In their work on corporate tragedies, Mitroff and Kilmann [1984] repeatedly stressed that an institution's most fundamental need is to know what assumptions it is making about itself and the outside world. "As a result" they argued, "there is nothing more important that it can do than to periodically raise to the surface for explicit examination and challenge its key operating assumptions" (p. 116). For them, this is the essence of strategic thinking.

Marketing scholars, once attacked for their lack of heresy and their reluctance to challenge their own assumptions [Zaltman and Bonoma 1979], have done a lot of such strategic thinking in the last 10 years. They have paid considerable attention to questions of epistemology, domain, paradigms, scientific style, and schools of thought. As a consequence, diversity in thinking and in research approach has become fully legitimate. However, tolerance and an open posture should not be confused with mindless pluralism, in which alternative research traditions are encapsulated from critical scrutiny [Hunt 1991b]. Good science is good conversation, McCloskey [1985] argued. Scholars should strive for informed dialogue among a variety of perspectives.

Awareness of the metaphors used in their discipline may help scholars
in starting or sustaining such strategic thinking and informed dialogue. Indeed, different schools of thought, theories and theory-families, and research approaches are based on different metaphors [Arndt 1985; Brown 1977; Harré 1985, 1986; Law and Lodge 1984; MacCormac 1985; Morgan 1980]. This pattern is readily recognizable in the marketing discipline. The International Marketing and Purchasing (IMP) Group sees markets as networks, analytical modelers and econometricians view them as mechanisms that can be described by means of response curves, early researchers on segmentation approached markets as a whole of consumers that could be partitioned into more homogeneous subgroups, whereas contemporary market structure analysis is based on a more abstract spatial field metaphor. Consumer researchers and theorists view consumers as utility maximizers, as information processors, as stimulus-response mechanisms, as emotional beings, and as users and creators of meanings. Others have described and analyzed distribution channels as logistic conduits, as political economies, as networks, and as governance structures characterized by agency relations and transaction costs. Each of these core metaphors is a basic presuppositional insight or intuition that undergirds an entire school of thought, research tradition, or Lakatosian scientific research program.

Metaphor also operates at the level of individual models and theories: “Building a theory is a matter of developing an appropriate concept by analogy” [Harré 1985, p. 171]. Marketing counts many such theory-constitutive metaphors [Boyd 1979] that serve as fundamental presuppositions underlying specific theories or attempts to theorize. Examples are the product and family life cycles, information overload, clothing-as-language, and the marital metaphor undergirding many conceptual pieces on marketing relationships.

Literary metaphors are rife in our discipline also. If a metaphor is aesthetically very pleasing, some may use it consciously for embellishment. Or, if it’s very vivid and memorable, a teacher or textbook writer is more likely to use it actively for pedagogical purposes. Marketing myopia, gatekeepers, heavy users, product cannibalization, strategic windows, push versus pull, and skimming versus penetration strategies are examples. Although they do not have the theoretical scope of the previous types, literary metaphors are used and passed through to new cohorts of students and recruits in marketing so extensively that they are part of both scholars’ and practitioners’ theories-in-use.

Finally, like ordinary language, marketing is replete with conveyance metaphors [MacCormac 1985]. They do not have the theoretical scope of core and theory-constitutive metaphors, but they pervade the way we talk and think about marketing. Less visible than literary metaphors but as commonplace, they are the metaphors marketers live by. They are so familiar and plain that we often forget that they are metaphors at all: a company “enters” a new market (is a market a building?), “launches” its products on the market (or is it a body of water?), “develops” the market through advertising (or an organism that must be fed?), “fights” the competition and “defends its position” (an arena or battlefield?), and so on.

Metaphors play a pervasive and essential role in marketing. Although core and theory-constitutive metaphors are especially crucial for research and theory, one should keep in mind that all four types are constitutive in the sense that they underlie and shape our thinking. According to Zaltman, LeMasters, and Heffring [1982], probably few areas of inquiry in the social sciences rely on metaphors to the degree that marketing does. Understanding why and how we use them and how they sometimes deceive us should improve scholarly work within our research traditions and inform the dialogue among them. The objective of this paper is to clarify the role of metaphor in scholarly research and theory, focusing on how metaphors define research agendas and on how they may mislead us. Hence, I address the use of metaphor in scientific praxis, rather than the nature of metaphor, or the psychological processes involved in metaphorical reasoning [Ortony 1979]. Sternberg, Tourangeau and Nigro [1979] provide a bridge between these two perspectives. Their theory of cognitive processing in metaphorical transfer is consistent with the picture I draw of the role of metaphor in science.

Using Metaphors

It is now generally acknowledged that people make and interpret their observations in the context of prior knowledge. Since there are no given patterns in nature and human behavior, a frame is needed before anything can be seen as something: without preexisting concepts, one is blind with one’s eyes open [Harré 1986, p. 203; Koningsveld 1976, p. 133]. As a consequence, the concepts one has in mind determine what and how to observe [Chalmers 1982; Hunt 1991a]. Since observation presupposes conceptualization and what we see depends to some extent on what we expect to see, it is extremely difficult to develop fundamentally new concepts. In order to escape this Catch 22, we all grow up using metaphors, thinking of one thing in terms of something else. This may seem rather vague as a definition, but it captures the essence of metaphor and reflects the consensus among scholars in the field, which is no minor achievement.
since metaphor has been challenging specialists from many disciplines—mainly philosophy, linguistics and psychology as well as all permutations among them. Also, it is advocated by some influential multi-disciplinary scholars, such as Burke [1945], Brown [1977] and Lakoff and Johnson [1980]. A more formal definition is that metaphorical reasoning involves the transfer of relational information from a domain that already exists in memory (usually referred to as source or base domain) to the domain to be explained (referred to as the target domain). It is essential to metaphor that the domains be conceptually different. That is, a metaphor is a between-domain analogy, in contrast to a literal or within-domain analogy [Vosniadou and Ortony, 1989, p. 6–7].

Lakoff and Johnson [1980] have shown how a major part of our daily conceptual system, in terms of which we both think and act, is structured metaphorically. We structure and understand less concrete and inherently vague concepts in terms of more clearly delineated ones that are firmly embedded in our experience [Johnson 1987; Lakoff and Johnson 1980; Paivio 1979]. By transferring relational information from a relatively familiar domain that already exists in memory to a relatively unknown domain to be explained, the metaphor provides new understanding. In addition, by using the metaphor’s new imagery and vocabulary, we generate new ideas about the phenomenon dealt with.

Metaphor plays a fundamental role in science. It can perform three basic functions: generating fundamental questions and presuppositions, framing scientific terminology, and improving effective communication [Boyd 1979]. Foremost, metaphor provides the initial basis for posing questions and generating causal hypotheses. When we do not know what processes and structures underlie what we are studying, we have to imagine them. We suppose that they are like something about which we already know a good deal and from there imagine similar structures and processes for the phenomenon we are studying [Harré 1985, p. 172]. We know an atom is not a solar system, and yet we consider what it would be like if it were. This is what gives metaphor its generative character: creating a new metaphor is forming an imaginative hypothesis. Innovative research is often built upon a perceived similarity between hitherto rather unrelated domains [Bicchieri 1988; Knorr-Cetina 1983; MacCormac 1976; Schön 1979]. Metaphors enable people to formulate the research puzzle in a different way and to suddenly see a promising solution, complete with the accompanying Aha! experience [Rock and Palmer 1990]. They are cognitive instruments, true tools of the mind, that provide avenues to new insights based on similarities that were unknown and have yet to be explored. We can use metaphors as mind stretchers to help us broaden and lateralize our thinking. However, not only does recognizing similarities not seen before produce new insight; identifying dissimilarities and trying to transform them into less obvious but deeper, more structural similarities fuels scientific activity and knowledge creation even more [MacCormac 1985].

A second role is in framing scientific terminology. The use of metaphor is seldom limited to the transfer of relational information from one domain to another. Often, this is accompanied by a transfer of terminology. In this way, new vocabulary referring to new concepts can be treated within the existing structure of language, so securing intelligibility [Harré 1986, pp. 77 and 208]. Hence, thinking about one thing in terms of another often entails referring to one thing in terms of another.

Metaphors can also be very useful in communicating what we already know to other scholars, to managers, or to students more effectively. They are among the few tools we can use to give compact descriptions of complex phenomena [Vosniadou and Ortony 1989; Weick 1989] and to share tacit knowledge that we cannot transmit using literal language [Dougherty 1992; Nonaka 1991]. As any teacher knows, metaphor can be a very effective didactic tool. Scholars also use their rhetorical power at conferences and in journals to persuade, recruit, and indoctrinate, as is becoming increasingly clear from work done in discourse analysis and the rhetoric of science. In short, one can conclude, “it is pictures rather than propositions, metaphors rather than statements that determine most of our philosophical [and, I would add, scientific] convictions” [Rorty 1979, p. 12].

Although metaphors are essential to scientific thought and discourse, their status may change over time [MacCormac 1976, 1985; Turbayne 1970]. Although the trite opposition between “dead” and “live” metaphors seems firmly entrenched, it is much more useful to distinguish three types: lively, dormant, and extinct [Black 1979; Lakoff and Johnson 1980]. In its early stages, a budding discipline, school of thought, or theory still needs everything—a new frame as well as a new vocabulary. One uses metaphors, knowing very well that they are substitutes for literal language. The new metaphor paints an unusual image, shocking us into considering the imaginative conjectures it generates. The butterfly effect in chaos theory, technological trajectories and path dependencies in evolutionary economics, and the network-organization in marketing are such new metaphors that we still experience as odd. Therefore, they are very lively. One is well aware of their metaphorical as-if nature. Their use is directed at opening our minds and actively engaging us in new venues. As the discipline or theory progresses, metaphorical talk is complemented by
a rigorous and self-contained vocabulary. However, one should not conclude that metaphors play no role in a mature field. Rather, what started out as a highly suggestive juxtaposition becomes deeply entrenched in the thinking and language of those working in that field. Metaphors shift from suggesting conjectures to expressing accumulated experience and corroborated findings. Research becomes highly efficient, with hypothetico-deductive theorizing and replication going more smoothly. In the end, a metaphor may be used so extensively that it loses its tension and passes into ordinary discourse. Consider the case of the kinetic theory of gases. Nineteenth century theorists, such as Rudolf Clausius, James Clerk Maxwell, and Ludwig Boltzmann, drew an analogical relationship between atomic particles (understood within the field of mechanics) and the behavior of gases (until then understood within the field of thermodynamics). As this (re)description of gases progressed, and as they conducted and explained experiments, the scientists gradually lost the sense that this was a metaphorical model. Their hypothetico-deductive work slowly put the metaphor to sleep. The metaphor was not lively anymore but dormant. Except for a few recalcitrants like Mach, for whom the original tension between the two domains remained, chemists forgot that if they found the molecule to be similar to the particle, it was because they had made the analogy before finding it to be so [Gerhart and Russell 1984, p. 145–146; Harré 1985, 1986]. Paradoxically, the history of science, like that of art, shows that the most successful metaphors end up dormant. Baudelaire was well aware that having created a commonplace was the ultimate consecration for any artist or scholar. His ideal was créer un poncif, “to invent something so unprecedented it would at first be taken to be absurd, only to have a discourse develop around it which would transform the initial absurdity into banality” [Brown 1987, p. 148].

Newton’s world as a machine, Darwin’s evolution as a natural selection process, Niels Bohr’s atom as a solar system, and Neil Borden’s manager as mixer of ingredients have all reached that ultimate consecration at one point in time and still take a predominant place in many folk theories and in lay discourse. Dormant metaphors become part of our world’s furniture. Hiding their point of view in the routine and mundane, they give researchers certainty and convenience [Kaufman and Parson 1990]. Taking them for granted gives us a lot of efficiency in how we structure our research problems and communicate about them with others. Like Monsieur Jourdain, Molière’s character who did not know he had been speaking prose until someone told him so, scholars active in a field they experience as mature, typically do not see themselves as reasoning in metaphors. Indeed, what Kuhn calls normal science — puzzle solving — happens within the confines of a core or theory-constitutive metaphor that has become so familiar that often people are no longer aware that it is a metaphor and use it as a literal term or model. Still, this final shift is merely psychological, not epistemological or linguistic. Therefore, calling a dormant metaphor dead is a most unfortunate convention. Although it is less visible, it still plays its triple generative, terminological and communicative role: while it may no longer be lively, it is still very much alive [Leatherdale 1974, p. 111]. Sometimes, but far less often than the usual dead versus alive convention would make us believe, a metaphor becomes really dead and buried or extinct. Bacteria as little staffs, muscles as little mouses (musculi), and statistical regression as the long-term tendency of the human race towards a uniform body length have totally lost any relation with their original domain. The original analogy has disappeared and the terms have acquired a new literal meaning. Although such terms are metaphorical in origin, we may as well view them as not metaphors at all: once the two domains have been conflated, no metaphor exists anymore. We no longer think of something in terms of something else, we merely use a word outside its original domain — such as dialing when using a touch-tone telephone — to fill a gap in the lexicon [Boyd 1979; Kittay 1987]. This suggests that the flow from lively to dormant is less a function of time than it is a function of the degree to which the differences between the source and target domains are sustained. Hence, dormant metaphors can be revitalized. Revitalizing the dormant or arguably even extinct metaphors of promotion as “moving the sales forward” and of advertising as “turning the mind towards” has proved very useful in Beem and Shaffer’s [1981] innovative essay on promotion and in the proposal van Waterschoot and I [1992] made for a better marketing-mix classification.

Core and theory-constitutive metaphors are definitely alive. Whether we are aware of them or not, whether they are lively or dormant, they drive our research and scientific discourse. Literary metaphors too are definitely alive. Their vividness and pervasiveness influence the way we think about marketing. The case of conveyance metaphors is less clear. Some argue that few of these unarousing metaphors are really extinct and posit that they form the deep structure of our life and work [Lakoff and Johnson 1980]. Most, though, hold what intuition suggests, that they are actually extinct and are thus nonmetaphors, that we use them merely to fill gaps in the lexicon.

Because they function as mental frames or maps, all nonexact metaphors involve a set of assumptions about the phenomenon described. Their use is never limited to a literal representation of the concept of
METAPHOR AT WORK

have of another phenomenon will necessarily suppress other aspects not shared by both the phenomena. Gareth Morgan has repeatedly and emphatically pointed out this effect. "The metaphor," he argues, "frames our understanding in a distinctive yet partial way" [1986, p. 13]. A metaphor always emphasizes some aspects, deemphasizes others, and hides still others. In highlighting certain interpretations it tends to force others into a background role. As Poggi [1965, p. 284] once stated, "a way of seeing is a way of not seeing." Metaphors help us to organize our view, but they always fail to grasp all aspects of the phenomenon under study. This is fundamental to metaphors; if the metaphorical structuring involved were total instead of partial, then the one phenomenon would be the other. If children really were durable goods, there would be no metaphor at all. Not only Becker's, but any scientific metaphor is conducive to intellectual tunnel vision. Viewing the brain as a computer, for example, calls attention to its ability to process information, but does not suggest human forgetfulness [War and Ruekert 1984]. Representing consumers as information processors forced low involvement processes and motivational and experiential aspects of consumer behavior into the background and out of research agendas until 10 years ago [Firat, Dholakia and Bagozzi 1987]. Much like paradigms and management control systems, metaphors provide researchers with a basis for selecting both the problems and the variables to investigate. They may condition them to ignore some of the most fundamental threats and limitations. As Perelman and Olbrechts-Tyteca [1969, p. 390] point out in their classic work on rhetoric and argumentation, "the acceptance of an analogy...is often equivalent to a judgment as to the importance of the characteristics that the analogy brings to the fore." Thus, the competition between metaphors turns not simply on their relative merits in explaining a certain phenomenon, but on judgments about which are the important features to highlight and explain, judgments for which there are no generally acceptable criteria [Loasby 1971].

This failure to encompass all aspects, it must be acknowledged, is inherent to any theorizing. The phenomena we study possess a multitude of characteristics in addition to those picked out by a particular model or law. For instance, even something as plain as a falling leaf is at once a mechanical, hydrodynamic, chemical, biological, optical, and thermal system. No theory can take all this into account; there is always a loss in richness, which the gains in clarity have to justify [Chambers 1982, p. 155; Douglas and Isherwood 1979, p. 61]. As Nelson and Winter [1982, p. 134] state, "Theorists should aim to tell the truth in their theorizing, but they

Being Used by Metaphors

In science as anywhere else, one seldom gets something for nothing. However fundamental the role metaphors play in science, they present several limitations and dangers. Unless we are aware of these pitfalls, using metaphors entails being used.

Partial Denotation

Analogies are deceptively appealing. The very systematicity that allows us to comprehend some aspects of a phenomenon in terms of concepts we

reference. Instead, they set up "a field of secondary and tertiary resonances, contrasts, and comparisons that do not merely describe, but also reconstruct and transform the original metaphorical material" [Mirowski 1988, p. 136]. Indeed, by using metaphorical reasoning, one always selects certain aspects of the subject under investigation to compare with another and leaves out the other aspects. When one says that men are wolves, any human trait that can be talked about in wolf language without undue strain is rendered prominent, and any that cannot is pushed into the background. By suppressing some details while emphasizing others, the wolf metaphor organizes our view of man [Black 1962, p. 41].

Gary Becker's [1976] extensive use of metaphors, which was the basis for his personal research program analyzing many aspects of family life in economic terms that earned him the Nobel Prize, is a case in point. His description of children as durable goods, for example, draws attention to the facts that children are costly to acquire, last for a long time, are expected to give satisfaction during that time, are expensive to maintain and repair, have an imperfect second-hand market, and so on. However, unlike refrigerators, children have personal opinions and are objects of affection and concern. Becker's picture highlights only some properties of children, not all. Furthermore, many noneconomists have accused Becker of economic imperialism, charging that his innovative use of metaphors often went too far in attributing materialistic dimensions to humans and created false insights. Finally, some have questioned whether he had really explained anything at all. Although Becker has been quite successful in using generative metaphors to redefine old research puzzles and create new ones, many are skeptical about his work.

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Analogies are deceptively appealing. The very systematicity that allows us to comprehend some aspects of a phenomenon in terms of concepts we
cannot aim to tell the whole truth. For to theorize is precisely to focus on
those entities and relationships in reality that are believed to be central to
the phenomena observed—and largely to ignore the rest.” “The danger
with mental models,” Day [1991, p. 12] concurs, “is not whether they are
right or wrong, for all models are simplifications. The pitfalls arise when
the models are tacit—functioning below the level of awareness.” In addition
to partial denotation, however, using metaphor involves some unique
pitfalls.

Undesired and Unused Connotations

In addition to being narrow and partial, metaphors may also deceive us by
over-extend[ing a comparison and carrying some unintended connota-
tions as extra luggage, providing us with inappropriate “insight” [Carman
1987; Spiro et al. 1989; Ward and Ruekert 1984; Zaltman, LeMasters and
Heffring 1982]. The expression “empty nest” family has a sad conno-
tation, but many parents experience their progeny leaving home as de-
sirable. The biological metaphor underlying the product life cycle, as
another example, suggests that the pattern is unalterable and beyond
managerial discretion, which is simply folly—at least at the brand level.
The comparison of marketing to warfare tends to equate competition in
the marketplace to a zero-sum game, which is seldom true. Undesired
connotational baggage is especially likely when using dormant metaphors.
However, one can counter the detrimental effects of such hidden con-
notations by revitalizing the dormant metaphor. Sometimes one can even
use the unwanted connotation against itself. Turning the pyramidal
organization chart upside-down so that the customer is on top is an example
from marketing practice. The new orientation does not get its impact
from denouncing the tacit connotations of the vertical (higher is better)
and of the natural flow (fluids flow naturally from high to low positions);
on the contrary, it hinges on them and uses them as an asset instead of a
liability. This example shows once more that metaphors in themselves are
not necessarily good or bad. It’s the use we make of them that makes the
difference.

We may also deceive ourselves by failing to fully exhaust all the con-
notations embedded in the metaphor [Lakoff and Johnson 1980; Spiro et
al. 1989]. Just as we can inadvertently overextend the used part of
the metaphor, we can myopically leave interesting relations unused. Pitifully
most quick-and-dirty comparisons of marketing with warfare or sports
provide conclusions fundamentally different from those that would be
provided by thoughtful analogy [Bower 1986, p. 50–51]. Although the
public’s attention is on the contest between rivals, the economic success
of sport is determined in large part by negotiations among the teams, the
unions of players, and the television networks. At the end of the season,
the teams come together to examine the results of their competitive activ-
ities during the year to see if they make sense and to see if improvement
is possible. Do the rules need adjustment? For example, should Euro-
pine soccer teams limit the number of foreign players? Should the season
be shorter? Would play-offs at the end of the season increase revenues?
Should one impose a rationing system like the one preventing the richest
professional American football teams from monopolizing promising col-
lege players? Will playing some games on Friday and Monday evenings
instead of concentrating everything in the weekends increase advertising
revenues? Understanding how market competition, like sports, is a game
for which the competitors write, or at least influence, the rules has proven
crucial for success in industries characterized by huge sunk costs, such as
the petrochemicals industry, or by product standards, such as the VCR
and compact disc industry.

In a funny and thought-provoking paper, Seeger [1984] has shown how
hitherto neglected connotations can be used to unearth other conno-
tations that we use but that mislead us. His argument focuses on the Boston
Consulting Group’s growth/share matrix imagery of stars, dogs, cash
cows, and wildcats. The matrix suggests that a low share/low growth busi-
ness is unattractive and should be treated like a dog. However, when ex-
perience effects are weak or nonexistent and in other situations where
market share does not determine competitiveness, the prescription to
kick out the dog is faulty. PIMS analysis by Hambrick and MacMillan
[1982], for instance, shows that the average dog business generates more
cash than the average wildcat uses; and Buzzell and Gale [1987] reported
that six out of 10 dogs were actually cash generators whereas more than
one in four cash cows were net cash users. In such circumstances, kicking
out the dog would certainly not improve the firm’s cash flow position.
Also, established brand names in low-growth markets can provide a plat-
form for brand extensions in more attractive markets. Just milking them
for maximum cash may be detrimental to the brand capital. Clearly, the
dog and cow metaphors have misled us for years and provide an argu-
ment against metaphorical theory. On the other hand, if we had used
these metaphors more thoroughly and exhaustively—viewing dogs as
loyal, hard working, and man’s best friend, and cows as breeders of
offspring—we would never have made such mistakes!
Confounding Metaphor (Concept) with Reality (Phenomenon)

The partial failure of any metaphor, the lack of objective criteria to select a best metaphor, and the tendency of the most successful metaphors to become less lively (but not less essential) lead us to another fundamental problem. A metaphor may be accepted as truth. After long and repeated use, a metaphor may become so hackneyed that people forget it is a metaphor and sublimate its relationship with reality. It is no longer the phenomenon as one understands it, it is the way the phenomenon is. When scientists and managers use terms and images to say a phenomenon is something instead of using them to represent the phenomenon as something, they take their models for the things modeled and their frame of reference for granted. Again, the BCG portfolio model is a case in point. Its imagery is so widely accepted that people often use it without carefully, considering its many underlying assumptions, and therefore misapply the model. Aesthetic appeal may blind us from taking compelling empirical evidence into account and drive us to keep viewing metaphor as reality. Some metaphors are so nice and seductive that people continue to use and teach them despite massive empirical counterevidence, as is the case with the product life-cycle S-curve. Vividness is another factor. Because vivid information has an effect on memory and judgment disproportionate to its informational value, a metaphor may remain in one’s mind and influence one’s thinking long after memory of the underlying rationale or of its empirical evidence has faded [Ward and Rueskert 1984, p. 120]. Research in advanced knowledge acquisition indicates that students hold misconceptions that can be attributed to the reductive effect of analogies even when teachers and texts explicitly stress the inadequacy of an analogy. Striking, pedagogically efficient metaphors are often the only representation students retain. “In other words, when analogies are used to start simple, the knowledge ultimately acquired often stays simple. Well-intended analogies often result in oversimplified knowledge” [Spiro et al. 1989, p. 502].

So, whereas new suggestive metaphors act as mind stretchers, their very success may instead cause them to close our minds. Although they may fuel programmatic puzzle-solving, they inhibit us from considering radically new hypotheses. Still, rejecting the use of metaphors to avoid confusing them with truth amounts to throwing away the baby with the bath water. What we must avoid is not metaphor itself but the trap of committing ourselves to any conception or model as the absolute and final description of reality [MacCormac 1976, 1985; Turbayne 1970]. On this issue, metaphorical methodology converges with Lakatos’s philosophy of science. He advanced the idea that criticisms demonstrating the limitations of hard core principles or assumptions do not imply that a research program should be abandoned, but they do constitute an argument for developing alternative programs. Researchers do not need to cease using previously unchallenged idioms because they are now viewed as mere metaphors that provide only partial insight. Neither do they need to stop working on agendas considered to be degenerating research programs. As long as a metaphor or a research program generates some insight, one may rationally stick to it, adherents of metaphorical methodology and Lakatosian falsificationism propose. What one must not do, however, is to deny its less than perfect record. What matters most is not that any particular metaphor or program has flaws, but rather that the research and education community should respond to those flaws in a responsible and systematic manner [Lakatos 1978, p. 117; Musgrave 1981].

Confounding Metaphorical Similarity with Metaphorical Explanation

Core and theory-constitutive metaphors are not theories but may serve as triggers for induction and as precursors to theories [Bacharach 1989; Holyoak and Thagard 1989]. To really contribute to new knowledge, one must go beyond the similarities between the source and the target domain and specify and explain the relationships in the target domain. Effective development of knowledge in new realms means that the theorist precisely specifies the nature of the structures and processes in the source domain and subsequently transfers this pattern of relationships to hypothetically specify processes and structures in the target domain [Harré 1985, 1986; Pinder and Bourgeois 1982; Tsoukas 1991]. One may feel that a metaphor explains a phenomenon, even though it offers only a superficial insight into the structure or processes of the phenomenon. Using metaphor in scientific accounts is not a sign of deficiency in itself, but when an author’s accounts rest solely on superficial similarity and he or his readers believe he has done a nice theoretic job, there is a serious problem. Such an unwarranted comfortable feeling is especially likely in those cases in which the metaphor allows the researcher to predict without presenting any explanation [Pyllyshin 1979, p. 431–432]. The product life cycle is a case in point: “If the level of sales determines the stage of the life cycle, then the stage in the life cycle cannot be used to explain the level of sales. Unless and until the product life cycle can be identified independent of the sales variable, the life cycle concept will remain impo-
tent that organisms have a life cycle and so do products provides no explanation at all for the S-shaped sales pattern. Transferring the life-cycle idea loosely from one domain to another is not enough. To be theoretically fruitful, the specific nature of relationships between antecedents, focal concepts, and consequences must be transferred. One gains new knowledge beyond the initial insight only when the existing knowledge about the evolutionary processes of organisms enables one to explain the evolution of sales. Only when some causal relationships identified in the source domain appear to have explanatory power in the target domain, has the metaphor proved to be a powerful heuristic device. Consider the successful transfer of contagion mechanisms from epidemiology into the realm of the diffusion of innovations. In both domains, the existence of relatively more receptive social actors (for example, elderly people or innovators) having contact with other social actors, and the presence of complementarities (for example, a humid climate or houses with large basements or garages) and discompliances and other inhibiting factors (for example, antibodies or values of housekeepers) have resulted in successful explanations. In the case of the product life cycle, some important causal analogies between the organic and the product domains seem present also, but the identity is far less perfect. Both products and organisms fare better when amply supported by such parental resources as food and warmth (R&D and advertising) in their youth, and when living in environments with few predators (substitutes), many symbionts (comprehensive products), enough rivals to form coalitions against predators if necessary (collaborative R&D, lobbying) or to get a foothold in newly invaded territories (passing the network externalities threshold; getting minimum product category exposure on shelves), but not so many that rivalry for food and other resources (the customer’s money; shelf space) gets too intense. Still, the life of organisms is ultimately limited by an internal process of ageing, whereas products instead face external limits stemming from relative competitiveness and environmental munificence. For product categories that address perennial needs (for example, bread) or for brands, even this last constraint does not apply. Here the analogical transfer of causal mechanisms breaks down.

The specification-transfer sequence presented here results in an explanatory model in the target domain that is more precise than the original metaphorical insight in what it does and does not put forward. Indeed, a model may be thought of as a metaphor whose implications have been spelled out and refined [Brown 1977, p. 78]. Because such models are also typically less vivid and less aesthetically appealing than the underlying metaphors, we are more likely to be critical of them. The danger of accepting the model as true is smaller than for the metaphor. The models are also more amenable to conceptual and empirical assessment. We are more likely to detect undesired connotations that do not hold in the face of sound logic or empirical evidence. Nevertheless, we must still be wary of taking assumptions for granted and of accepting undesirable connotations; the dangers are decreased, but not annihilated. Moreover, the pitfalls of partial denotation and unused connotation remain unchanged. Indeed, the set of possible causal relationships that can be transferred and imputed on the target domain is wholly dependent on the choice of the source domain. That is, the model one ends up with is predetermined by the underlying metaphor. Different models, each partially denotive in its way, would have been derived from different metaphors. Also, although we may be able to empirically refute an undesired connotation, we have to go back to the original metaphor to get to the interesting connotations left unused. Therefore, we have to remain aware of the metaphor, even at advanced stages of theoretical sophistication in which models and literal language seem to have superseded metaphor. In short, metaphor should not be viewed as “a ladder to be kicked away once the new theoretical plateau has been reached” [Brown 1977, p. 82]. Nor is it in itself enough to get us to the next plateau. Metaphor is more than a necessary evil but less than a sufficient blessing.

Conclusion

We are likely to formulate better propositions, to do more effective research, and ultimately, to gain more knowledge if we are explicitly aware of our often implicit assumptions in thinking and research [Hunt 1991a, p. 395]. Since marketing is replete with metaphors taken from other spheres, and unexamined metaphors are a substitute for thinking and a threat to science, we can improve our field by being more critical of our existing metaphors and more conscious in picking up new metaphors. Metaphors, though, are not limitations we must try to surmount. Even at advanced levels of theoretical sophistication, core and theory-constitutive metaphor still operates. In mature disciplines and research traditions, metaphor is typically dormant but still alive. Specific theoretical explanations using precise, literal terminology are still subject to the pitfalls of the metaphors from which they are derived. Metaphor is fundamental to our thought process, and we can only circumvent the existing metaphors by using other metaphors. We should not attempt the impossible—to
banish them. Instead, we should use two antidotes against their insidious tendencies. First, we should pay serious attention to the various ways in which metaphors are incomplete or mislead. Once warned, researchers, teachers, and students are more likely to be able to avoid the pitfalls [Dawar 1992; Van den Bulte 1992]. Second, we should explore several metaphors for the same phenomenon thus offsetting the strengths and weaknesses of each [Morgan 1983, 1986]. In case integrating these various perspectives is not feasible or seems inappropriate, we should attempt a conscious pluralism of different schools of thought and of theories based on alternative metaphors rather than attempt to forge a synthesis on narrow grounds [Morgan 1980; Turbayne 1970].

We can expect this effort to help us to clarify one another’s basic premises and to subject our core concepts and knowledge claims to critical discussion. Unfortunately, pluralism has too often resulted in a Tower of Babel in marketing science. Hunt’s [1991a, b] analysis of the philosophical “crisis literature” and my analysis of the substantive attacks launched against the marketing mix [1992] both suggest that although philosophical and substantive criticisms are often highly provocative, much of the debate is ill-informed, ill-directed, or flawed by conceptual and semantic confusion. Critical analysis of metaphor offers us a mindset and an agenda for fruitfully confronting different perspectives and research traditions in marketing and for raising strategic debates in marketing thought to a more informed and productive level. Instead of concealing controversy beneath faded metaphors as a device to maintain a favored position, we must use a rhetoric of assent to draw attention to the bases of the controversy [Kaufman and Parson 1990].

Marketing provides its scholars with many exciting venues for both conceptual and empirical advances if they will only end their infatuation with oversimplified answers to complex issues, which is, as biologist Theodosius Dobzhansky put it, one of the earmarks of intellectual mediocrity. Thomas Kuhn [1977] expects good scientists to work in an “essential tension” between being bound to tradition, knowing it and accepting it, and being able to see problems and anomalies with it when they arise. By understanding the pervasive role of metaphor, we can remedy our infatuation and heighten our tension threshold level.

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Commentary by Shelby D. Hunt and Anil Menon

Is It “Metaphor at Work” or Is It “Metaphors, Theories, and Models at Work”?

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Van den Bulte’s “Metaphor at work” is a constructive addition to the growing literature in marketing on the role of metaphors in both research and practice [Arndt 1985; Bernard and Adelman 1990; Boozer, Wyld, Grant 1990; Hunt and Menon 1993; Rosenberg 1984; Stern 1988, 1990; Thompson, Locander and Pollio 1989; Ward and Gaidis 1990; Zaltman, LeMasters, and Heffring 1982; Zikmund 1982]. The paper, whose objective is to “clarify the role of metaphor in scholarly research and theory,” succeeds admirably in explicating and contrasting the different types of metaphors and their potential role in theory development. Importantly, it distinguishes between literary and theory-constitutive metaphors. While the former play a major role in written and verbal communications because of their ability to illuminate and vividly present ideas in a fresh, novel manner, the latter (though potentially less vivid) have the potential to offer novel scientific insights into phenomena—especially if they are used in a thoughtful, systematic, and organized manner. Furthermore, while literary metaphors lose their value and become commonplace when they are used extensively, theory-constitutive metaphors never become trite (though they may prove to be nonproductive or nonfruitful).

“Metaphor at work” also provides a good exposition of how scientists use metaphorical reasoning. Metaphors facilitate the process of scientific discovery by three means: (1) generating fundamental questions and presuppositions, (2) framing scientific terminology, and (3) improving effective communication. Stated in brief, a creative metaphor brings together two separate, apparently anomalous, domains into cognitive and emotive association by using information that is directly appropriate to one as a framework of “associated implications” for understanding the other. When these implications, suggestions, and supporting connotations interact with the literal meaning of the metaphorical expression, they create both cognitive and emotive tensions. Through efforts at translation, researchers seek to reduce these tensions by identifying similarities between the two domains. Such efforts can result in both comprehension and the ability to view a subject matter (for example, marketing) in an entirely new and fresh perspective (for example, as war or marriage). Thus, metaphors can lead to discovery through “metaphoric transfers.”

“Metaphor at work” concludes with a useful and detailed exposition of how to avoid misusing metaphors and miscomprehending metaphorical transfers. Not discussed, however, is the fact that much of the misuse of metaphors can be traced to confusions created by faulty conceptualizations of metaphor. Ironically, this paper’s conceptualization of metaphors is likely to lead to precisely the problems discussed in its final sections. Good definitions of major concepts are important because they describe and circumscribe the domain of the concepts they characterize. In short, good definitions are both properly inclusive and exclusive. Against this criterion, consider the paper’s definition of metaphor: “thinking of one thing in terms of something else.” With this definition, all theories and all models are metaphors, since all theories and models enable one to “think of one thing” (for example, a marketing system) in “terms of another” (for example, a marketing model). Indeed, since all referential concepts become metaphors, there is scarcely any linguistic construction that is not a metaphor. Regrettably, the paper succumbs to what Black [1979, p. 20] calls “metaphorical inflation,” in which “enthusiastic friends of metaphors are indeed prone to various kinds of inflation, seeing metaphors everywhere.” A counterproductive result of using metaphor in such an overly broad manner is that its major value in theory development is lost.

Many marketing scholars have succumbed to “metaphorical inflation.” For example, consider Arndt’s [1985] exposition of 12 “key” marketing metaphors. Although three of Arndt’s (so-called) metaphors, that is, “warfare,” “organism,” and “spaceship earth,” are both metaphors and “live,” the other nine are problematical. For example, when Marxist scholars in Arndt’s “liberating paradigm” refer to “victimized consumers” and “alienated man,” they mean precisely what the expressions literally imply: “consumers are victims” and “man is alienated” in Western societies. When advocates of Arndt’s “subjective world paradigm” use “language and text,” “experiencing man,” and “irrational man,” they also mean what the words literally imply: “explore the language of consumers,” “examine the everyday experiences of consumers,” and “since consumers are irrational, use such methods from clinical psychology as Freudian theory.” Arndt’s “political economy,” “political marketplace,” “brand loyal consumer,” and “instrumental man,” literally mean “channel members engage in political activities as well as strictly economic ones,” “consumers are often loyal to particular brands,” and “marketing managers view the ‘4P’s’ as instrumental for achieving their objectives.” While the
etymology of some of these terms (such as *loyal* and *instrumental*) might qualify a few of the expressions as extinct or dormant metaphors, most are straightforward declarative expressions that are meant to be interpreted as literally true on the basis of the denotative meanings of their constituent terms. Thus, they are not metaphors and do not function as metaphors in the process of discovery, that is, they do not *provoke*.

It appears that this paper's "metaphorical inflation" stems from its overreliance on Lakoff and Johnson's [1980] subjectivist conceptualization of metaphors, which is, contrary to Van den Bulte, not a consensus definition. For example, Boyd [1979], MacCormac [1985], and Stern [1988] point out that metaphorical language is a kind of connotative, figurative language, in which each metaphor is literally (that is, denotatively) false, but is connotatively (that is, imaginatively or suggestively) true. In other words, only certain kinds of "thinking in terms of something else" are metaphorical; others are not. What would be a properly inclusive and exclusive definition of a metaphor? We propose that a metaphor is a literally false, declarative assertion of existential equivalence that compares two concepts or things in which one concept, called the primary concept, is claimed to be another, the secondary concept. Such a definition, we suggest, retains for metaphors the characteristics, and only those characteristics, that uniquely make metaphors "work."

A second problematical discussion in "Metaphor at work" is its justification of metaphors with such assertions as "without pre-existing concepts, one is blind with one's eyes open," "the concepts one has in mind determine what and how to observe," and "what we see depends to some extent on what we expect to see." These statements, admittedly representing the standard view on the relationships between perception—what we see—and our prior beliefs or theories, trace back to the "new image" view of science, propagated by Feyerabend [1970], Hanson [1958], and Kuhn [1962], that the "theory ladenness of observation" makes it impossible for science to provide objective knowledge about the world. Though the new image view is now so firmly entrenched in the philosophy of science that it has become dogma [Greenwood 1990], recent work shows that Kuhn and his colleagues were mistaken. Indeed, nothing in the philosophy of science or the psychology of perception either implies or suggests that science cannot provide objective knowledge about the world. Hunt [1992, 1993a, 1993b] has provided detailed analyses; this brief commentary can only touch on the numerous misconceptions spawned by Kuhn and others that continue to plague both the philosophy of science and the writings of philosophically inclined social scientists.

First, new image advocates continually, indiscriminately, and con-
ence. Although we agree that metaphors are important in science, we believe it is important for readers to understand that this importance is independent of the supposed “theory-ladeness of observation.” Metaphors can “stand on their own two feet.” Indeed, metaphors must do so. Stated most succinctly, though our theories of the world influence how we understand the world that we see, our theories of the world do not influence how we see the world that we understand. Thus, what we see in the world can be used as an objective test of our theories about the world.

In conclusion, metaphors can play an important role in developing marketing knowledge by stimulating creativity through the metaphorical transfer of concepts, propositions, and theories from other disciplines. However, users, proposers, and developers of metaphors in marketing should always be mindful that (1) although the borrowing involved in metaphorical transfers cannot be reduced to algorithmic status, it can be reasonably systematic and thoughtful; (2) metaphors are denotatively false and (potentially) connotatively true, not just one ‘thing’ to be used for viewing another ‘thing;’ (3) a metaphorical transfer consists of a system of multiple, integrated elements, not individual, isolated ones; (4) the distinctions between literary and scientific metaphors, and between dormant and live metaphors (since they affect the roles that metaphors play in knowledge development) are important, not trivial; (5) the value of a metaphor to a discipline is determined by the appropriateness of its (intentionally and or unintentionally) transferred source, ontology, concepts, theories, and values; and (6) the value of metaphors relies in no way on the discredited notion that “observation is theory-laden.” As Van den Bulte so aptly put it, the “Critical analysis of metaphor offers us a mindset and an agenda for fruitfully confronting different perspectives and research traditions in marketing and for raising strategic debates in marketing thought to a more informed and productive level.” We agree, but only if marketers avoid metaphorical inflation.

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Author’s Reply by Christophe Van den Bulte
Can Literal Truth Safeguard Models and Theories from Metaphor?

Hunt and Menon’s comment certainly meets the expectations of an interested reader. It offers a clear and concise exposition of the main points, questions an assumption taken for granted, and triggers some new questions that yet need to be resolved.

Although I used the argument that observation presupposes conceptualization to justify the fundamental role of metaphor, I am grateful to Hunt and Menon for pointing out that appreciating the value of metaphor does not hinge on taking a relativist view on science. Indeed, Rom Harré—one of the key thinkers of scientific realism—puts metaphor squarely at the core of any theory development, as a number of citations in “Metaphor at work” testify. Hence, marketers should be mindful of how metaphors pervade their work, irrespective of whether they are relativists or realists.

Hunt and Menon also correctly point out that the broad definition of metaphor as “thinking of one thing in terms of something else” implies that all theories and models can be classified as metaphors. Resenting this as “metaphorical inflation” they present a more restrictive definition, distinguishing literally false kinds of thinking in terms of something else—which they call metaphor—from literally true kinds—in which, I infer, they would include successful theories and models. Unfortunately, Hunt and Menon omit to explain why they believe it is useful to safeguard models and theories from metaphoricity. It is far from clear to me if there is any fundamental problem in considering theories and models to be inherently based on metaphors. Also, I doubt whether “literal truth” is a powerful discriminator: any declarative assertion based on useful metaphorical thinking can be saved from “literal falsity” by the mere inclusion of the qualifier like. Whereas it is indeed not defendable to state that the atom literally is a solar system, I doubt whether one can classify the assertion that it is like a solar system as literally false. Finally, not only do I find the criterion itself not very useful, I also have some concerns about its being consistent with Hunt’s scientific realism and about the rationale offered.
Hunt and Menon’s illustrative discussion of Arndt’s metaphors is not particularly compelling. Many of them are not just “straightforward declarative terms” but do trigger a host of connotations and cognitive schemata. “Alienated man” makes me retrieve thoughts and feelings related to the appropriation of labor value by owners of capital, Baudrillard’s political economy of signs, Kafkaian bureaucracies, and pictures from Eraserhead and Blade Runner. Also, I believe one can reasonably argue that at the time they were first espoused, ideas of political economy and “instrumental man” did provoke and gave impetus to channels research and market response modeling. A second problem is that Hunt [1990, 1992] has explicitly foregone the pursuit of knowledge with certainty. Even for the most successful theories, he asserts, evidence will never “allow us to know with certainty that the structure of relationships is as posited” [1990, p. 10]. At the very best, “long term success of a scientific theory gives reason to believe that something like the entities and structure postulated by the theory actually exists” [1990, p. 9]. It is not clear to me, then, which criterion one should use to determine which kind of “thinking in terms of something else” is not literally false. Can “literal falsity” be of any help to a scientific realist to distinguish “mere metaphors” from “(nonmetaphorical) theories”? In what way does the notion of literal truth advocated by Hunt and Menon differ from the notion of truth with certainty rejected by Hunt? To what extent does attributing literal, denotative truth presuppose having direct and genuine access to reality? These quintessential questions still await elucidation. Finally, I expect many readers will fail as I do, to grasp how Hunt can rationally advocate a notion that both he and Harré have squarely rejected in defense of reason and realism in science. If scientists constrained to “telling each other only literal truths . . . would perform remain forever silent” [Harré 1986, p. 12; Hunt 1990, p. 12], how can he expect us to formulate anything else than inherently metaphoric models and theories?

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