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Abstract This article contributes to theory development in marketing, in general, and to theory development in marketing ethics, in particular. The proposed "inductive realist model of theory generation" incorporates both (1) recent works in the philosophy of science on discovery processes in science and (2) Hunt's (*International Studies in the Philosophy of Science, 25*(2), 159–178, 2011, *AMS Review, 2*(1), 5–18, 2012) inductive realist model of theory status. To illustrate how the model can be used, the author shows how the model can contribute to understanding the development of a general theory of marketing ethics that is frequently referred to as the "Hunt-Vitell theory of ethics."

Keywords Philosophy of science · Scientific realism · Inductive realism · Ethics · Scientific discovery · Theory development

Historically, both the philosophy of science and marketing theory have drawn sharp distinctions between issues related to the context of discovery and those related to the context of justification. In the philosophy of science, the conventional wisdom is that the discovery/justification distinction traces to the position of Reichenbach (1938, p. 7): "The philosopher of science is not much interested in the thought processes which lead to scientific discoveries…. That is, he is interested not in the context of discovery but in the context of justification."[1] In marketing, the distinction traces to Hunt's (1976, p. 18) view that, whereas there are rigorous procedures for justifying knowledge-claims, "many, if not most, scientific discoveries are flashes of perceptual insight and are not the result of following some rigorously prescribed procedure." Since a 1978 conference that was held at the University of Nevada, Reno, those calling themselves the "friends of discovery" in the philosophy of science have paid increasing attention to issues related to the context of discovery (Nickles 1980a, b). In marketing, there has also been increased attention. For example, Yadav (2010, p.17) laments the decline of conceptual, theory-development articles, and he makes suggestions for developing theories in marketing because marketing "must strike a sustainable, synergistic balance between conceptual and empirical articles; both forms of scholarship are essential."

Recent work on the philosophical foundations of marketing has focused on explaining empirically successful marketing theories (Hunt 2012). In this work, Hunt (2012) (a) details the new, "inductive realist" model of theory status (i.e., acceptance, working acceptance, and rejection) in marketing, (b) shows how the model provides a new way to explicate the concept of "approximate truth," and (c) uses the model to explain the empirical success of market orientation theory. However, readers should note that Hunt's inductive realist model of theory status *begins* with scholars

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[1] The reason that I say "conventionally" is that Laudan (1977) provides extensive documentation that the discovery/justification distinction in the philosophy of science pre-dates the work of Reichenbach (1938) by over 100 years. For example, Laudan (1977) provides the following quote from the 19th century philosopher, William Whewell: "Scientific discovery must ever depend upon some happy thought, of which we cannot trace the origin: some fortunate cast of intellect, rising above all rules. No maxims can be given which inevitably lead to discovery" (Whewell 1847, Vol. II, pp.20–21).

offering "theory proposals." Therefore, the model may be viewed as (primarily) within the context of justification.[2] That is, the model is silent on the question of where theory proposals in marketing come *from* (i.e., theory *generation*). Given the acknowledged importance of both theory generation and theory evaluation, a model that incorporates both discovery and justification is desirable.

The purpose of this article is to contribute to theory development in marketing by proposing a model of theory generation that links discovery and justification. Specifically, my proposed "inductive realist model of theory generation" will incorporate both (1) recent works by the "friends of discovery" on discovery processes in science and (2) Hunt's (2011, 2012) inductive realist model of theory status. To illustrate how the model can be used, I show how the model can contribute to understanding the development of a general theory of marketing ethics, that is, what is frequently called the "Hunt-Vitell theory of ethics." The article proceeds by discussing recent works on discovery processes in science and then using this work and Hunt's (2011, 2012) model of theory status to develop a model of theory generation. I then briefly review the Hunt-Vitell ("H-V") theory of ethics and use the inductive realist model to explain the factors leading to the development of the H-V theory.

Theory generation and discovery processes

The distinction between the contexts of discovery and justification is customarily traced to Hans Reichenbach's *Experience and Prediction* (Reichenbach 1938), which claimed that the context of justification is the only part of scientific practice that is epistemologically relevant and amenable to philosophical analysis. Modern interest in discovery processes began with Hanson's (1958) *Patterns of Discovery*, which claimed that Kepler's discovery of the elliptical orbit of Mars resulted from Kepler's retroductively inferring the elliptic hypothesis from Tycho Brahe's data. For Hanson, Kepler's retroduction was an example of a "logic of discovery." However, subsequent works showed that, in fact, Kepler had not retroduced the elliptic hypothesis from the data. As a consequence, "history has not been kind to Hanson's analysis" (Lugg 1985, p. 209). Nonetheless, Hanson's (1958) may be viewed as a forerunner of the numerous works on discovery that were launched by the "friends of discovery" after a conference in 1978 at the University of Nevada, Reno. The conference resulted in two volumes on discovery edited by Thomas Nickles (Nickles 1980a, b). Since 1980, numerous writers have contributed works on the topic of discovery processes. Much of this work on discovery is reviewed in articles by Blachowiez (1989), Gibbons (2012), Lugg (1985), Nickles (1985), Savary (1995), and the volumes edited by Meheus and Nickles (2009) and Schickore and Steinle (2006).

My objective in this article is not to review the "friends of discovery" literature, but to use it to inform a revision of the inductive realist model of theory proposals and theory status. Before developing the model, however, five preliminary issues concerning discovery need to be addressed. First, "discovery" is a *success* word (Curd 1980). To claim that James Watson and Francis Crick discovered that DNA's molecular structure is a double helix is not to claim that they first proposed it (even if they were the first proposers). Rather, it is to claim that the scientific community accepts their proposed double-helix assertion as—at least approximately—true. As Gutting (1980, p. 29) stresses, the word "discovery" implies that "what is discovered in fact exists or expresses a truth." Therefore, works on discovery processes are consistent with inductive realism's emphasis on truth and approximate truth. Indeed, to the extent that friends of discovery focus on *discovery*, their works *presume* the possibility of a claim being true (or approximately true).

Second, "discovery" does not just denote a contribution to knowledge that is new and epistemically warranted. It also connotes a contribution to knowledge that is scientifically important. Every article in a scientific journal—including the *AMS Review*—proposes that the article's knowledge claims make a contribution to knowledge. And each article endeavors to provide epistemic warrant for its knowledge claims. However, many, if not most, of the articles in scientific journals are (and, indeed, claimed by their authors to be) incremental, rather than major, contributions to knowledge. The implication of the preceding is that a model of discovery processes—theory generation processes—should account not only for new, approximately true, *major* contributions to knowledge, but also to the by-far-more-numerous, *incremental* contributions to scientific knowledge.

Third, the word "discovery" works well as a success word when used to describe a process that leads a scientist to find that entities (e.g., molecules) exist and/or that particular entities have certain attributes (e.g., the DNA molecule has a double helix structure). However, the word "discovery" works less well when used to describe the generation of *theories*. We conventionally describe theories as (among other things) systematically related sets of *statements*. Clearly, it is an affront to English grammar to refer to *statements* being "discovered" (Siegel 1980). (Equally clearly, however, when the statements comprising a theory accurately refer to the entities, attributes, and relationships that exist in the external world, such a theory may constitute, rightly speaking, a

[2] The reason for the "primarily" is that Hunt's (2012) model of theory status states explicitly that the successes and failures of a theory as to explanations, predictions, and interventions often results in significant revisions in theories. The process of revising theories is, of course, in the context of discovery.

discovery.) In any respect, to avoid confusion, the inductive realist approach discussed here uses the phrase "theory generation," not "theory discovery."

Fourth, there appear to be two extreme positions with respect to discovery processes. At one extreme, some have viewed discovery as having "an irrational element" (Popper 1959, p. 32) or being a random "happy thought" (Whewell 1847, p. 20) or being "a series of inferences which are deeply veiled by the darkness of instinctive guessing" (Reichenbach 1944, p. 67). At the other extreme, discovery is construed as the result of an algorithmic, computational logic. As an example of algorithmic discovery, Zytkow and Simon (1988, p. 65) claim: with "new computer systems of discovery… it becomes reasonable and attractive to study the schemes of discovery in the same way as the criteria of justification: empirically as facts, and logically as norms." The inductive realist approach to discovery processes—theory generation processes—is that discoveries are neither irrational nor algorithmic. Rather discoveries are best viewed as the result of creative cognitive acts that involve constraints and reasoning processes that parallel those found in the context of justification. As such, the inductive realist model agrees with Meheus (2009, p. vii) that "a large majority of philosophers of science agrees that… truly, novel discoveries are not the result of applying some standardized procedure… [nor are they] produced by unstructured flashes of insight."

Fifth, Meheus (1999) points out that the articles and books in the "friends of discovery" literature often start with the claim that both the early positivists (e.g., Pierre Duhem, Ernst Mach, and Henry Poincare') and the later, *logical* positivists ignored issues related to scientific discovery. In contrast, Meheus (1999, p. 82) not only shows that the positivists addressed theory generation, but he also shows that their approaches were "entirely coherent." The work of Hempel (1965) is just one of many examples that Meheus (1999) documents. Hempel (1965) discusses discovery and the methods of "thought experiments" and "analogy." As to thought experiments, "Hempel clearly recognized the systematic and methodical character of thought experiments" (Meheus 1999, p. 90). Indeed, for Hempel:

> In many cases, the empirical assumptions and the *reasoning* underlying an imaginary experiment are made highly, but not fully, explicit. Galileo's dialogues contain excellent examples of this procedure, which show how fruitful the *method* can be in suggesting general theoretical insights. (1965, p. 165)

Readers should note how Hempel, often considered to be a philosopher of science who saw no role for discovery in philosophical analysis, was advocating a "method" for "theoretical insights." Meheus (1999, p. 90) then shows how "Hempel considered the use of thought experiments as a *method of discovery*." The point to be stressed here is that, just as Jones and Keep (2009) and Shaw (2009) have pointed out that marketing is in danger of losing its history, the work of Meheus (1999) suggests that the philosophy of science may also be losing some of *its* history.

While keeping the preceding five aspects of the concept of "discovery" in mind, I now turn to developing a theory of the process of theory generation. Figure 1 is a model of the theory.

The inductive realist model of theory generation

Figure 1 shows the inductive realist model of theory generation. The focus of the model is explaining the process that leads to Box 4, new theory proposals. (I use "new theory proposals" in a broad sense, which includes, for example, positing new entities.) As with the inductive realist model of theory status (see Hunt 2012), the model in Fig. 1 is explicitly realist in two ways. First, the entities represented in Box 1 may be observable or unobservable, for "a realist holds that a valid scientific explanation can appeal to the non-observable" (Manicas 1987, p. 10). The second way that the model is realist is that the theories (entities, attributes, and relationships) identified in the linguistic expressions in Box 1 are understood to be about the external-to-the-linguistic-expressions' world of entities, attributes, and relationships in Box 6. That is, the world exists independently of its being theorized about.

Stated in brief, the model proposes that the process begins with a scholar (or group of scholars) recognizing that some problem (Box 2) exists within the theories that constitute current disciplinary knowledge (Box 1). The empirical successes (Box 9) and empirical failures (Box 10) of extant knowledge contribute to problem recognition. This recognition is guided and influenced by particular constraints (Box 7) that are idiosyncratic to the "problem-solution being sought" (Nickles 1980b, p. 10).

Problem recognition is also guided by reasoning processes (Box 8) that parallel those typically associated with the context of justification. Examples of such inference processes include deductive, inductive, and analogical reasoning (Schaffner 1974). The inductive realist model posits that the process of discovery involves creative cognitive acts (Box 3) that follow problem recognition (Box 2) and precede new theory proposals (Box 4). But these creative cognitive acts by a scholar or group of scholars—though being *creative*—are not well described as being "irrational" (Popper 1959, p. 32), or "instinctive guessing" (Reichenbach 1944, p. 67), or algorithmic (Zytkow and Simon 1988). Rather, for the inductive realist model, the creative cognitive acts are better described as resulting from insightful, constrained reasoning processes.

Consistent with the inductive realist model of theory *status* (Hunt 2011, 2012), Box 5 shows that theories are used to provide explanations and predictions, as well as

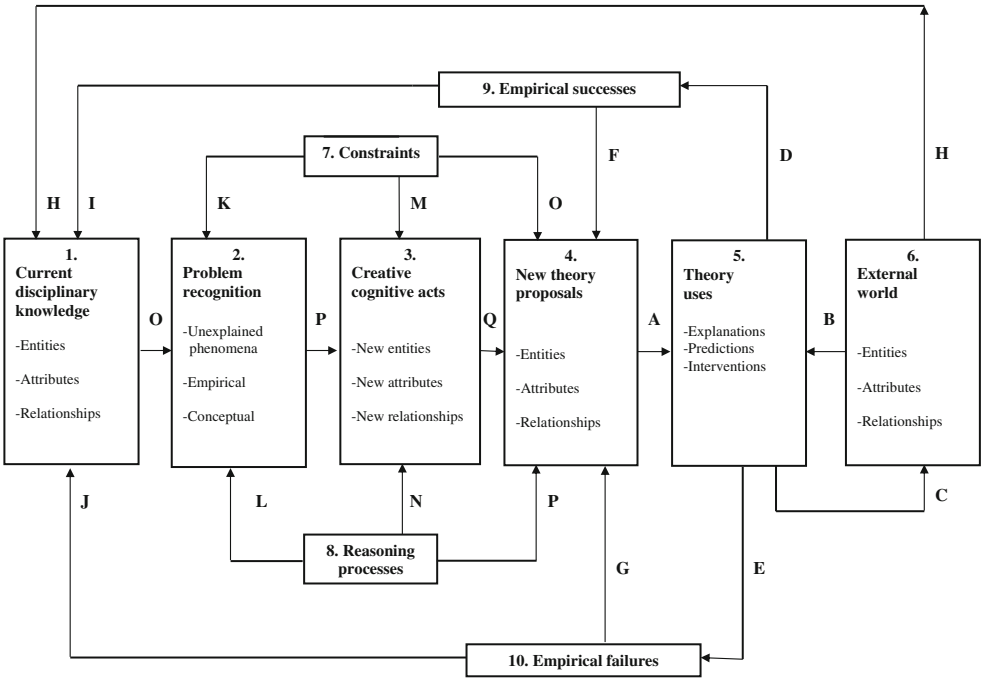

Fig. 1 The inductive realist model of theory generation. Copyright © 2012 by Shelby D. Hunt. Reprinted by permission

to guide interventions. The external world (Box 6) influences the successes (Box 9) and failures (Box 10) of the theories proposed, as well as the current state of disciplinary knowledge (Box 1).

The next section focuses on the rationale for modeling the discovery process as moving from current disciplinary knowledge (Box 1), to problem recognition (Box 2), to creative cognitive acts (Box 3), to new theory proposals (Box 4). In doing so, I draw on the "friends of discovery" literature.

Current disciplinary knowledge

All "friends of discovery" scholars begin, explicitly or implicitly, with the current state of disciplinary knowledge (Box 1) (e.g., Nickles 1980a, b). Among other things, the knowledge content of an academic discipline includes the entities that are posited to exist (e.g., firms, customers, and codes of ethics). These entities that exist have attributes (e.g., some firms are more market oriented than others; some codes of ethics are more strongly enforced than others). Also, the entities have relationships (e.g., firms that are high in market orientation are generally more profitable than those that are low in market orientation; firms that have codes of ethics that are more strongly enforced are more ethical than those that have codes that are less strongly enforced). Entities are customarily labeled as "concepts" or "constructs." Sometimes, patterns of relationships of concepts are labeled "laws" or "lawlike generalizations." Likewise, sometimes systematically related patterns of posited relationships are labeled as "theories."

In addition to concepts, laws, lawlike generalizations, and theories, disciplines have research traditions that include favored research methods and epistemologies. For example, the neoclassical economics research tradition favors equilibrium analyses, mathematical models, treating firms and consumers as maximizers, and the use of statistical tests on third-party generated data. Disfavored, for example, are historical evidence and statistical tests on primary data from surveys. Marketing's research traditions are more open than those of neoclassical economics. However, marketing—especially marketing's "major" journals—increasingly favors experimental studies that address consumer behavior issues and the development of mathematical models of marketing problems. Disfavored are studies that (1) focus on marketing systems, marketing theory, or strategy, (2) use qualitative methods, or (3) collect primary data through self-administered questionnaires.

A major goal of all scientific disciplines is to explain and predict phenomena in their respective "domains" (Shapere 1985). At least since the 1960s and the work of Alderson (1965), the conventional view is that marketing's primary domain is exchange relationships. Viewed this way, marketing science has four fundamental explananda (Hunt 1983). First, marketing science seeks to explain the behaviors of buyers directed at consummating exchanges. That is, why do which buyers purchase what they do, where they do, when they do, and how they do? Second, it seeks to explain the behaviors of sellers directed at consummating exchanges. That is, why do which sellers produce, price, promote, and distribute what they do, where they do, when they do and how they do? Third, it seeks to explain the

institutional framework directed at consummating and/or facilitating exchanges. That is, why do which kinds of institutions develop to engage in what kinds of functions or activities to consummate and/or facilitate exchanges, when will these institutions develop, where will they develop, and how will they develop? Fourth, it seeks to explain the consequences on society of the behaviors of buyers, the behaviors of sellers, and the institutional framework directed at consummating and/or facilitating exchanges. That is, why do which kinds of behaviors of buyers, behaviors of sellers, and institutions have what kinds of consequences on society, when they do, where they do, and how they do?

Problem recognition

Figure 1 shows that the impetus for theory generation is problem recognition (Box 2). As Nickles (1980a) puts it, "the formulation and solution of problems is the very heart of scientific research". Indeed, "most fruitful research, whether by a Ph. D. candidate or Nobel Laureate, begins with the selection of a good problem" (Nickles 1980a, p. 34). Even scholars such as Kuhn (1970) and Laudan (1977), neither of whom viewed science as a truth-seeking enterprise (unlike inductive realism), stressed problem recognition and problem solving as key aspects of the process of science. The period of time that begins with problem recognition (Box 2) and ends with new theory proposals (Box 4) may be referred to as the "period of theory generation" (Curd 1980, p. 203).

The model highlights the importance of three kinds of problems: unexplained phenomena, empirical problems, and conceptual problems. For a youthful discipline such as marketing, with its modest number of well-confirmed theories, there are always an abundance of unexplained phenomena that scholars can work on. Consequently, much of new theory generation in marketing is directed at the problem that results from unexplained phenomena.

As to empirical problems, these consist of any problem that stems from the empirical failures (Box 10) of a discipline's current theories. That is, because theories are used to explain phenomena, predict phenomena, and guide interventions, as shown in Box 5, empirical problems result from the failures of extant theories to explain phenomena well, to predict phenomena accurately, and to guide interventions successfully in the external world (Box 6).

As to conceptual problems, these consist of any problem that results from a lack of conceptual "fit." The lack of fit may be internal, as when a theory's internal logic is recognized as being inconsistent. Or the lack of fit may be external, as when a theory is inconsistent with other, well accepted theories. An example of a lack of external fit would be when a discipline has two theories, X and Y, with (1) both theories explaining some phenomena well, but (2) the two theories contradicting each other on some important characteristic or characteristics.

Constraints and reasoning processes

As Fig. 1 shows, both problem recognition (Box 2) and the creative cognitive acts (Box 3) that lead to new theory proposals (Box 4) involve constraints (Box 7) and reasoning processes (Box 8). That is, how scholars perceive or define what is a problem and what problem their research should address, is constrained by the background knowledge of the scholars, including the state of their discipline's current knowledge (Box 1). In recognizing both problems to be worked on and the constraints, the scholar uses customary reasoning processes, such as deduction and induction.

For example, Curd (1980, p. 215) points out that Watson and Crick's discovery of the double helix structure of the DNA molecule was arrived at in the face of numerous constraints. These constraints, among others, were that the problem-solution had to be consistent with (1) the compound's chemical composition, (2) its chemical properties, and (3) the quantum-mechanical laws of chemical binding. Furthermore, the problem-solution (4) had to be compatible with available X-ray photographs and (5) had to be capable of containing a stable code for the formation of a very large number of sequences of amino acids arranged in an arbitrary order.

The point to be stressed here is that scientific discoveries are highly constrained processes. The constraints are idiosyncratic to disciplines and their domains. Furthermore, the process of ensuring that the constraints are indeed satisfied involves highly refined reasoning processes. Also, when scholars advocate new theories and claim to be "thinking outside the box," the "box" being referred to is Box 7. Finally, when scholars maintain that their proposed theory is "outside the box," they must be prepared to provide good reasons for doing so (Box 8).

Creative cognitive acts

The "friends of discovery" literature uniformly rejects the view that scientific discovery results from "an irrational element" (Popper 1959, p. 32). Also rejected is that scientific discoveries typically result from a single, mysterious, genius-inspired, flash of insight. As Darden (1980, p. 151) puts it, what is rejected is the view that theories "arise all at once by a creative leap of the imagination of the scientist." However, while the "friends of discovery" literature proposes no "theory of creativity" (Savary 1995, p. 342), they do maintain that human creativity plays an essential role in genuine scientific discovery. Therefore, the inductive realist model of theory generation acknowledges that it takes creative cognitive acts (Box 3) to go from problem recognition to new theory proposals (Box 4).

Three points should be stressed here. First, the creative cognitive acts involved in theory generation take place through time. This is not to deny that there may be aha! moments. Rather, it is to deny that theory generation occurs all at once (with a single aha!). Second, readers should note that the concept in Box 3 is labeled "creative cognitive acts," not a "creative cognitive leap." Although "leap" is often used in the literature, it has the implication that discoveries occur "all at once" from a single flash of insight. Instead, the inductive realist model views discoveries as resulting from several important insights that take place through time. Third, readers should be advised that the view here is not that creative cognitive acts occur only in discovery or theory generation. Instead, the inductive realist view specifically stresses that theory testing or the "justification" process also involves creative cognitive acts. Indeed, devising good empirical tests is often a highly creative enterprise (in addition to being highly reasoned, of course).

New theory proposals

After the scholar recognizes a problem to be addressed (Box 2) and engages in the creative, constrained reasoning process of problem solving (Box 3), the scholar must choose (or find) an appropriate publication outlet for the new theory proposal (Box 4). The two major publication outlets are books and scholarly journals. For marketing and other social sciences, peer reviewed journals are usually considered primary, and books are secondary.

When manuscripts are developed for possible publication in both journals and books, the inductive realist model specifically recognizes that the manuscript development process is creative, constrained, and highly reasoned. During the manuscript development process, theory proposals are often modified. The modifications often come from performing the very act of developing epistemic warrant for the theory proposal. The epistemic warrant consists of the theoretical and empirical evidence for the theory proposed. Also, many of the theory changes result from suggestions or directives from reviewers and editors. The norms of reviewers and editors also become constraints that authors of new theory proposals must work within (Box 7). Satisfying the constraints imposed by reviewers and editors involves detailed reasoning processes (Box 8).

The norms of different marketing journals vary greatly. Indeed, the norms of different reviewers for the *same* journal vary greatly. If an editor allows the original manuscript to be revised, all authors of new theory proposals face the daunting task of satisfying the–often conflicting—demands of reviewers. Satisfying the demands of reviewers involves a finely grained reasoning process that incorporates both theoretical and empirical arguments.

The preceding outlines the inductive realist model of theory generation. The model will become clearer with an example of the process of theory generation. Accordingly, the next section will review the structure of the H-V theory of ethics. Then the model will be used to explain the factors leading to the development of the H-V theory.

A general theory of ethics

What has come to be called the "Hunt-Vitell theory of ethics" was formally developed in the early 1980s and first published in 1986 in the *Journal of Macromarketing* (Hunt and Vitell 1986). By the late 1980s, many scholars were using the theory for teaching and researching the subject of ethics. By the early 1990s, because Scott Vitell and I did not give the theory a name, ethics' scholars began referring to it as simply, the Hunt-Vitell (or H-V) theory of ethics. We authored a slightly revised version of the theory in 1993 (Hunt and Vitell 1993). My discussion of the theory will follow the 1993 version of the theory, which is shown as Fig. 2.

The H-V model addresses the situation in which an individual confronts a problem perceived as having ethical content. This perception of an ethical problem situation triggers the process depicted by the model. If the individual does not perceive some ethical content in a problem situation, subsequent elements of the model do not come into play. Given that an individual perceives a situation as having ethical content, the next step is the perception of various possible alternatives or actions that might be followed to resolve the ethical problem. Because it is unlikely that an individual will recognize the complete set of possible alternatives, the "decision set" will be fewer than the universe of total possibilities

Once the individual perceives a set of alternatives, two kinds of evaluations will take place: deontological and teleological. In the deontological evaluation, the individual evaluates the inherent rightness or wrongness of the behaviors implied by each alternative. The process involves comparing each alternative's behaviors with a set of predetermined deontological norms. These norms represent personal values or rules of moral behavior. They range from (1) general beliefs about such things as honesty, stealing, cheating and treating people fairly to (2) issue-specific beliefs about such things as deceptive advertising, product safety, sales "kickbacks," confidentiality of data in research, respondent anonymity, and interviewer dishonesty. The norms take the form of beliefs of the following kinds: "It is always right to …;" "it is generally or usually right to …;" "it is always wrong to …;" and "it is generally or usually wrong to…."

Contrasted with the deontological process, the teleological evaluation process holds four things to be paramount: (1) the perceived consequences of each alternative for various stakeholder groups, (2) the probability that each consequence will

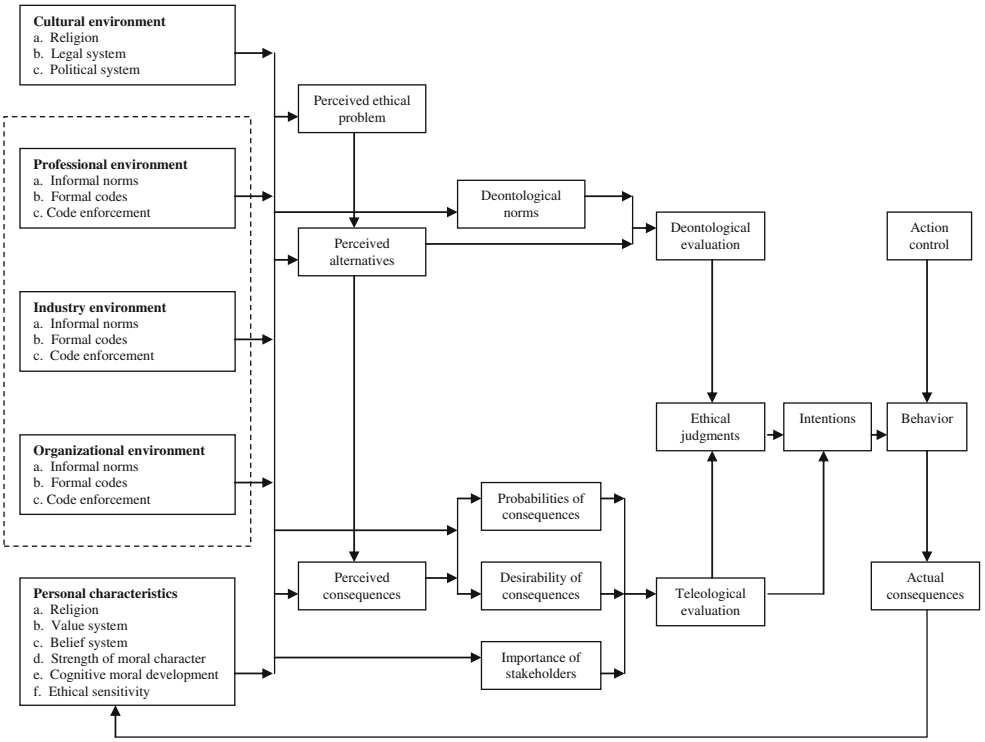

Fig. 2 Hunt-Vitell theory of ethics. SOURCE: Hunt and Vitell (1986, 1993). Copyright © 1991 by Shelby D. Hunt and Scott J. Vitell. Reprinted by permission. NOTE: The portion of the model outside the *dashed lines* constitutes the general theory. The portion inside the *dashed lines* individuates the general model for professional and managerial contexts

occur to each stakeholder group, (3) the desirability or undesirability of each consequence, and (4) the importance of each stakeholder group. Both the identity and importance of the stakeholder groups will vary across individuals and situations. For example, the stakeholders may (or may not) include one's self, organization, family, friends, customers, stockholders, suppliers, or employees.

Although the H-V model proposes that the teleological evaluation process is influenced by the desirability and probability of consequences, as well as the importance of stakeholders, no specific information-processing rule is advanced by the model. Indeed, the theory underlying the model is that the information-processing rules will differ across different people's personal moral codes. That is, people will differ in (1) the importance they place on various stakeholders, (2) their beliefs as to the positive/negative consequences that different stakeholders will enjoy/suffer, (3) their beliefs as to the likelihood that certain consequences will occur. The overall result of the teleological evaluation will be beliefs about the relative goodness versus badness brought about by each decision alternative, as perceived by the decision maker.

The core of the model comes next. The H-V model posits that an individual's ethical judgments, for example, the belief that a particular alternative is the most ethical alternative, are a combination of the individual's deontological evaluation (that is, applying norms of behavior to each of the alternatives) and the individual's teleological evaluation (that is, an evaluation of the sum total of goodness versus badness likely to be provided by each alternative for all relevant stakeholders). The model then proposes that the ethical judgments of people in decision situations influence their behaviors because of "intentions." That is, consistent with empirical research, people generally *intend* to act consistent with their beliefs as to what is their perception of what is the most *ethical* alternative. Therefore, the H-V model proposes that both ethical judgments and intentions will be better predictors of behavior in situations where the ethical issues are viewed as highly important, rather than inconsequential. That is, the model focuses on important problem situations that require significant thinking and evaluation on the part of people, not just those in which people act (react) in a routinized manner.

However, the H-V model also proposes that people's ethical judgments will sometimes differ from their intentions because their teleological evaluations also directly affect their intentions. The arrow in the model directly from teleological evaluation to intentions implies that, though an individual may perceive a particular alternative as the most ethical alternative, the person may intend to choose another alternative because of certain preferred consequences. These significant positive consequences may flow to one's self or to another important stakeholder as a result of choosing what the individual believes to be a less ethical alternative. The theory suggests that when behavior and intentions are inconsistent with ethical judgments, one of the consequences will be feelings of *guilt*.

What is called *action control* in the model is the extent to which an individual actually exerts control in the enactment

of an intention in a particular situation. That is, situational constraints may result in behaviors that are inconsistent with intentions and ethical judgments. Researchers have found that, in many circumstances in which individuals did not behave consistently with their ethical beliefs, they did so because they believed that there were environmental circumstances that absolutely prevented them from adopting what they believed to be the most ethical course of action.

After the individual engages in a particular behavior in a decision situation having perceived ethical content, there will be an evaluation of the actual consequences of the alternative selected. As the direct arrow from "actual consequences" to "personal characteristics" in the model implies, the consequences of decisions provide feedback to the individual. This is how the model proposes that people *learn* to be ethical/unethical. Researchers have found that individuals, through organizational systems of rewards and punishments, will learn to behave in particular ways in decision situations involving ethical issues: rewarded ethical/unethical behaviors will be repeated, punished ethical/unethical behaviors will be avoided. The H-V model identifies six personal characteristics that are posited to influence the decision-making process: religion, value system, belief system, strength of moral character, cognitive moral development, and ethical sensitivity

All ethical theories stress the role of culture in influencing ethics. Likewise, the H-V model stresses the importance of *Cultural Environment* in influencing the process of ethical decision making. As components of culture, the H-V model suggests that researchers focus attention on religion, legal systems, and political systems. The boxes in the model labeled "Industry Environment," "Professional Environment" and "Organizational Environment" specifically orient the model toward ethical situations for businesspeople and the professions. The H-V model proposes that all industries, professional associations, and organizations have complex sets of norms, some of which are often formalized in codes, but most of which are informal norms communicated in the solving of actual workplace problems (and observing how others solve such problems). These norms, therefore, form a framework by which individuals are *socialized* into their respective organizations, professions, and industries.

Explaining the generation of the Hunt-Vitell theory

As discussed in Hunt and Vitell (2006), the general theory of marketing ethics traces to when I started teaching at the University of Wisconsin in January, 1969. A course that I developed—later given the label "macromarketing"—focused on subjects such as ethics, marketing systems, public policy, and social responsibility. In the early 1970s, teaching materials in the area of marketing ethics devoted extensive attention to the presumed existence of an "ethics gap" between marketers and other members of society, which resulted from marketers and others in society having different ethical frameworks. Using normative theories from moral philosophy, several class discussions in the macromarketing course focused on what kinds of investigations would be appropriate for determining whether, in fact, there existed an ethics gap and whether this gap resulted from marketers having ethical frameworks that differed from others in society. These discussions, though lively, were educationally unproductive, because (it seemed to me) of the lack of a positive theory to guide thoughtful, systematic analyses of ethical issues.

In the fall semester of 1974, a rudimentary outline of a theory of ethical decision making was developed in an effort to make class discussion more productive. If people actually followed the suggestions and advice of moral philosophers, I reasoned, then integrating philosophers' deontological and teleological theories could provide a framework for a positive theory of ethics. Students responded favorably to the theory (really, just a theory-sketch). In 1980, I joined the faculty at Texas Tech University, and in the fall of 1981 Scott Vitell entered Texas Tech's Ph.D. program and took our version of the macromarketing course. He became interested in formally developing the theory and testing it in his dissertation. Over the next few years, we jointly worked on the theory, and our efforts resulted in a version of it being presented at the Macromarketing Conference held in Vancouver, Canada, in 1984. We then developed a revised version that ultimately was published in the *Journal of Macromarketing* in 1986.

By the late 1980s, scholars began pointing out that most of the theory was really applicable to ethical decision making in general, not just to decisions in marketing or business. Their comments and the positive findings of empirical research on the theory led us to a revised model that was published in Hunt and Vitell (1993). The purpose of this section is to apply the inductive realist model to explain the factors that led to the generation of the theory. I focus on current disciplinary knowledge (Box 1), problem recognition (Box 2), creative cognitive acts (Box 3), new theory proposals (Box 4), constraints (Box 7), and reasoning processes (Box 8).

Box 1: marketing ethics in the early 1980s

As I recall our early discussions, Scott Vitell and I relied heavily on a detailed and thoughtful review by Murphy and Laczniak (1981) of the status of marketing ethics research in the early 1980's. Six major streams of research were identified. First, some writers attempted to show the relevance to marketing of formal ethical theories from philosophy (e.g., Robin 1980). Second, some authors were attempting to develop models of ethical decision-making in marketing

(e.g. Bartels 1967). A third stream of research examined specific practices within marketing and attempted to determine the extent to which various groups view the practices as being ethical or unethical (e.g. Sturdivant and Cocanougher 1973). A fourth stream of research focused on the mutual responsibilities between marketing research agencies and their clients (e.g., Bezilla et al. 1976). The fifth area of research focused on the responsibilities of marketing researchers to their respondents and subjects. (e.g., Tybout and Zaltman 1974). The sixth line of research investigated the actions that corporate top management can take to help their employees make decisions in a more ethical fashion (e.g., Coe and Coe 1976).

Murphy and Laczniak (1981) reviewed the preceding research streams and concluded that research "related to marketing ethics has been less than innovative and systematic" (1981, p. 262). They also concluded that a major reason for the lack of systematic research in the area of marketing ethics is that "the field of marketing is without a global theory of ethics" (Murphy and Laczniak 1981, p. 262).

Box 2: ethics problem recognition

We agreed with Murphy and Laczniak (1981) that the lack of a global theory of ethics had resulted in a lack of *systematic* research in the area of marketing ethics. Therefore, we reasoned (Box 8), given the successful use of the theory-sketch in teaching ethics, it might be possible to formally develop our theory-sketch into a general theory. The first issue that we addressed was what should the theory focus on explaining? After much discussion we decided to focus on explaining the major findings of the (previously mentioned) third stream of research, with the empirical work of Sturdivant and Cocanougher (1973) as the prototypical example.

Sturdivant and Cocanougher (1973) had asked respondents (executives, housewives, blue-collar workers, and students) to evaluate the ethics of eight marketing practices on a seven point (completely ethical to completely unethical) scale. The following is one example:

> A large auto manufacturer has developed a safety device that could reduce traffic injuries by as much as 50 %. However, the device would increase the cost of each car by more than $300, which would undoubtedly cause the company to lose sales to competitors. Therefore, the company decided not to use the safety device unless all manufacturers are legally required to use it (Sturdivant and Cocanougher 1973, p. 12).

Sixty-six percent of the blue collar workers, 73 % of the students, and 76 % of the housewives perceived the decision as unethical. Yet, only 51 % of executives shared this view. Similar results were reported for the other seven marketing practices. Sturdivant and Cocanougher (1973, p. 176) then concluded that "a gap exists between the views of businessmen and other groups," which results from "differences in their ethical frameworks".

Studies such as that of Sturdivant and Cocanougher (1973) prompted us to perceive three ethical problems that we wanted to address in the development of our theory. Stated in the form of questions, the three are: (1) Why do people have different views as to the ethicality of many marketing practices? (That is, what explains the variance in "ethical judgments"?) (2) What is the meaning of the concept "ethical framework"? (3) Do differences in ethical judgments imply that people have different ethical frameworks? As we understood the marketing ethics literature, there was no theory that could provide satisfactory answers to these three questions.

Box 3: creative cognitive acts

As we attempted to develop our theory, we recognized several major constraints (Box 7). First, we believed (Box 8) that it would be important for the theory to incorporate major, existing, ethics concepts. Because the ethics literature had long focused on deontological ethics and teleological ethics, we believed these concepts needed to be prominent in the theory. Second, going back at least to the time of Socrates, ethicists have recognized that different cultures have different ethical beliefs. Therefore, we reasoned, culture should be a major explanatory variable. Third, we were strongly influenced by three theories of consumer behavior (Engel et al. 1978; Fishbein and Ajzen 1975; Howard and Sheth 1969), and we noted that each was developed in a box-and-arrow format. Therefore, we thought it important that the theory should be capable of being represented as a box-and-arrow, process model.

What, then, was new about the H-V theory? In terms of the inductive realist model of theory generation, what were the creative cognitive acts? First, and perhaps foremost, the H-V theory represented an attempt to bring together, to integrate, many ethics concepts that had previously been considered separately. Even if every single concept in the theory had been investigated previously, and even if every single path in the model had been previously proposed, the theory was still new in the sense of the *framework* for putting all the parts together.

Second, the H-V theory was new in that it took normative ethics theories and used them to guide the development of a positive ethics theory. Indeed, it seemed to us that positive ethics theory in the social sciences, such as the work of Kohlberg (1981), was almost totally separate from the normative ethics theories that had been developed in philosophy. Thus, to us, the study of ethics seemed to fall prey to the "silo" problem that plagues much of academia.

A third new aspect of the H-V theory was that we specifically modeled ethical judgments to be a function of both deontological evaluation and teleological evaluation. We were strongly influenced by Frankena's (1963, p. 35) advocacy of a "mixed" system:

> This theory instructs us to determine what is right or wrong in particular situations, normally at least, by consulting rules such as we usually associate with morality; but it goes on to say that the way to tell what rules we should live by is to see which rules best fulfill the joint requirements of utility and justice. This view is still faced with the problem of measuring and balancing amounts of good and evil and, since it recognizes two basic principles, it must also face the problem of possible conflict between them.

Therefore, we reasoned (Box 8), the H-V theory posited that most individuals' ethical evaluations are a function *both* their deontological and teleological evaluations.

Fourth, the H-V theory was new in that it provided a detailed explication of the concept "ethical framework." Specifically, different individuals have different ethical frameworks when they have different personal moral codes.[3] Differences in personal moral codes result from differences in:

- the deontological norms held,
- the relative importance of particular norms,
- the rules for resolving conflicts among norms,
- the rules for interpreting the applicability of norms in particular situations,
- the importance weights assigned to particular stakeholders,
- the rules for combining the teleological components,
- and the rules for combining the deontological and teleological evaluations.

The preceding discussion of ethical frameworks (i.e., personal moral codes) provided us an answer to the first two questions that had prompted our theorizing. That is, (1) what explains the variance in ethical judgments and (2) what is the meaning of "ethical framework"? I turn now to the third question.

Readers should note that the H-V theory specifically recognizes that individuals placed in the same situation may perceive reality quite differently. For example, individuals may perceive different positive consequences for particular (e.g., highly important) stakeholders, different negative consequences for particular (e.g., very unimportant) stakeholders, and different probabilities of positive and negative consequences for particular (important and unimportant) stakeholders. We reasoned (Box 8) that different *perceptions* of reality should not be considered to be a part of an individual's personal moral code. Rather, only *evaluations* of perceptions of reality should be considered to be a part of an individual's personal moral code. Therefore, using the perceptions versus evaluations distinction, we were able to address the third problem that prompted our theoretical work: we claimed that the H-V theory implies that "different ethical judgments do not imply different ethical frameworks and similar ethical judgments do not imply similar ethical frameworks" (Hunt and Vitell 1986, p. 14).

As the inductive realist model of theory generation stresses, the creative cognitive acts involved in developing the H-V theory took place over several months. We went through iteration after iteration after iteration of the model. There was no single, great, eureka! moment. Rather, there were numerous, small, aha! moments. In 1984 we had developed a version of the theory and a model of that version that we believed might be publishable. We decided it was time to draft a manuscript and submit it to a journal. In terms of the inductive realist model of theory generation, it was time to "propose" our new theory.

Box 4: a new ethics theory proposed

We believed that the most appropriate outlet for our new theory was the *Journal of Marketing*. Unfortunately, at that time I was the editor of *JM* and, therefore, we could not submit our manuscript to *JM*. After much discussion, we decided to submit our manuscript to the *Journal of Macromarketing*. This decision was based significantly on the positive comments on the theory that I had received when I presented a draft of the model at the Macromarketing Conference held in Vancouver, Canada, in August 1984.

The purpose of this article is not to discuss the overall process of crafting a manuscript. I simply note here that we endeavored to develop sound reasons (Box 8) for the merits of our theory. Also, we tried to work within the constraints, as we perceived them. In short, we tried to stay "inside the box." (Subsequently, we found out that some reviewers would see the theory as "outside the box.")

The manuscript went to the editor of the *Journal of Macromarketing* in the fall of 1984, and he solicited comments from three reviewers, designated as A, B, and C. All three reviewers had editing recommendations, and all three wanted more discussion of how the model could be tested. However, their overall recommendations differed radically. Reviewer C recommended acceptance, because, in part, the reviewer "strongly advocates examining marketing ethics from a positive perspective." In contrast, reviewers A and B evaluated the paper negatively because, as the inductive realist model puts it, the theory violated a major constraint of the ethics discipline. For them, the theory was inappropriate because ethical theories must be normative. Reviewer A put it this way:

[3] For more on personal moral codes, see Hunt and Hansen (2007).

> Developing a positive theory of ethics is *impossible* in the sense that it would be no different than describing decision making in general. …Thus, ethical theory, at least as espoused by the vast majority of moral philosophers, seeks to understand actions in light of some standard or concept of what behavior "ought" to be. In this sense, theories of ethics are uniquely normative (emphasis added).

Reviewer B agreed with A that developing a positive theory of marketing ethics was impermissible:

> Unfortunately, the author(s) avoid a central point—adhered to by most moral philosophers—that ethics is distinctly different from positive (descriptive) social science by definition. Ethics deals with normative judgments about moral situations. Therefore, a model of ethical decision-making should either postulate a morally consistent normative system or provide a mechanism to evaluate the ethical appropriateness of decisions already made according to some standard or standards (underlining in original).

Heartened by the fact that at least one reviewer liked our article, we worked on a revision. We sent our revision to the editor in early 1985. It accepted many of the reviewers' suggestions, including the addition of a new section entitled "Suggestions for Testing the Model." What we could not do, of course, was change the theory from positive to normative. We did, however, attempt to reason with reviewers A and B. Indeed, in the seven pages of notes to reviewers, we argued that there should be a place in the marketing ethics literature for both positive and normative theories of ethics.

In May of 1985, the editor told us that, while reviewer C continued to recommend acceptance, reviewers A and B still maintained that a positive theory of ethics was impermissible. Therefore, he offered to accept our article for publication, with the condition that he would offer reviewers' A and B the opportunity to comment on our article, which could then be followed by our reply. We accepted his offer. In July of 1985, the editor advised us that both of the reviewers had declined his invitation to write comments on why a positive theory of ethics is impermissible.

The article appeared in the Spring, 1986, issue of the *Journal of Macromarketing*. Given that two of the three reviewers had had such negative views of the article, we had reason to believe that the theory would be little-noticed and/or much-maligned. We were wrong. The theory prompted numerous empirical tests and much discussion. As of this writing, the article has received over fourteen hundred Google Scholar citations, a citation record that exceeds that of any other article ever published in the *Journal of Macromarketing*.

The point to be stressed in this section is that new theory proposals (Box 4) in science must satisfy numerous constraints (Box 7) and be carefully reasoned (Box 8). When the constraints can be seen in advance of manuscript submission, authors are well-advised to reason carefully. When reviewers are confronted with outside–the–box theories, they should endeavor to be open to new theories. Likewise, when editors are confronted with conflicting reviews, sometimes they should, themselves, engage in creative cognitive acts (Box 3). In our view, Stanley Shapiro, the editor of the *Journal of Macromarketing* in 1985, exercised his Box 3 responsibilities well—others may disagree.

Conclusion

Drawing on philosophy of science works by the "friends of discovery" and the inductive realist model of theory status (Hunt 2011, 2012), this article proposes an inductive realist model of theory generation that links discovery and justification. To illustrate how the model can be used I apply it to the development of a general theory of marketing ethics. As shown in Fig. 1 and discussed in the text, discovery is argued to be best described as the result of creative cognitive acts that involve constraints and reasoning processes that parallel those found in the context of justification. As proposed, the model "links" discovery and justification in many ways. Here, I stress four specific ways.

First, in discovery, the empirical failures (Box 10) that result from the use of theories to explain phenomena, predict phenomena, and intervene in the external world (Box 6) are a key impetus for problem recognition (Box 2). Similarly, in justification: "A theory's high empirical failures, relative to success, gives reason to believe that the theory is likely false" (Hunt 2011, p.15). Therefore, discovery and justification are linked in that empirical failures play an important role in both.

Second, in discovery, the empirical successes (Box 9) of a theory in *one* part of a discipline's domain can stimulate the creative cognitive acts (Box 3) that suggest that the theory may be fruitfully applied in *another* part of the discipline's domain. Also, readers are asked to consider the case of an empirically successful theory from a nonmarketing discipline (e.g., management). Sometimes, a successful theory from another discipline can be "borrowed" by marketing and used as a stimulus for developing new theory in marketing's domain. Just as in discovery, a theory's empirical successes are important in justification. For example, "A theory's high proportion of successes, relative to failures, gives reason to believe that the theory is approximately true" (Hunt 2012, p.15). Therefore, empirical successes are important in both discovery and justification; they are *linked*.

Third, in discovery, the processes involved in problem recognition (Box 2), creative cognitive acts (Box 3), and developing new theory proposals (Box 4) are highly constrained (Box 7) by background knowledge and

disciplinary norms. These processes are also finely reasoned. Similarly, in justification, the processes involved in theory uses (Box 5) are constrained and closely reasoned according to background knowledge and disciplinary norms. For example, in justification, what counts as an explanatory success or failure? What constitutes a predictive success or failure? When is there enough conceptual and empirical evidence to warrant the claim that a theory is approximately true? Therefore, discovery and justification are linked in that both processes are constrained and closely reasoned according to scholars' background knowledge and their discipline's norms.

Fourth, the model links discovery and justification in that the world external to the theorist (Box 6) is prominent in both processes. After all, the model is the inductive *realist* model of theory generation. Therefore, the model assumes the standard realist positions that (1) the world exists independently of its being perceived, and (2) the purpose of science is to develop theories that increase our understanding of the external world through systematized structures capable of explaining and predicting phenomena.

As a final conclusion, consider the case of marketing ethics. The inductive realist model illustrates the factors involved in theory development in ethics by showing how to explain the process of generating the H-V theory of ethics. The objective has been to point marketing scholars toward further developing marketing ethics theory—at least that is the hope. More generally, as Yadav (2010) has so persuasively argued, marketing theory development has lagged theory-testing for several decades. The inductive realist model of theory generation can prompt more theory development in marketing. Again, at least that is the hope.

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