Realism or Relativism for Marketing Theory and Research: A Comment on Hunt’s “Scientific Realism”

Hunt’s 1990 interpretation of scientific realism is compared with the relativistic/constructionist view previously introduced in this journal. Though some similarities are found, the two views differ most strikingly in terms of the nature of reality, the nature of truth, and the value of the concept of incommensurability. Several implications are offered for marketing scientists about what difference it makes which view they accept. However, the author concludes that philosophically oriented marketing theorists need to further demonstrate the value of their work for practicing marketing scientists.

On the level of empirical investigation—and concentrating on the practice of investigators rather than the theoretical commentary they may provide—there is more evidence to be cited for relativism than against it.

—Barnes and Bloor (1989)

Scientific realism recently was presented in this journal as an appropriate philosophy of science to guide marketing theory and research (Hunt 1990). That view rejects all forms of relativism, including those proposed in marketing, which include critical relativism (e.g., Anderson 1983, 1986) and the relativistic/constructionist perspective (e.g., Peter and Olson 1983, 1989). Scientific realism argues that truth is the appropriate goal for marketing theory and research and that science can come to know the real world, though not with certainty.

For scholars seeking a reconciliation of philosophical positions in marketing theory, several similarities can be found between scientific realism and the relativistic views. For example, scientific realism rejects logical positivism, logical empiricism, and falsification as acceptable philosophies for marketing theory and research (Hunt 1990, p. 11). Relativists in marketing have long rejected those philosophies. Scientific realism argues that “there is no grand theory of science” (Hunt 1990, p. 8). Relativists have long argued that there is no single method or approach to science.

However, several points of divergence also can be noted between scientific realism and the relativistic views. The two philosophies diverge on the nature of reality, the nature of truth, and the value of the concept of incommensurability. Those issues are critical for marketing theory and research, as for any field that seeks to develop knowledge.

The purpose of this article is to evaluate scientific realism’s position on those issues and to compare it with the relativistic/constructionist view. Such a comparison enables marketing theorists and researchers to judge better which approach to science makes more sense to them and which offers a better guide.
for their work. In addition, such a comparison may help determine what future work needs to be done in the area.

Views on the Nature of Reality

The major difference between scientific realism and the relativistic/constructionist view is in the nature of scientific reality. Realism views science as being capable of knowing reality, though not with certainty. The relativistic perspective views science as constructing various views of reality.

Realist View of Reality

Scientific realism is based on four propositions; three are investigated here and the fourth is examined in a subsequent section. The first three are: "(1) the world exists independently of its being perceived (classical realism), (2) the job of science is to develop genuine knowledge about that world, even though such knowledge will never be known with certainty (fallibilistic realism), and (3) all knowledge claims must be critically evaluated and tested to determine the extent to which they do, or do not, truly represent or correspond to that world (critical realism)" (Hunt 1990, p. 9).

Figure 1 is a graphic representation of the realist view of science. Basically, scientists through their processes of evaluation and testing produce genuine knowledge about the world. Those knowledge claims cannot be known with certainty and are fallible, but apparently, according to Hunt's third proposition, the extent to which they truly do or do not represent or correspond to the world can be determined.

Surely such a view of science seems plausible and inviting. Science is viewed as being capable of judging knowledge claims and ruling on whether or not they conform to the real world. If science could be conducted that way, many relativists would likely be converted to accepting scientific realism.

However, there is a problem with this view that reduces its apparent value—unless science can know with certainty what truly is the real world, it is impossible to judge the extent to which knowledge claims truly represent or correspond to that world. In other words, without independent knowledge of a standard (i.e., what reality truly is), how can scientists know how close they are to reaching the standard? It is like arguing that a football team can know that it is 10 yards from scoring a touchdown without knowing where the goal line is. This is the fallacy of realism, that the extent to which knowledge claims truly represent reality can be known without knowing what reality truly is.

The relativistic/constructionist view avoids this fallacy by recognizing that standards for accepting knowledge are developed by the scientific community. For example, in many areas of marketing, the primary empirical hurdle for a theory is that tests of its hypotheses must produce statistically significant effects. Though there are good reasons why that standard is weak (see Sawyer and Peter 1983), many studies published in marketing use it.

A second problem with the realist view may be more evident in Figure 1—nothing in scientific realism indicates the processes by which theories are constructed or created. No account is offered for where the theories come from that scientists test and evaluate. In some ways, this is a retreat to logical empiricism's insistence that philosophy of science address only the justification of knowledge claims and avoid the difficult issues involved in explaining how theories are created. Because an adequate philosophy of science for marketing should include an account of not only the processes involved in testing and evaluating theories but also the creation and diffusion of theories in scientific communities, scientific realism is at best incomplete.

It has been argued previously in marketing that "science creates many realities" (Peter and Olson 1983, p. 119), a position rejected by scientific realism (Hunt 1990, p. 2). An explanation of that statement follows so that readers can judge which view of reality makes more sense.

Relativistic View of Reality

The relativistic/constructionist position on the nature of reality is depicted in Figure 2. Unlike scientific realism's interpretation of relativism, the relativistic view has no problem with the possibility of an external world.
that is independent of the scientist. However, the difference in the relativistic perspective is that no interpretation of that world can be made independently of human sensations, perceptions, information processing, feelings, and actions. No meaningful interpretation of that world can be made that does not involve some form of human processing, typically in the form of symbols. Those symbols usually involve language and mathematics, two examples of useful constructions of the human species.

An adequate philosophy of science must not only recognize that human sensations and perceptions are part of science, but also account for their role in the development of scientific knowledge. Hunt's interpretation of scientific realism fails to do so. However, the relativistic view accounts for those factors at several levels.

One level of analysis involves the individual scientist's general worldview. This level includes all of the scientist's previous experiences, training, beliefs about the world, knowledge of language and meanings, and skills. The consistency of a proposed theory with a scientist's everyday view of the world can provide one type of "good reason" for believing in it.

A next level may include a research paradigm or scientific view of the world that a person brings to bear on a particular research problem. This level may or may not be totally consistent with the general worldview as it may contain special language, mathematical analyses, and arguments not commonly employed in everyday experience. Some researchers are knowledgeable of multiple research paradigms and may apply them at different times to different problems in fruitful ways. However, it is more likely that researchers have a favored paradigm, possibly from training in their formal introduction to a field, that dominates the perspective taken and the tools used in research. For example, various types of psychologists, such as cognitivists, behaviorists, and environmentalists, may believe in different theories and use different methods in their research. Similarly, in marketing, mathematical modelers, experimentalists, survey researchers, and interpretivists commonly take different approaches to construct and investigate their views of reality.

The process of constructing a theory or interpretation of reality may involve many events. The scientist may observe and interpret phenomena, read and interpret a variety of other scientists' views, discuss the issues with others, construct and examine data, and invent new words or symbols to describe her or his ideas. Eventually, conclusions may be drawn about how she or he thinks the phenomena work. As shown in Figure 2, the interpretation is encapsulated in the scientist's worldview and research paradigm, which limit the interpretation to a particular perspective. At this stage, it is a private, mental interpretation of reality.

Mental interpretations are made public in science by their transformation into written papers and oral presentations. For other scientists, including editors and reviewers, to share an interpretation of reality, they must go through the processes involved in comprehending words and meanings in the arguments, developing an understanding of the interpretation of reality, and deciding whether they believe in it or not. Many problems complicate these processes. For example, scientists may infer meanings other than those intended by the proposer of the theory. Differences in denotative and connotative meanings for terms may lead to misinterpretation. There may be differences in beliefs about whether the empirical evidence supports the theory or is the result of other factors.

A critical part of the evaluation involves whether or not the theory is consistent with other scientists' worldviews and research paradigms and their personal interpretations of the phenomena. In addition, other scientists may be influenced by the putative insights in the theory, the apparent rigor of the supporting research, the cleverness of the research design, or the
clarity of the written report. They also may be influenced by psychological and social factors in forming their beliefs about the theory. For example, they may be influenced by the professional status and affiliation of the proponent of the theory, the perceived quality of the journal in which it is published, comments about the theory from respected colleagues, and the sheer number of other researchers who accept the theory and begin to study it in their research.

A construction of reality is not equivalent to uninterpreted reality. The reason is that the meanings given to phenomena are humanly constructed and bounded by cultural, historical, and theoretical limitations. Some such meanings are well engrained in a society and are easily shared, such as labels put on particular objects (e.g., apples, chairs, etc.). However, there are clearly differences in the naming and meaning of even simple objects across languages and cultures. The meanings of more complicated terms, such as "attitude," "brand loyalty," or "brand equity," differ across theories and research paradigms, even within the same culture and language. The recognition that meanings are socially and culturally determined does not equate relativism with nihilism, solipsism, or incoherence as charged by Hunt.

An important point of this discussion is that even for simple objects, the labels placed on them and the meanings given to them are human constructions in the form of language, mathematics, or other symbols; they are not the objects themselves. However, concepts are easily confused with the phenomena they are intended to represent. For example, Hunt (p. 10) argues that the history of Newtonian mechanics gives us reason to believe that something like apples, trees, planets, and stars actually exist. However, though the words are useful for communication in English-speaking cultures, they are concepts whose meaning depends on theory. For example, the meanings and differences between the concepts of "star" and "planet" depend on one theory; the meanings and differences between "star" and "cash cow" depend on another. In sum, there is no theory-independent way to know what an object is or, indeed, whether it is an object.

Similarly, empirical data are not equivalent to uninterpreted reality. Empirical data are constructed by scientists through processes such as measurement and sampling; they are not the phenomena themselves. Measures cannot be constructed meaningfully unless one has at least an implicit theory of what is to be measured, that is, an interpretation to guide measure development. The meaning of data derived from measures also depends entirely on the interpretations scientists give to them concerning what was measured, how well, and from what theoretical perspective. This point is what is meant when philosophers state that there is no pure observational language, that data are theory-laden, and that "data never speak for themselves" (Peter and Olson 1983, p. 122). Hence, empirical data are not independent criteria for judging the closeness of a theory to reality because they are entirely dependent on theory for their meaning and interpretation. Without a theory that describes, among other things, what concepts are putatively measured, empirical data are merely numbers.

Human constructions in the form of language, mathematics, and other symbols are the "reality" scientists analyze, evaluate, debate, and compare with their own beliefs. As stated previously, these constructions of reality are in no sense equivalent to uninterpreted reality nor is there any method to evaluate whether they truly capture uninterpreted reality.

When scientists share an understanding and beliefs about a given interpretation, consensus emerges. However, it is common in science to have more than one interpretation of various aspects of uninterpreted reality. Each of the views is a construction, a set of words and perhaps numbers (data) that scientists have created. To the degree that the theories compete for belief by a scientific community and account for phenomena in different ways, they are alternative constructions of reality. This point is what is meant by the statement that "science creates many realities" (Peter and Olson 1983, p. 119). Even at a philosophical level, the reason why there are so many alternative views of science, including many types of realism and relativism, is that different writers interpret and describe it in different ways.

**Views of the Nature of Truth**

There are several different but related meanings for the term "truth" in scientific realism. Two suggested by Hunt are described and evaluated here to determine whether "truth" is the appropriate goal for marketing theory and research. A relativistic view of truth then is explained.

**Realist Views of Truth**

The first meaning is that a theory is true if it accurately represents reality. For example, Hunt states (p. 12):

> In conclusion, with respect to truth and scientific realism, the perspective of Siegel (1983, p. 82) seems a fair summary statement: "To claim that a scientific proposition is true is not to claim that it is certain; rather, it is to claim that the world is as the proposition says it is."

Surely, "to claim that the world is as the proposition says it is" appears to suggest that the world is unequivocally or certainly as the proposition says it.
is. The quotation sounds as though the second part of
the statement is not a refutation of the first but a state-
ment of agreement with it. In other words, literally
interpreted, this is a statement of complete knowledge
about the world rather than uncertain knowledge about
it.

Even if one grants that the statement means truth
is uncertain, it is difficult for relativists to accept that
meaning of truth. The reason is that it is based on the
assumption that science can judge the extent to which
theories correspond to the real world without knowing
independently what the real world is—that is, this view
of truth suffers from the fallacy of realism.

A second definition of truth in scientific realism
is different, but related to the first (Hunt 1990, p. 9):

McMullin (1984, p. 26) succinctly states the fourth
and final tenet: *The basic claim made by scientific
realism . . . is that the long term success of a sci-
technical theory gives reason to believe that something
like the entities and structure postulated by the theory
actually exists* [emphasis added].

Hunt restates it in terms of marketing (p. 11):

Applied to marketing and social science, scientific
realism maintains that, to the extent that there are
theories that have long-run success in explaining
phenomena, predicting phenomena, or assisting in the
solution of pragmatic problems in society, we are
warranted in believing that something like the post-
ulated entities and their structure of relationships ex-
ists, that is, they truly represent or correspond to real-
ity external to the theorist [emphasis added].

Here the argument is that to the extent that a the-
ory has “long-term success” in explaining and pre-
dicting phenomena and solving pragmatic problems,
we are warranted in believing that “something like”
the postulated entities truly exist and that the theory
is true. However, if a theory is successful in predic-
tion, explanation, and solving practical problems, the
proper inference seems to be that the theory is useful,
not that it is true or that the entities contained in the
theory truly exist. The fact that a theory, such as
Newtonian physics, works well does not make it true;
it makes it useful. The relativistic view of science has
argued consistently that several different types of use-
fulness are more appropriate goals for marketing than
truth (e.g., Olson 1982; Peter 1991; Peter and Olson
1983, 1989). The standards for what type of useful-
ness is judged important are set by the scientific com-

dunity. For example, some academic researchers be-
lieve their work should be useful for helping marketing
managers develop successful strategies, whereas oth-
ers seek knowledge of marketing phenomena for its
own sake.

Relativistic View of Truth

From the relativistic perspective, truth is a construc-
tion, a concept designed to refer to a particular type
of belief held in a particular context. To state that a
proposition is true is to state a subjective belief that
one holds about the proposition. The idea that truth
can be determined universally and independently of
human constructions and beliefs about uninterpreted
reality is viewed as impossible. In sum, “Truth is a
subjective evaluation that cannot be properly inferred
outside the context provided by the theory” (Peter
and Olson 1983, p. 119).

Overall, then, there seems to be no reason why
taking a relativistic view of reality or truth makes the
success of science over the last 400 years “totally in-
explicable” or a “miracle” as argued by scientific
realists (Hunt 1990, p. 3, 9). Rather, it is the useful-
ness of the theories that accounts for the success of
science over the last 400 years. Because a theory is
believed to be useful, however, does not prove that it
is true in the sense that it captures reality.

The Incommensurability Issue

Incommensurability is the idea that the choices be-
tween competing paradigms are not made purely on
the basis of formal logic and empirical data. Rather,
other factors such as the training and experiences of
researchers, their beliefs about the world, the persua-
siveness of those arguing for the various theories, the
status and number of other scientists who believe a
theory, and a variety of other psychological and social
factors are needed to explain why research commu-
nities accept different paradigms. Scientific realism
rejects incommensurability as “incoherent” and “re-
lativistic” (Hunt 1990, p. 4, 5). Several reasons can
be offered for why relativists value the concept of in-
commensurability, three of which are historical evi-
dence, the philosophers’ fallacy, and practical value.

Historical Evidence for Incommensurability

The history of science indicates that there are occa-
sions when researchers shift beliefs from one view to
another for reasons other than formal logic and em-
pirical data (e.g., see Kuhn 1962, 1970). Though many
philosophers disagree with Kuhn’s views, others, as
well as many historians, sociologists, and psycholo-
gists of science, find the idea useful for describing
changes in scientific beliefs. However, this relativistic
view recognizes that multiple paradigms can coexist
in a field because one paradigm does not necessarily
replace another. The reason is that there are multiple
constructions of uninterpreted reality that different
scientists find useful for describing events, predicting
events, and solving problems. Anderson (1986) pro-
vides several examples of incommensurable para-
digms in marketing and consumer research.
The Philosophers' Fallacy Applied to Incommensurability

A second reason for belief in the value of the concept of incommensurability results from the philosophers' fallacy. As Hunt (1990, p. 7) notes, “Basically, the philosophers' fallacy is to take a perfectly good term . . . and subject it to such ‘high redefinition’ that the term no longer can be applied to anything.” Surely, if any concept in philosophy of science has been the subject of the philosophers’ fallacy it is incommensurability. Why would some philosophers of science be so threatened by a concept and subject it to such ridicule that even Kuhn at one time retreated from it to a “neo-positivistic view” (Suppe 1977, p. 647)?

One likely reason for such concern about incommensurability is the impact that acceptance of the concept could have on philosophy of science. Note that philosophy of science was considered to be at a “crisis state” during the period in which Kuhn’s work was being debated. The proceedings from a conference held in 1969 portraying the chaos in philosophy of science is the major contribution of Suppe (1977). At that time, the “received view” had been rejected and philosophers were searching for and evaluating other alternatives.

The major problem with accepting the idea of incommensurability for some philosophers of science, then and now, is that such acceptance drastically reduces the importance of philosophy of science in society as well as that field’s ability to attain its objectives. The reason is that accepting incommensurability requires philosophers to admit that other factors, such as sociological and psychological processes, are needed to give a complete account of the development and meaning of scientific theories and the growth of scientific knowledge.

The methods of philosophy of science are not fully adequate for analyzing factors such as the sociological processes by which scientists create consensus about knowledge and the psychological processes by which scientists form beliefs about knowledge. Acceptance of incommensurability by philosophers would leave their field with, at best, incomplete accounts of science, such as scientific realism. Their way out of that dilemma is to label incommensurability as “incoherent” and any reasons for accepting a theory, other than formal logic and empirical data, as “irrational.”

Practical Value of Incommensurability

A third reason for the acceptance of incommensurability is a practical one—the concept encourages development of multiple views and affords researchers the freedom to use information from a variety of paradigms rather than to have to judge one as true and the rest as false. For example, behaviorism and behaviorism represent different paradigms. In general, cognitive theories view behavior as being controlled by internal cognitive and affective states and processes. Behavior theories view behavior as being controlled by the environment. Though both perspectives can be valuable when applied to particular marketing problems, they are, in a word, incommensurable because both try to explain behavior, but in much different ways. Similarly, realism and relativism are incommensurable in that they both try to explain science, but do so in much different ways.

Conclusions and Implications

Comparison of scientific realism and a relativistic view of science shows that both perspectives reject logical positivism, logical empiricism, and falsification as acceptable philosophies of science for marketing. The two perspectives agree that no single approach to science guarantees scientific progress. Both perspectives also view the long-term success of theories as an important criterion for judging them. However, scientific realism considers long-term success as a measure of truth and contact with reality, whereas the relativistic perspective views it as one type of usefulness.

The major disagreements between the two views pertain to the nature of reality, the nature of truth, and the value of the concept of incommensurability. Scientific realism suggests that the extent to which knowledge claims truly correspond to the real world can be determined, though not with certainty. The relativistic view suggests that science can create useful theories or interpretations of reality, but has no independent method for evaluating the closeness of theories to reality. Scientific realism argues that truth is an appropriate goal for marketing science, though absolute truth is unattainable. Relativists argue for the attainable goals of various forms of usefulness as determined by the scientific community. Scientific realism rejects incommensurability whereas the relativistic view accepts it as a useful concept.

Overall, considerable progress has been made in the development and updating of marketing’s views of science since the “early” crisis literature. Instead of debating long-abandoned views of science, marketing scholars are now concerned with more current views and creating new views of science. In addition, by challenging traditional views of science, the early crisis literature helped establish a valuable interpretive research tradition in marketing and consumer behavior. The debate over views of science has been a healthy one for marketing in that it has forced marketing the-

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1The discussion here involves behaviorism as a technology rather than as a philosophy of science. For further discussion, see Peter and Olson (1990).
orists to think carefully about what they believe and why they do so.

Given the difference in basic assumptions about the nature of reality, scientific realism and relativism are unlikely ever to be fully integrated. Holders of both views have good reasons for believing what they do, and support for aspects of both views can be found in the science studies literature. There are simply honest differences in beliefs about science and about which approach offers greater promise for the development of marketing knowledge.

Integration of philosophical views is not the most critical task facing marketing theorists, however. Rather, philosophically oriented marketing theorists now need to focus greater attention on what insights their views offer for the construction and evaluation of marketing theories and what implications they have for developing a more useful marketing science.

For instance, Hunt (1990, p. 13) argues that many marketing researchers already have accepted scientific realism. Perhaps that explains why marketing researchers place such heavy emphasis on empirically testing extant theories, often theories borrowed from other fields. Scientific realism encourages such behavior because it offers no guidance on theory creation for marketing researchers and leads researchers to believe that empirical research can truly determine reality. However, if that were the case, we would expect marketing research to have produced a number of strong empirical generalizations, something it has failed to do.

Because empirical testing cannot determine truth as correspondence to reality, the relativistic view argues that marketing scholars should place less emphasis on traditional empirical research. Rather, marketing scholars should invest more of their time and effort in the creation and development of new, useful theories for the field. Work by Wicker (1985) and Zaltman, LeMasters, and Heffring (1982) provides useful ideas on creating new theories and concepts.

The emphasis of scientific realism on seeking truth may also account for why many academic marketing researchers place such heavy emphasis on doing basic theory-testing research that seeks general truths. In fact, scientific realism may be attractive to many marketing researchers because it supports and reinforces current research practices and prejudices rather than encouraging change in the field.

The relativistic view recognizes that basic research can be useful in influencing the beliefs of a research community. However, because this view does not support the idea that basic research can produce universal truth (truth as correspondence to reality), it argues for academic marketing researchers to place greater emphasis on finding useful solutions to specific problems. Even a partial, tentative solution to problems such as the distribution of food to starving Third World people, the delivery of a reasonable standard of living to the poor and homeless, the misuse of drugs, and the spread of AIDS could far outweigh a consensus solution to many of the basic research issues currently examined in the field that seek generalizations.

The preceding ideas are but a few of the ones relevant to what difference it could make which philosophical approach marketing scholars accept. Greater attention by scientific realists and relativists to the implications of their views for practicing scientists would greatly enhance the value of their work for the field of marketing.

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