may, therefore, well find it useful to develop further its own body of theory.²⁷

It has already been established in the previous pages that a sound theoretical basis in marketing is a prerequisite for marketing becoming a science, and that theory and practice in marketing are complementary.²⁸ Halbert adds that the need for a marketing theory arises also from the support it can give to the practitioners in the field. It should be noted that while theory deals with the explanation of events as a type, practice explicates events demarcated by specific conditions, i.e.:

<u>THEORISTS</u>	<u>PRACTITIONERS</u>
L	L
C	C + α
<hr style="width: 50%; margin: 0 auto;"/> E	<hr style="width: 50%; margin: 0 auto;"/> E'

(α = actual specific conditions which vary according to the company. As a result, E' = explanation of an event demarcated by specific conditions).

Accordingly, the two necessary conditions for the formulation of a marketing theory are the need for it from both the practical and the intellectual aspects, and the

²⁵W. J. Baumol, "On the Role of Marketing Theory," *Journal of Marketing*, (vol.21, April 1957), pp.413–415.

²⁶Ibid., p.416.

²⁷Ibid., p.417.

²⁸At this point, it is important to emphasize that we accept this opinion *if and only if*, practice stands for the testing of the related theory.

availability of techniques required for developing such a theory. As Halbert phrases it:

To learn from experience one must have a framework of concepts within which to interpret past events; otherwise experience cannot be relevant and nothing can be learned from it.²⁹

In a later article, Halbert clearly states his belief that marketing is not yet a science, and that achieving a scientific status presupposes the formulation of a well established theory of marketing;

If marketing is to develop and proceed as a science in future years, we can confidently expect the development and presence of marketing theory in university circles to increase very rapidly and to take its expected and respected place among the other scientific disciplines.³⁰

Essentially, the purpose of a theoretical framework in any field, including marketing, is to 'make possible some basis for forecasting developments and thus to increase the knowledge about the various aspects of marketing.'³¹

It is clear that marketing scholars agree that the formulation of a theory of marketing is a prerequisite for attaining a scientific status. Furthermore, its usefulness and role are unquestioned. However, in order to evaluate the potential contribution of a certain theory to marketing, evaluation criteria are necessary. Zaltman, LeMasters and Heffring point out that well-established general criteria for theory evaluation, which are especially useful in the development or formative stage of the theory being evaluated, are adapted from the philosophy of science literature and as such are considered as the 'traditional' criteria.

Properties of a Good Theory³²

Property	Meaning
Internal consistency	Has no logical contradictions
Strength	Entails other theories
Representativeness	Deals with deep mechanisms
Empirical interpretability	Is operationalizable
Falsifiability	Falsifiable when confronted with reality
Confirmation	Coheres with facts
Originality	Increases knowledge by deriving new propositions
Unifying power	Connects previously unconnected items
Heuristic power	Suggests new directions for research

Though the writers suggest a set of 'objective' criteria for theory evaluation, they

²⁹Michael H. Halbert, "The Requirements for Theory in Marketing," op. cit., pp.17-18.

³⁰Michael H. Halbert, "Marketing Theory and Marketing Science," in *Perspectives in Marketing Theory*, Jerome B. Kernan and Montrose S. Sommers, eds., (New York: Appleton-Century-Crofts, 1968), pp.59-65. (Quotation on p.63)

³¹Lawrence C. Lockley, "An Approach to Marketing Theory," in *Theory in Marketing*, Reavis Cox, Wroe Alderson, Stanley J. Shapiro, eds., (Homewood, Illinois: Richard D. Irwin, Inc., 1964), p.43. For additional discussion of the role of marketing theory see Richard M. Martin, "On Atomic Sentential Forms and Theory Construction" in *Theory in Marketing*, Reavis Cox, Wroe Alderson, Stanley J. Shapiro, eds., (Homewood, Illinois: Richard D. Irwin, Inc., 1964), pp.68-83; Perry Bliss, "How We Can 'Know' more about Marketing", in *Theory in Marketing*, Reavis Cox, Wroe Alderson, Stanley J. Shapiro, eds., (Homewood, Illinois: Richard D. Irwin, Inc., 1964), pp.84-91; C. West Churchman, "Marketing Theory as Marketing Management", in *Theory in Marketing*, Reavis Cox, Wroe Alderson, Stanley J. Shapiro, eds., (Homewood, Illinois: Richard D. Irwin, Inc., 1964), pp.313-321.

³²Gerald Zaltman, Karen LeMasters, Michael Heffring, *Theory Construction in Marketing: Some Thoughts on Thinking*, (New York: John Wiley & Sons, Inc., 1982) pp.163-164. The writers also mention 'nontraditional' criteria for theory evaluation, such as 'distance', 'metaphor', 'generative capacity' and 'irony'.

assert that the application process may involve a certain degree of subjectivity as certain criteria may be assigned a different degree of importance according to the theory being evaluated, and the person conducting the evaluation.³³

2-4. Is Marketing a Science? – A More Recent Debate

The debate on the 'nature of marketing' raises a new aspect in the unsettled controversy regarding the scientific status of marketing. Kotler and Levy propose that the concept of marketing should be broadened to include nonprofit organizations as these perform marketing activities in the same way that profit organizations do.³⁴ Lazer discusses the changing boundaries of the marketing field, urging for a broader perception and definition of marketing that would reflect 'marketing's societal dimensions, and perceives marketing as more than just a technology of the firm'.³⁵ Furthermore, Dawson criticizes the emphasis upon practical problem solving in marketing as downsizing the attention that should be paid to the social ramifications of marketing activities.³⁶

On the other hand, Luck contends that marketing should be limited to include only business processes and activities that result in a *market* transaction. He notes that limiting the activities that ought to be classified as 'marketing activities' would not cripple the field and it would remain a field of considerable scope.³⁷ Similarly, Bartels has researched into the 'identity crisis' in marketing, and pointed out several inherent disadvantages to broadening the concept of marketing:

1. Marketing researchers may turn away from important issues in the area of distribution.
2. Methodology rather than substance is emphasized as the content of marketing knowledge.
3. Forms of decision-making have become more important than knowledge of the subject related to the decisions that are to be made.
4. Marketing literature may become increasingly esoteric and abstract, and thus more difficult to understand for the practitioners in the field.

Bartels concludes that if marketing broadens to include both economic and noneconomic fields of application, it will eventually lead to a mutation of the marketing concept as originally conceived, ultimately reappearing under a new name.³⁸

Though the controversy over the concept of marketing did finally contribute to an 'expanded' conception of the field, this new aspect of the debate did not bring about an answer to the 'is marketing a science?' question.³⁹ The development of a 'conceptual

³³Ibid., p.175.

³⁴Philip Kotler and Sidney J. Levy, "Broadening the Concept of Marketing," *Journal of Marketing*, (vol.33, July 1969), p.15. In this articles the authors claim that nonprofit organization such as churches, police departments and public schools have products and customers and make use of the marketing mix tools and therefore perform marketing activities.

³⁵William Lazer, "Marketing's Changing Social Relationships," *Journal of Marketing*, (vol.33, January 1969), p.9.

³⁶Leslie Dawson, "Marketing Science in the Age of Aquarius," *Journal of Marketing*, (vol.35, January 1971), p.71.

³⁷David Luck, "Broadening the Concept of Marketing—Too Far," *Journal of Marketing*, (vol.33, January 1969), p.54.

³⁸Robert Bartels, "The Identity Crisis in Marketing," *Journal of Marketing*, (vol.38, October 1974), p.76.

³⁹Bush J. Alan, William C. Moncrief, and Clifford D. Scott, "On the Interpretation of Nomic Necessity: A Requirement for a science of Marketing," in *Marketing Theory: Philosophy of Science Perspectives*, Ronald F. Bush and Shelby D. Hunt, eds., (Chicago: American Marketing Association, 1982), p.30.

model of the scope of marketing' by Shelby Hunt is considered as the first attempt at combining these two controversies. By using his conceptual model of the scope of marketing combined with several analytical methods derived from the philosophy of science literature, Hunt addresses both the 'nature of marketing' and the 'marketing science' controversies.⁴⁰

According to Hunt, the different views regarding the "Is marketing a science?" controversy can be considered a by-product of the different perceptions of the scope of marketing. Nevertheless, the scope of marketing is remarkably broad:

The scope of the area called marketing has been shown to be exceptionally broad. Marketing has micro/macro dimensions, profit sector/nonprofit sector dimensions, and positive/normative dimensions. . . If marketing is to be restricted only to the profit/micro/normative dimension (as many practitioners would view it), then marketing is not a science and could not become one.⁴¹

On the premises that marketing has a basic subject matter (science of transactions), is not lacking uniformities and regularities, and uses *intersubjectively certifiable* methods, Hunt concludes that the positive dimensions of marketing can be classified as marketing science.

2-5. Laws and Lawlike Statements in Marketing

The existence of laws in marketing is necessary in determining whether marketing is a science or not, for laws and lawlike statements play a critical role in marketing research.⁴² Hunt emphasizes that the development of laws in marketing is a prerequisite for explaining marketing phenomena. In addition, lawlike statements in marketing 'facilitate the prediction of marketing phenomena'.⁴³ However, not all the lawlike statements in the social sciences are laws of strict universal form, thus failing on the falsifiability criterion, which is necessary for a discipline to develop into a science.

Laws in the social sciences are probabilistic or statistical in nature. Therefore, statements of lawlike nature in the social sciences are fundamentally not falsifiable, and it is this criterion of falsifiability or testability that distinguishes between science and nonscience.

Bush, Moncrief and Scott conclude that if marketing has statements of lawlike nature, and that if those statements satisfy the criterion of falsifiability, then marketing is in fact a science.⁴⁴

According to Hunt, a statement must possess four criteria in order to be consid-

⁴⁰Ibid., p.30. Though Hunt's model and the contribution it made to the 'marketing science' debate are recognized in this paper, it does not necessarily mean that we agree with Hunt's view on which research methodology should be adopted in the marketing field.

⁴¹Shelby D. Hunt, "The Nature and Scope of Marketing," *Journal of Marketing*, (vol.40, July 1976), pp.24-28. (quotation on p.24). In this article, Hunt, in addition to classifying marketing activities into micro/macro and profit/nonprofit dimensions he dichotomize them into positive and normative phenomena. Thus, he excludes the normative dimension of marketing from being scientific. Robin criticizes this view as unnecessary and confusing on the grounds that scientific explanation can be applied in marketing even in the case of normative objectives. See Donald P. Robin, "Comment on the Nature and the Scope of Marketing," *Journal of Marketing*, vol.41, January 1977, pp.136-138.

⁴²Shelby D. Hunt, *Modern Marketing Theory: Critical Issues in the Philosophy of Marketing Science*, (Cincinnati, OH: South-Western Publishing Co., 1991), p.106.

⁴³Shelby D. Hunt, *Marketing Theory: Conceptual Foundations of Research in Marketing*, (Columbus, OH: Grid Inc., 1976), p.66. In chapter II of the book, Hunt extensively discusses the models that have explanatory power (deductive-nomological, deductive-statistical and inductive-statistical) of marketing phenomena.

ered lawlike:

1. It must be in the form of a generalized conditional implying an “if-then” relationship. Furthermore, though it must fulfill all the criteria of laws, it has not yet been tested and corroborated. Accordingly, some lawlike statements can be proved to be false, but can never be proved true.
2. All lawlike statements must have empirical content. The criterion of empirical content rules out any statement of analytical nature, which cannot be tested against the ‘real world’. In addition, this criterion eliminates definitions and tautological statements.
3. Lawlike statements must possess nomic necessity. Meaning that the occurrence of a certain phenomenon must be related to the occurrence of another phenomenon, thus ruling out association by ‘chance’.⁴⁵ According to Bush, Moncrief and Scott, though there are several views regarding the meaning of nomic necessity, a more important point that needs to be emphasized is whether probability or statistical laws of the social sciences can ever possess such a criterion? They conclude:

If there can be some agreement that there is not a precise demarcation between a statement that possesses nomic necessity and one that does not and that necessities can lie on a continuum, then the lawlike statements in the social sciences could possess a “degree” of necessity. . . . If the purpose of science is to explain, predict and control, and laws are necessary for explanatory power, then there should be no question that there are lawlike statements in marketing. If one adheres to the strict criteria for laws (i.e., nomic necessity), it can be argued that lawlike statements in marketing possess level of necessity—technical necessity, and it is nomic tendency that fuels our laws.⁴⁶

4. The last criterion stressed by Hunt is that lawlike statements must be systematically integrated into a body of scientific knowledge. This requirement emphasizes the importance of theories in a scientific body of knowledge, and contributes to the distinction between strictly empirical regularities and lawlike statements. For theories, ‘provide a crucial mechanism for according lawlike status to empirical regularities and other isolated propositions’.⁴⁷

From the above, it can be concluded that if indeed marketing, as field of research, employs ‘scientific tools’ such as laws and theories, in order to explain phenomena, then it deserves to be called a science.

2-6. Marketing as a Science—Conclusion

The issue of whether or not marketing is a science has been debated for over three decades. By giving a definition of science and the methods employed, marketing scholars have tried to ascertain if those could be applied to the field of marketing and lead to the conclusion that marketing is a science. However, some scholars believe that

⁴⁴Bush J. Alan, William C. Moncrief, and Clifford D. Scott, “On the Interpretation of Nomic Necessity: A Requirement for a science of Marketing”, op. cit., p.30. (quotation on the same page)* We would like to emphasize that we accept only the second part of the above quotation.

⁴⁵Shelby D. Hunt, *Marketing Theory: Conceptual Foundations of Research in Marketing*, op. cit., pp.65-71.

⁴⁶Bush J. Alan, William C. Moncrief, and Clifford D. Scott, “On the Interpretation of Nomic Necessity: A Requirement for a science of Marketing”, op. cit., pp.31-32. (quotation on p.32).

⁴⁷Shelby D. Hunt, *Marketing Theory: Conceptual Foundations of Research in Marketing*, op. cit., pp.71-74. Hunt notes that ‘lawlike generalizations’ become laws if there exists a substantial corroborative empirical evidence. Furthermore, when the evidence corroborating certain laws is overwhelming and when the laws are considered to be of extreme or central importance to a discipline, then the laws are called ‘principles’. See also Shelby D. Hunt, *Modern Marketing Theory: Critical Issues in the Philosophy of Marketing Science*, op. cit., pp. 118-119.

marketing as a social science is more complex, and thus the methods of the natural sciences cannot apply. Others assert that though marketing employs scientific procedures it is not a science but rather an art. Though some aspects of marketing may be more 'artistically oriented', the objective of research in marketing is to create 'knowledge' about the field, and as such it can be classified as a science.

3. Role of Science in Marketing

After having determined that marketing is a science, there is a need to look into the fundamental question of the role of science in marketing. If marketing is a science, then what should be the role of science as applied to the field of marketing?

In general, a science consists of a systematically organized body of knowledge related to phenomena in a particular subject matter, and of the research tools employable for obtaining accurate and reliable knowledge about these phenomena. Consequently, marketing science aims at investigating the various phenomena that are denominated as marketing, and the marketing researcher, in his role as a scientist, seeks knowledge about the aspects of society with which he is concerned.

Thus, science in marketing would provide the marketing scientists with tools for knowledge acquisition and analysis, making it easier to describe, predict, and control marketing phenomena.

As a scientist his (the marketing researcher) competence consists, if he has the necessary knowledge, of an ability

1. to state what is going on in marketing.
2. to predict the consequences of actions and events insofar as they pertain to marketing.
3. to advise marketing practitioners or society how best to attain goals specified by either.⁴⁸

However, an opposing opinion states that if marketing researchers think in terms of the practical implications of their work, it may actually hinder the development of a valuable marketing science. Yet, it does not necessarily suggest that practical implications should be disregarded;

What is needed are two types of researchers—the 'pure or basic scientist', whose research is aimed at explaining phenomena or testing theory, and the 'applied scientist', whose interests are with determining the practical implications of the results of pure science research, or with extending the boundaries and understanding of the science into practical areas. For the applied scientist the 'real world' is the focus, and the justification of research based on 'real world' considerations in this case can, perhaps, be justified.⁴⁹

According To Schwartz, 'science in any field of investigation is the direct antithe-

⁴⁸George Schwartz, "Nature and Goals of Marketing Science," in *Science in Marketing*, George Schwartz, ed., (New York, London and Sydney: John Wiley & Sons, Inc., 1965), pp. 5-12. (Quotation on pp.11-12). Schwartz points out that while knowledge about marketing can be stated either verbally or in the form of numbers, quantitative knowledge 'may be more precise and informative than verbal knowledge.

⁴⁹Wayne A. Roberts, Jr., "A Kuhnian Perspective on Marketing Science and the 'Scientific Method'," in *Scientific Method in Marketing*, Paul F. Anderson and Michael J. Ryan, eds., (Chicago: American Marketing Association, 1984), pp.14-17. (quotation on p.16).

sis of dogmatism'.⁵⁰ By taking a scientific approach when investigating a marketing phenomenon, the marketing scientist becomes more sensitive to the creditability of the research methodology applied and the relevance of the results produced by the research technique adopted. Moreover, science in marketing contributes to the systematization of the study of marketing phenomena, and thus eliminates waste which would render the marketing process more efficient.⁵¹

By drawing on other scientific fields, marketing increases its research resources and increasingly improves its potential for tackling problems. However, the adoption of scientific procedures in marketing is usually synonymous with scientific tools borrowed from the natural sciences. Deshpande cautions that this kind of 'myopic attitude', of following and using the tools of natural sciences in establishing research methods in marketing, may result in a 'limited set of methods for doing science', and may also have a hindering effect on the growth of the discipline.⁵²

Accordingly, marketing as a science would become a body of empirically validated descriptive, predictive, and controlled knowledge. Schwartz stresses that the role of such knowledge in marketing is to provide true information:

about the activities and institutions which comprise marketing, (2) which would enable those concerned with marketing to predict the consequences of their actions or the behavior of variable marketing phenomena, and (3) which would enable those concerned with marketing to control the variation of marketing phenomena.⁵³

Ultimately, one perspective describes marketing as a field striving toward becoming a science, while the other implies that marketing is already a 'maturing' science. While both perspectives acknowledge the advantages of recognizing the role of traditional science in marketing, it should be stressed that in order to fully benefit from it, marketing scientists need to continue to investigate the role of conventional science in marketing.⁵⁴

⁵⁰George Schwartz, "Nature and Goals of Marketing Science," op. cit., p.18.

⁵¹David Hamilton, "Marketing Science: Usefulness to the Consumer", in *Science in Marketing*, George Schwartz, ed., (New York, London and Sydney: John Wiley & Sons, Inc., 1965), pp.38-46, and Joseph W. Newman, "Marketing Science: Significance to the Professor of Marketing", in *Science in Marketing*, George Schwartz, ed., (New York, London and Sydney: John Wiley & Sons, Inc., 1965), pp.20-31.

⁵²Rohit Deshpande, "Theoretical Myopia: The Discipline of Marketing and the Hierarchy of the Sciences," in *Scientific Method in Marketing*, Paul F. Anderson and Michael J. Ryan, eds., (Chicago: American Marketing Association, 1984), p.20. See also Rohit Deshpande, "'Paradigms Lost': On Theory and Method in Research in Marketing," *Journal of Marketing*, (vol.47, fall 1983), pp.101-110. Deshpande's definition of 'theoretical myopia' in marketing coincides with Peter and Olson's assertion that search for additional insights should not be limited to 'traditional' fields of borrowing such as economics, social and cognitive psychology, and statistics. In addition, disciplines such as history, anthropology, sociology, and clinical psychology should be drawn upon when looking for useful ideas for marketing science. See J. Paul Peter, and Jerry, C. Olson, "Is Science Marketing?," *Journal of Marketing*, (vol.47, fall 1983), pp.111-125.

⁵³George Schwartz, "Marketing Science: Past, Present and Future Development", in *Science in Marketing*, George Schwartz, ed., (New York, London and Sydney: John Wiley & Sons, Inc., 1965), p.484.

⁵⁴Michael P. Mokwa and Kenneth R. Evans, "In Pursuit of Marketing Knowledge: An Exploration into Philosophies of Inquiry," in *Marketing Theory: Philosophy of Science Perspectives*, Ronald F. Bush and Shelby D. Hunt, eds., (Chicago: American Marketing Association, 1982), p.34. See also William H. Redmond and Melanie Wallendorf, "Marketing and the Scientific Enterprise: A Sociological Analysis," in *Scientific Method in Marketing*, Paul F. Anderson and Michael J. Ryan, eds., (Chicago: American Marketing Association, 1984), pp.10-13.

4. Usefulness of Philosophy of Science in Marketing

Marketing methodologists usually refer to philosophical literature when investigating marketing phenomena. Thus, it seems plausible that knowledge of philosophy of science is useful for understanding marketing methodology, and for assessing the appropriateness of each of the current methodological trends in guiding research in the field.

In general, as all research activity implies some fundamental 'philosophy', every scientist that undertakes a research project makes assumptions about the goals of the project, the role of theory, and the applied methodology. Therefore, philosophy of science will help the practicing researcher to be aware of the underlying assumptions related to the project. According to Hunt, *explicit* awareness of frequently *implicit* assumptions of research will have a positive effect on the researcher, and will eventually lead to better and more effective research.⁵⁵ In addition, practicing methodologists would benefit from exposure to philosophy, as their analysis would become more understandable to others, and their debates would be on more stable ground as common terminology is employed.⁵⁶

Ultimately, a philosophy of science approach to marketing research will provide the guidelines for clarifying the controversy of which philosophy of science currently dominates marketing research. Furthermore, by exposing inaccurate and incoherent propositions, philosophy of science may foster the emergence of an 'optimal methodology' to guide research in marketing.

5. Summary and Conclusions

This paper has dealt with controversies related to the scientific status of marketing in the last fifty years. Some marketing scholars particularly focused on the application of terms such as science, theories, and laws to the field of marketing, as a prerequisite for a science of marketing. However, most of the controversies focused on the question whether marketing is a science or not. Employment of scientific methods in marketing is not necessarily related to the scientific status of the field. In addition, narrowness and elusiveness in marketing are mentioned as impediments toward scientificity.

Bartels acknowledges that the role of a science of marketing would be to contribute to the solution of marketing problems, and that theoretical deductions are important. Nevertheless, he emphasizes the importance of empirical evidence and of generalizations based upon experience. In addition, he stresses that negative instances do not nullify theoretical laws. Therefore, it is evident that he is suggesting a justification-oriented marketing science, in which both empirical induction and theoretical deduction have a place.

Both Hutchinson and Buzzell make a clear distinction between the employment of

⁵⁵Shelby D. Hunt, *Modern Marketing Theory: Critical Issues in the Philosophy of Marketing Science*, op. cit., pp.394-395.

⁵⁶Bruce J. Caldwell, *Beyond Positivism: Economic Methodology in the Twentieth Century*, (London, UK: George Allen & Unwin Publishers Ltd., 1982), pp.215-216.

scientific methods and the classification of the field as a science. While Hutchinson concludes that marketing is not a science, because it does not conform to the basic characteristics of science, Buzzell asserts that it is a science in a 'developing' phase.

Halbert, Alderson, Cox, and Baumol suggest that a science of marketing should draw concepts from the behavioral sciences. As already stated, we agree with the assertion that psychology is only one of the social sciences and therefore should not be considered as the basis for a science of marketing. In addition, we reject Alderson, Cox, and Baumol's emphasis on an empirical inductive approach as a basis for a theory of marketing, because induction in science is logically impossible. Though Halbert acknowledges that the starting point for a theory of marketing should be the appearance of an anomaly for which we do not have an adequate explanation (or a problem in Popper's words), he also overstates the importance of empirical generalizations in a science of marketing.

By asserting that the empirical philosophy of knowledge, which emphasizes that knowledge is derived from experience, should form the basis of a science of marketing, also Schwartz takes an empirical orientation towards the formulation of marketing science. Again, we can discern both inductive and psychological factors as conditions for marketing becoming a science.

The problematic element in the general criteria for the evaluation of marketing theories, as proposed by Zaltman, LeMasters, and Heffring, springs from the subjectivity entailed in the process. If the degree of importance of the evaluation criteria depends on the theory itself, and on the scientist evaluating the theory then the 'so-called objective' criteria turn into 'relative' criteria varying according to the circumstances. At this point, we may raise the question "How is it possible to formulate an objective theory of marketing based on subjective criteria?"

Kotler, Levy, Lazer, Dawson and Bartels shift the focus of the debate from the issue of whether marketing is a science to the definition of the concept of marketing. The inability in reaching a conclusion regarding the definition and the boundaries of the marketing field brings confusion into the debate on the scientific status of marketing. If we are unable to define what our field is about how can we know whether it is a science or not? Finally, a broader concept of marketing is agreed upon, yet it does not bring about an answer to the question 'is marketing a science?'

Though Shelby Hunt combines the two controversies, he concludes that only the positive dimensions of marketing can be referred to as marketing science. Nevertheless, by suggesting that marketing has also normative dimensions, he creates a situation in which marketing is both science and non-science at the same time. As scientific problems are concerned with 'what it is' and not 'what it should be' (the normative dimensions), we can conclude that this division into positive and normative dimensions is unnecessary and confusing.

At last, the debate settles and marketing 'becomes' a science. Nevertheless, we can detect a justificationist trend in the 'is marketing a science?' debate. Accordingly, marketing is a science in which empirically validated knowledge prevails.

As a science, marketing has both a content and an underlying philosophy. While the content element encompasses the marketing phenomena investigated, the philosophical component pertains to the methodological rules that guide research in the field. We can thus see that marketing as a science, becomes a more systematic field of study with the objective of investigating marketing phenomena.

One final note, the author of this article agrees that marketing is indeed a science, for scientific tools, such as theory and laws are employed in the field. Marketing science has a sound theoretical basis, which serves as the foundation for the generation of marketing knowledge. Moreover, as in other scientific fields, also in marketing science, the philosophical component encompasses the underlying methodology which guides research in the field.

Notwithstanding, acknowledging that marketing is indeed a science, does not imply, for us, accepting marketing science as it is. For, it seems that the debate on the scientific status of marketing paves the way for a justification-oriented marketing science, in which observations play the leading role, and where marketing scientists are 'observers' whose main concern is the justification of findings. However is this how a science of marketing should be? Should marketing be a justification-oriented science, in which also psychological factors play an important role? Whether it is the emphasis on observations or on subjective factors, the mistake is emphasizing the "wrong aspect" of the scientific process.

For, as suggested by Popper, science should always begin and end with problems. Accordingly, marketing scientists should become *problem solvers* whose main task is to tentatively try to solve problems by means of critical discussion. Marketing science should emphasize a deductive hypothetical method, which stresses the importance of critical discussion and theory refutation. Marketing will thus become an 'objective science' which produces 'objective scientific knowledge'.

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