

Science and Morality: The Role of Values in Science and the Scientific Study of Moral Phenomena

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This article contributes to the debate over values in science. A critical co-constructivist framework is proposed for conceptualizing the role that debate over values plays in *all* science. Using the psychological literature on moral development, it is shown that although debate over values is an integral part of all scientific discourse, it plays a more explicit role in fields within the human sciences (e.g., anthropology, psychology, sociology, etc.) that touch on moral phenomena. Debate over values thus raises a central issue for modern science, namely the need to develop consensually agreed-on methods for resolving such debate.

Developments in philosophy of science over the past several decades have challenged the assumption of the value neutrality of science. The result has been a growing consensus that science is not and cannot be value free (Bhaskar, 1975, 1979; Fiske & Shweder, 1986; Habermas, 1973; Hanson, 1958; Howard, 1985; Kuhn, 1962/1970; Manicas & Secord, 1983; Toulmin, 1953, 1961). Although there is a growing recognition that science is not value free, there is less agreement concerning the types of values that should play a role in science. A distinction is frequently made between the roles of "epistemic" (Howard, 1985) or "cognitive" (Laudan, 1984) values (e.g., a value on truth) and nonepistemic or noncognitive values (i.e., moral values, including political and social values). One view, for example, is that science is defined by its values, and that the values at the core of scientific endeavor are epistemic or cognitive in nature (McMullin, 1984). According to this view, nonepistemic values represent intrusions into science that are gradually sifted out in the pursuit of epistemic values. The view that nonepistemic values should be excluded from science is, however, open to question, particularly in relation to the social and psychological sciences. As Howard (1985) has noted,

To the extent that one believes that there are immutable, law-like relationships in human behavior, McMullin's argument furnishes support for the belief that the influence of nonepistemic values should continually be minimized in psychological research. When one views humans as evolving in response to individual biographi-

cal and social influences, the wisdom of extending McMullin's argument to the human sciences becomes suspect. If human nature is influenced by how science views it, not only should we consider whether nonepistemic values *can* be removed from psychological research, but we must also consider if nonepistemic values *should* be removed. (p. 263)

This article seeks to move beyond the issue of whether values influence science and to address the issue of *how* values influence science. Values, we argue, play a central role in *all* scientific discourse; however, they do not play the *same* role in all scientific debate. Drawing on the co-constructivist socio-evolutionary tradition in the social sciences (Berger & Luckman, 1967; Gergen, 1985; Habermas, 1979), we propose a framework for understanding the role of values in scientific discourse. Values constitute one type or category of "metatheoretical" assumption that has an influence on science. Metatheoretical assumptions are substantive presuppositions (e.g., logical, epistemological, ontological, normative, etc.) that are part of the shared background of scientific activity that is ordinarily "meta" theoretical with respect to the factual, methodological, and theoretical issues that make up the immediate content of scientific debate.¹ As Reese and Overton (1970) have pointed out, scientific theories and models are never free of philosophic presuppositions. Even the most circumscribed and concrete model is dependent on the availability of more general models, and these on yet more general models, in an ever-widening series terminated only by the most general and hence the most basic models: metaphysical models. Normative assumptions² thus enter into

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¹ We do not mean to imply that epistemological, normative, or ontological theory is necessarily "meta" theory. Epistemology, ethics, and ontology are fields of inquiry that have historically been characterized by well-developed theories. We only mean to suggest that epistemological, normative, and ontological assumptions can be usefully conceptualized as metatheoretical with respect to ordinary scientific debate.

² In this article we use the term *normative assumptions* in a generic sense to denote not only values but also normative assumptions that have been termed *norms*, *standards*, *principles*, and so forth. We recog-

scientific discourse at the same level as other substantive presuppositions (e.g., logical, epistemological, or ontological) that do not ordinarily enter into theoretical debate over factual or methodological issues, namely, at the level of metatheoretical discourse. Not all debate over values, however, takes place at the metatheoretical level. Debate over normative assumptions plays a more explicit role in scientific discourse in those fields of the human sciences that include moral phenomena in their object domain.

The next two parts of this article describe our framework. In the first part, we present a view of the role that normative assumptions play in scientific discourse. In the second part, we extend the framework to include a number of distinct dimensions along which normative assumptions have varied, both historically and in the current psychological literature on moral behavior and development. In the third part, we illustrate the utility of this framework by applying it to the current psychological literature on moral behavior development.

Role of Normative Assumptions in Theoretical, Practical, and Metatheoretical Discourse

Our discussion of the role of normative assumptions in theoretical, practical, and metatheoretical discourse draws on Habermas's (1971, 1973, 1979) critical theory and his work in the area of communication (McCarthy, 1981). For Habermas, ordinary language communication is a meta-institution on which all other social institutions depend. A basic assumption is that ordinary interaction rests on a background consensus (a shared mutual understanding) that makes interaction possible. Communication thus not only aims at understanding, it presupposes it. From Habermas's perspective, the types of actions that occur during interaction can be defined in terms of the *shared* understanding that is both a goal and a presupposition of speech.

According to Habermas (1971, 1973, 1979), there are four basic types of implicit validity claims that the speaker makes on the hearer. They represent universal requirements or prerequisites that must be met if the speaker and hearer are to share the type of mutual understanding that is necessary for speech. Consensual interaction is threatened or may break down when the implicit validity claims that make up the background consensus are threatened or break down. The implicit validity claims concern comprehensibility, truthfulness, truth, and rightness. These claims are described in more detail in McCarthy (1981).

Role of Discourse in Communication

Habermas (1971, 1973, 1979), however, did not assign all four dimensions equal status. When validity claims in the dimensions of truth and rightness are challenged, the interaction can move beyond the use of ordinary or strategic communicative action and shift to discourse. Discourse involves examining

the implicit shared mutual understanding that provides the basis for normal speech in an attempt to establish a *new* basis for shared understanding. Discourse represents an attempt to render explicit the normally implicit understanding that is the basis of consensual speech and to subject this understanding to critical or discursive discussion.

Habermas (1971, 1973, 1979) distinguished between two types of discourse, theoretical and practical. In theoretical discourse, the truth claims of descriptive statements are subjected to question and argumentation. Practical discourse, in contrast, subjects the rightness claims of normative statements to question and argumentation. With this distinction, Habermas attempted to draw a parallel between the type of communication that occurs in theoretical discourse (e.g., the type of discourse that occurs in the scientific community) and practical discourse (e.g., the type of discourse that occurs in sociomoral-political communities).

Theoretical Discourse

Theoretical discourse attempts to determine truth. A theory of truth is a theory of how truth can be determined. In the history of philosophy there have been numerous theories of truth. The correspondence theory of truth, for example, holds that statements are true to the degree that they "correspond" to reality. The coherence theory of truth, in contrast, holds that the truth of statements is determined by the coherence and internal consistency of the system of thought within which the statements are embedded and derived.

In this frame, Habermas's (1971, 1973, 1979) work on theoretical discourse can be understood, in part, as an attempt to formulate a rational foundation for truth. More specifically, he argued that the truth value of an assertion can be rationally determined in such a way that it is not open to the objections that have been historically raised against objectivistic theories of truth. Habermas drew on the work of Peirce (1958) and distinguished between the truth of the content of a statement (i.e., its propositional content) and the act of declaring the statement to be true. In the first case, the issue concerns the conditions under which one can determine that a statement is true; in the second case, the issue concerns the conditions under which one can claim that the statement is true. This distinction separates for purposes of analysis the criteria for truth from the criteria by which a truth claim can be justified. A statement may be true, for example, but if one can provide no justification for one's belief in the truth of the statement, then the statement is an unwarranted assertion. An understanding of the structure of discourse is important because, Habermas argued, in the final analysis, the question of under what conditions a statement is true is inseparable from the question of under what conditions a statement can be justified.

This argument led Habermas (1971, 1973, 1979) to conclude that the logic of truth must include a logic of theoretical discourse, which entails examining the conditions under which it is possible to achieve a rational consensus with respect to truth through discourse. Thus, he proposed what amounts to a consensus theory of truth. Consensus theories of truth are themselves open to criticism. Perhaps the most serious is the implication that if consensus is reached with respect to the truth of an

nize that the variety of meanings historically associated with these terms has been rich and varied. For our purposes, however, the term *normative assumptions* is used to refer to all such normative presuppositions about the nature of goodness or rightness.

assertion, then the assertion is true. If people can all agree that the world is flat, then the implication is that it is true that the world is flat. The problem for a consensus theory of truth, then, is to define those conditions when accepting a consensus as true is warranted. This requires examining the conditions under which the consensus was reached. How can one distinguish between a "true" and a "false" consensus? How can one distinguish between a rationally motivated consensus and one that merely appears to be rational? The main thrust of Habermas's work on theoretical discourse was to define the properties of a rationally motivated consensus.

The notion of a genuine consensus presupposes that the outcome of critical discussion can be the result simply of a better argument and not of accidental or systematic constraints on communication. Habermas argued (cited in McCarthy, 1981, p. 306) that communication is unconstrained only when, for all participants, there is an effective equality of opportunity for assuming dialogue roles. From this general symmetry requirement there follow particular requirements for each of the basic modes of communication. In addition to having the same chance to speak, participants must have the same chance to put forward, call into question, ground, or refute statements, explanations, and so on, so that in the long run no assertion is exempted from critical examination. In addition, communication must also be free from distorting influences, whether open domination, conscious strategic behavior, or more subtle barriers to communication deriving from self-deception. Habermas referred to this condition as the "ideal speech situation" (McCarthy, 1981, p. 306).

Habermas (1971, 1973, 1979) did not consider the ideal speech situation as "ideal" in the sense of "not real" or "unrealistic," but rather as an ideal in the normative sense, that is, a criterion, standard, or value against which communication can be evaluated. More important for our purposes, it is a standard that is applicable to all communication, including the institutionalized communication patterns that define the structure of discourse communities. The notion of an ideal speech situation links abstract theories of truth to the concrete reality of a community of truth seekers.

Thus, although the scientific community is not unique in its pursuit of truth, it differs from other communities of truth seekers in the degree to which theoretical discourse approximates *in practice* the conditions of the ideal speech situation. To the degree that the truth claims of scientists, for example, are open to critical discussion, and individual scientists have equal opportunity to assume dialogue roles and to put forward and challenge claims, then science approximates the features of an ideal speech situation. Scientific truth is hence not "objective" truth; it is contingent truth. The relative truth status of any scientific hypothesis or theory is always contingent, open to critical examination and revision. However, to the degree that the consensus reached by the scientific community results from conditions that approximate the ideal speech situation, that consensus represents the closest approximation to truth about the natural world that can be achieved.

Practical Discourse

Habermas (1971, 1973, 1979), however, was not interested simply in the rational foundations of science. He also argued

that practical questions of morality can be decided rationally. His position was that the small differences that exist between theoretical and practical discourse are less important than the similarities that exist between them. The structure of both theoretical and practical discourse, he suggested, is essentially the same.

If rightness as well as truth can qualify as discursively redeemable validity claims, it follows that right norms must be capable of being grounded in a way similar to true statements. In the philosophical tradition two views (among others) stand opposed. One was developed in classical natural law theory and says that normative statements admit of truth *in the same sense* as descriptive statements; the other has with nominalism and empiricism become the dominant view of today and says that normative statements do not admit of truth at all. In my view, the assumptions underlying both views are false. I suspect that the justification of validity claims contained in recommendations of norms of action and of evaluation can be just as discursively tested as the justification of validity claims implied in assertions. Of course the grounding of right commands and evaluations differs in the structure of argumentation from the ground of true statements; the logical conditions under which a rational motivated consensus can be attained in practical discourse are different than in theoretical discourse. (Quoted in McCarthy, 1981, p. 311)

In practical discourse, an action or speech act takes place against a background of recognized values and norms, roles and institutions, and rules and conventions (McCarthy, 1981, pp. 311–312). In this context, it is possible for any speech act to be challenged on the grounds that it is "wrong" or "inappropriate" when measured against accepted norms. Actions can be further justified within the established normative framework. If validity claims continue to be questioned and the legitimacy of the norm is called into question, communication can either break off or enter into practical discourse in an attempt to achieve a consensual basis for rational agreement. In practical discourse, "theoretical justifications" for problematic norms are advanced and criticized. The relevant evidence is first and foremost the consequences and side effects that the application of a proposed norm can be expected to have regarding the satisfaction of or nonsatisfaction of generally accepted needs and wants.

In theoretical discourse, the logical gap between evidence and hypothesis is bridged by various canons of induction. The corresponding gap in practical discourse is filled by the principles of universalizability: "only those norms are permitted which can find general recognition in their domain of application. The principle serves to exclude, as not admitting of consensus, all norms whose content and range of validity are particular" (McCarthy, 1981, p. 313). Habermas thus argued that there are two types of interests, particular interests and common or "generalizable" interests, and practical discourse tests which interests can be "communicatively shared" and admit of consensus and which are particular and admit at best to a negotiated compromise. In the former case, if the consensus is based on an adequate knowledge of conditions and consequence and on a "truthful" perception by the participants of their "real" interests (and not deception or self-deception), then it is a rationally motivated consensus. If the motivating force behind the agreement is a nondeceptive recognition of common needs and interest in the light of existing conditions, likely consequences, and so forth, what grounds could there be for denying that the agreement was rational (McCarthy, 1981, p. 314)?



Figure 1. Theoretical and practical discourse.

The processes associated with both theoretical and practical discourse are thus, according to Habermas (1971, 1973, 1979), essentially the same. The structure of both requires suspending all motives except the willingness to come to a mutually shared understanding. Historically, modern science represents the institutionalization of features of the ideal speech situation in the realm of theoretical discourse; democratic political institutions represent the institutionalization of features of the ideal speech situation in the realm of practical discourse. More important, to the degree that the consensus reached by a sociomoral-political community is the result of conditions that approximate the ideal speech situation, then that consensus represents the closest approximation to the right or the good that can be achieved. The fulfillment of the conditions of the ideal speech situation are thus connected with the ideal forms of life, which include traditional notions of freedom and justice: "the truth of statements is linked in the last analysis to the intention of the good and true life" (McCarthy, 1981, p. 307).

The argument that we have developed thus far suggests that modern scientific and technological institutions and democratic political institutions represent the institutionalization of modes of thinking and discussion that approximate the ideal speech situation in their respective realms of discourse. As Figure 1 illustrates, theoretical discourse in science is oriented toward the resolution of conflicting factual and methodological issues that arise in the ordinary conduct of scientific activity. Figure 1 also shows that practical discourse is oriented toward the resolution of conflicting norms, values, and principles that arise as part of the ordinary conduct of human affairs.

The distinction between the discourse structure of scientific and sociomoral-political communities highlights the distinctive features that have historically emerged in each type of community. As we have discussed, however, this view would appear to suggest that the question of what is right does not enter into scientific debate or that what is true does not enter into sociomoral-political debate. This is clearly not the case. The distinction is useful in defining historical differences that have emerged in the two discourse communities, but there is a point in discourse, the metatheoretical level, at which the distinction between theoretical and practical discourse breaks down.

Metatheoretical Discourse in Science

Earlier we noted that scientific theories necessarily involve assumptions that are "meta" theoretical. Metatheoretical assumptions, as such, do not ordinarily enter into scientific debate over theoretical, methodological, or factual issues. However, to the degree that the scientific community approximates the conditions of the ideal speech situation, Habermas (cited in McCarthy, 1981, p. 308) has argued that there must be freedom

to move from a given level of discourse to increasingly more reflected levels. That is, the conditions of the ideal speech situation require that in the long run no claims be exempt from critical examination, including explicit or implicit metatheoretical claims. Metatheoretical discourse is critical discussion that moves beyond the validity of particular truth claims to the level of the metatheoretical frameworks that provide the context for the particular truth claims. As the history of science illustrates, it is at this level that the most profound developments in cognitive understanding have occurred. What Kuhn (1962/1970) has called "ordinary science" involves critical discussion of problematic truth claims carried out within the context of implicitly shared metatheoretical frameworks; "scientific revolutions," in contrast, involve critical discussion that challenges the metatheoretical frameworks themselves. It is also at the level of metatheoretical discourse that the distinction between theoretical and practical discourse becomes less clear.

As Figure 2 illustrates, at the level of metatheoretical discourse the boundaries between what we have been calling theoretical discourse and practical discourse break down. Issues of what one can know (e.g., theoretical issues that arise in the conduct of scientific activity) become inseparable from issues of what can be known (e.g., practical sociomoral-political issues such as allocation of resources to scientific activity).

The view that metatheoretical discourse is an integral part of scientific debate raises the question of the relation between theoretical and practical discourse when debate shifts to the metatheoretical level. In theoretical discourse, truth claims derived from particular theoretical frameworks can be justified by scientific facts obtained by means of consensually agreed-on methods and procedures. However, when discourse shifts to the metatheoretical level, theories, data, and methods themselves become problematic issues and the object of critical discussion. Thus, scientific theory, facts, and methods cannot play the same role in metatheoretical discourse that they play in theoretical discourse. This is not to say, however, that they can play *no* role, but simply that their role cannot be the same as in the resolution of the theoretical discourse. Similarly, in practical discourse, normative claims can be justified by norms, values, and principles derived from particular sociomoral-political theoretical frameworks. However, when discourse shifts to the metatheoretical level, norms, values, and principles themselves become problematic issues and the object of critical discussion and cannot play the same role in metatheoretical discourse that they play in practical discourse.

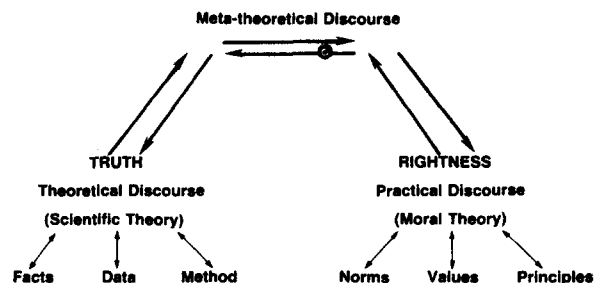


Figure 2. Metatheoretical, theoretical, and practical discourse.

Figure 2 indicates that at the level of metatheoretical discourse the relation between theoretical (scientific) issues and practical (normative) issues is reciprocal. On the one hand, there appears to be no justification for ignoring scientific facts, data, methods, and so forth when resolving problematic normative issues. On the other hand, there appears to be no justification for ignoring values, principles, norms, and so forth when resolving problematic theoretical issues.

Theoretical and Metatheoretical Discourse and the Scientific Study of Moral Phenomena

The view that debate over normative assumptions ordinarily enters scientific discussion at the metatheoretical level does not necessarily imply that is the *only* level at which such debate enters into scientific discourse. In this section we argue that although debate over normative assumptions plays a role in all scientific inquiry, such debate plays a more explicit role in those human sciences that focus on moral phenomena.

The phenomena of focal concern for the human sciences differs in fundamental ways from the phenomena of concern for the physical and natural sciences. D'Andrade (1986), for example, has argued that scientific world views can be grouped into three classes: the physical sciences (e.g., physics, chemistry, astronomy, and related engineering fields), the natural sciences (e.g., biology, geology, some aspects of meteorology, much of economics and psychology, and some fields of anthropology and sociology), and the semiotic sciences (e.g., linguistics, some fields of psychology, anthropology, and sociology). The classes of sciences differ in terms of the level of generalizations possible. Because the physical sciences seek to explain phenomena whose order is invariant, the physical sciences aim at generalizations that are universal and unrestricted. The natural sciences, in contrast, seek to explain complex contingent naturally occurring mechanisms and processes, and consequently aim at more limited generalizations. Finally, the semiotic sciences aim at generalizations about "meaning" or order (e.g., language, culture, etc.) that are "imposed" and arbitrary rather than natural or physical. Because the semiotic sciences study imposed order, their generalizations are more contingent and limited by boundary conditions than explanations in the natural and physical sciences.

We believe that scientific study of moral phenomena, regardless of discipline (e.g., psychology, sociology, anthropology, etc.), is a prototypical example of what D'Andrade (1986) has termed a *semiotic science*. Perhaps more important, debate over normative assumptions plays a more explicit role in the scientific study of moral phenomena because of the particular type of imposed meaning that constitutes the focal phenomena of the field, namely, normative assumptions themselves. That is, *because the scientific study of moral phenomena includes human morality as an object of study, normative assumptions necessarily enter into scientific debate at the theoretical level as well as at the metatheoretical level*. This is not to say that there is no debate in such fields over factual, methodological, and theoretical issues. We do propose, however, that theoretical discourse in these fields also includes debate over normative assumptions and that this debate takes place as part of ordinary theoretical discourse. We thus argue that normative assumptions enter in

scientific debate at all levels, including the theoretical, practical, and metatheoretical levels.

Nature of Normative Assumptions

The first part of this article focused on the role of normative assumptions in scientific discourse. This part develops a framework for conceptualizing normative assumptions themselves. Normative assumptions vary along a number of distinct dimensions. We define several dimensions that are major themes in Western moral theory and that play a central role in the current psychological literature on moral behavior and development. We do not view these dimensions as exhaustive. We do, however, consider them to represent the range of normative assumptions that have been historically central to Western moral theory and are central to the scientific study of moral phenomena.

Dimensions of Normative Assumptions

A central dimension along which normative assumptions vary is *objectivistic versus relativistic*. This issue concerns the ontological status of morality. Whether the good and the right are objectively real and invariant or are dependent on context (historical, cultural, situational, or individual) is perhaps one of the most basic themes in moral theory, both historically and in the current literature (Kurtines & Gewirtz, 1984a; Lickona, 1976). Theories that view moral standards as having an independent or objective existence are termed *objectivistic* or *universalistic*. Theories that view moral standards as human constructions without an objective existence are termed *subjectivistic* or *relativistic*.

A second dimension along which normative assumptions vary is *teleological versus deontological* (Frankena, 1963). This dimension is concerned with how the good and the right are defined. Moral theories that focus on the question of good tend to define the good in terms of value fulfillment. Theories that focus on the nature of values are termed *axiological*, and theories that are oriented toward final goals or ultimate values are termed *teleological*. Moral theories that focus on the question of right tend to define *right* in terms of obligation or duty as defined by principles rather than by goals, outcomes, or consequences, as in the case of teleological theories. Theories that focus on obligation are termed *deontological*, and theories that focus on principles are termed *formalistic*.

A third dimension along which normative assumptions vary is *rationalistic versus empiricist* (Brandt, 1959). This dimension is concerned with the epistemological status of morality. In epistemology, rationalism is the view that reason is a source of knowledge independent of or superior to knowledge derived from external sense experience. Empiricism, in contrast, is the view that knowledge of the world is obtained through sense experience. Intuitionism stands between both rationalism and empiricism in that knowledge is viewed as dependent on neither reason nor sense experience, but rather on special inner intuition. Moral theories that focus on reason or rational thought as the source of moral knowledge are termed *rationalistic*; theories that focus on insight or intuition are termed *intuitionistic*; and theories that focus on the role of sense experience are termed *empiricist*.

A fourth dimension along which normative assumptions vary is *naturalism versus supernaturalism* (Jones, 1969). This issue is concerned with the source or origins of morality. Moral theories that view morality and moral standards as part of the natural world and subject to natural laws and processes are termed *naturalistic*. Theories that view morality and moral standards as derived from a supernatural being or power are termed *supernaturalistic*.

Finally, moral theories vary in their assumptions about the *nature of moral standards*. Throughout Western history, a variety of moral standards have been proposed. The range of standards, principles, or values has been extremely diverse, including benevolence, equality, equity, happiness, justice, love, self-interest, and utility.

The foregoing dimensions are not exhaustive. However, they do represent the diversity of moral views that have characterized Western moral theory and that continue to have an impact on the current literature on moral behavior and development. In the next section, we use what has been called a *history of ideas* approach (Lovejoy, 1961) to illustrate historical variation along these dimensions during the three major periods of Western history: the classical age, the Middle Ages, and the modern age.

Classical Moral Theory

The main trends in moral theory during the classical period (500 B.C.–400 A.D.) tended to be objectivistic, rationalistic, and naturalistic. The works of the major thinkers of the period, such as Aristotle (1953), Plato (1955, 1956), and Socrates, shared in common the assumption that objective moral standards existed, that these standards were part of the natural world, and that the human mind could come to know these standards through the process of reason. They differed in their assumptions about what moral standards were to be used in determining good or right action. Socrates assumed that moral obligation was determined by inner principles derived through the use of reason. Plato assumed that justice, the absolute or ideal form of the good, was the goal toward which human activity should strive. For Aristotle, the good life consisted of the actualization of those functions that are unique to humanity, that is, the exercise of reason over appetitive desires in the pursuit of the final goal of activity, happiness. Although other positions on moral dimensions (e.g., the relativism and skepticism that characterized the Sophists) were advanced, the mainstream of moral theory during the classical period tended to be objectivistic, rationalistic, and naturalistic.

Medieval Moral Theory

Medieval moral theory (400 A.D.–1400 A.D.) such as that of St. Augustine (1963) and St. Thomas Aquinas (1945) differed from classical moral theory in that its assumptions tended to be spiritualistic and otherworldly rather than naturalistic and secular. Furthermore, although moral theorists of both periods tended to assume the existence of objective moral standards, they differed with respect to what those standards were. The normative assumptions of moral theorists of the classical period tended to be oriented toward more naturalistic and secular stan-

dards such as justice or happiness, whereas the normative assumptions of moral theorists of the medieval period tended to be oriented toward the concept of love, particularly the Christian concept of the spiritual love of God. Finally, ancient and medieval moral theorists differed with respect to their assumptions regarding the source of moral knowledge. Classical moral theory emphasized reason, whereas medieval moral theory stressed the role of faith.

Modern Moral Theory

The modern period in Western intellectual history began in the 17th century. The main trends in moral theory since that time have been increasingly defined by normative assumptions that are more naturalistic and relativistic. At the beginning of the modern age, Descartes (1628–1701/1931) proclaimed the independence of philosophy from theology, thereby paving the way for a return to a naturalistic orientation to moral theory similar to that of the classical period. This naturalistic orientation was similarly represented in the political writings of Voltaire, Locke, and Rousseau. Moral theory during this period also tended to take on a more relativistic orientation. The British empiricists, for example, were skeptical about the certainty of rational knowledge (Hume, 1748/1946). Consistent with their skepticism, the British utilitarian philosophers argued for a more relativistic and teleological moral orientation that defined good in terms of the consequence of actions as they related to the welfare of the greatest number of people (i.e., the principle of utility). This tradition of naturalism and relativism has continued to have a significant influence on modern moral philosophy through such diverse schools of thought as existentialism (Kierkegaard, 1843/1941; Nietzsche, 1886/1966; Sartre, 1953), Marxism (Marx, 1859/1970; Marx & Engels, 1848/1955), and pragmatism (Dewey, 1939; James, 1907/1967).

Although a variety of political, philosophical, and religious changes contributed to the emergence of a more naturalistic and relativistic orientation, none was more important than the rise of modern science. As Jung (1933) observed,

How totally different did the world appear to medieval man! For him the earth was eternally fixed and at rest in the centre of the universe, encircled by the course of a sun that solicitously bestowed its warmth. Men were all children of God under the loving care of the Most High, who prepared them for eternal blessedness; and all knew exactly what they should do and how they should conduct themselves in order to rise from a corruptible world to an incorruptible and joyous existence. Such a life no longer seems real to us, even in our dreams. Natural science has long ago torn this lovely veil to shreds. That age lies as far behind as childhood. . . . (p. 204)

The implications of modern science for modern moral theory are profound. By the beginning of the modern age, astounding scientific discoveries followed one another so that by the time of Sir Isaac Newton, scientific knowledge had become the prototype for dependable knowledge in the modern world. Scientific knowledge is knowledge about the natural world. More important, as we noted earlier, scientific truth is contingent truth rather than objective truth. The relative truth status of any scientific hypothesis or theory is always contingent, open to critical examination and revision. Scientific knowledge, which provides the paradigm of dependable knowledge for the modern world, is

thus naturalistic and contingent. In the face of the increasingly widespread influence of this naturalistic and contingent view of knowledge, moral theory has increasingly become more naturalistic and relativistic.

Role of Normative Assumptions in Theoretical Discourse in the Psychological Study of Moral Phenomena

We have argued that normative assumptions enter into scientific discourse at *all* levels: theoretical, practical, and meta-theoretical. Using the psychological literature on moral behavior and development as a case in point, in this part we illustrate how normative assumptions enter into theoretical discourse. As our overview of the literature demonstrates, psychological theories of moral behavior and development differ not only in their position on theoretical, methodological, and factual issues, but also in their position on normative issues. More important, we illustrate how debate over normative assumptions is an integral part of the theoretical discourse that has defined the field over the past three decades. Thus, although not all of the psychological theories of moral behavior and development that we discuss have explicit positions on all of the dimensions that we have identified, *all* of the theories have explicit positions on one or more of these dimensions.

We make no claim that our overview is exhaustive or that the selection of theoretical perspectives represents all possible views. We do not consider it essential for our purpose that the overview be exhaustive. Although our overview is not exhaustive, our selection of theoretical perspectives represents the range of normative assumptions that have historically characterized Western moral theory and that continue to play a central role in theoretical discourse in the field. Indeed, as will be seen from our overview, debate over normative assumptions has not only been an explicit part of theoretical discourse in the field, it also has often been articulate and eloquent as well as intense and heated.

Before we begin our review of the debate over normative assumptions, we note that there is a broad consensus in this literature with respect to at least one central normative assumption, namely, a naturalistic orientation toward the study of moral phenomena. Scientific knowledge, we have noted, is knowledge of the natural world, and all of the theories reviewed in this section share the assumption that moral phenomena (at least those phenomena that are the object of descriptive-scientific study) are natural phenomena. Despite absence of debate over this particular issue in the literature, we would note that this is a normative assumption in that it presupposes the validity of a particular position with respect to the issue of the nature of morality.

Stage Structural Theory

For the past three decades, the cognitive developmental approach in general and the work of Lawrence Kohlberg (1958, 1964, 1976, 1981, 1984) in particular has been at the center of theoretical debate on moral behavior and development. We begin with Kohlberg's work because it provides an example of the interrelation between theoretical, methodological, or factual is-

ues and normative issues that characterizes theoretical discourse in this literature. More specifically, Kohlberg adopted a set of normative assumptions that represent the objectivistic, rationalistic, and deontological-formalistic tradition in moral theory. We begin with a discussion of Kohlberg's position on the ontological status of moral standards (i.e., the issue of objectivistic vs. relativistic morality). This issue, we noted earlier, has been a central one in the history of Western moral theory and, as is seen, continues to play a central role in the theoretical discourse that has defined this literature.

The view that morality has an objective existence independent of historical, cultural, and situational context has been one of the central normative assumptions of Kohlberg's (1958, 1964, 1976, 1981, 1984) work. Indeed, Kohlberg not only argued for the objective existence of moral standards, he also explicitly and extensively argued against the view that moral standards are relative. In an early paper Kohlberg (1971) noted that one of his goals was "to show that the common assumption of the cultural relativity of ethics, on which almost all contemporary social scientific theorizing about morality is based, is in error" (p. 155). In contrast to the view that moral standards are in some sense relative to historical, cultural, or situational context, Kohlberg argued for the existence of universal moral principles. Indeed, postconventional morality, as defined in the context of Kohlberg's stages, is principled morality, and he has described the highest stage of the postconventional level as the morality of universal principles:

Stage 6: *The universal-ethical-principle-orientation*. Right is defined by the decision of conscience in accord with self-chosen *ethical principles* appealing to logical comprehensiveness, universality, and consistency. These principles are abstract and ethical (the Golden Rule, the categorical imperative); they are not concrete moral rules like the Ten Commandments. At heart, these are universal principles of justice. . . . (Kohlberg, 1973, p. 632)

In a more recent book, Kohlberg (1981) elaborated on the objectivistic assumptions of his theory. As Shweder (1982) noted in a review of the book,

Kohlberg's project in these essays is to establish that there is an objective morality that reason can reveal, to define that objective morality in terms of justice, equity, equal respect for all persons, and the "natural" rights of man, and to defend that formulation against relativists, behaviorists, romantics, emotivists, psychoanalysts, and advocates of capital punishment and character education. (pp. 421-422)

In addition to arguing for an objectivistic orientation toward morality, Kohlberg (1973) has also explicitly identified his theory with the deontological-formalistic (stressing obligation and principle) and rationalistic (stressing reason over sense experience) tradition in moral theory. Kohlberg has adopted a position consistent with the Kantian-Rawlsian formalistic tradition in modern moral theory. "Stage 6," Kohlberg (1973, p. 632) noted, "has a distinctly Kantian ring, centering on concepts of obligation as defined by principles of respect for persons and of justice." Kohlberg further noted that the "assumptions of our psychological theory are naturally allied to the formalistic tradition in philosophic ethics from Kant to Rawls" (1973, p. 633). As Kant observed,

the ground of obligation must be looked for, not in the nature of man nor in the circumstances of the world in which he is placed,

but solely *a priori* in the concepts of pure reason; and that every other percept based on principles of mere experience—and even a percept that may in a certain sense be considered universal, so far as it rests in the slightest part, perhaps only in its motive, on empirical ground—can indeed be called a practical rule, but never a moral law. (1785/1970, p. 57)

The rationalistic epistemological assumptions of Kohlberg's (1976) theory are further illustrated in his theory of moral development. Rationalistic epistemology, as noted earlier, minimizes the role of experience in knowledge. Consistent with this rationalistic epistemology, Kohlberg defined moral development as involving six culturally universal and invariant stages. Thus, although he acknowledged the role that experience plays in the development of the content of moral reasoning, the development of the underlying form or structure of moral reasoning is viewed as occurring independent of sociocultural experiences.

Our stages of moral judgment are defined by the form of moral judgment, not its content. Higher stages we claim are more moral in their form. . . . This formalist conception of moral judgment has been the basic philosophic assumption made by our stage approach to moral judgment. Kohlberg (1971) articulates the stages of moral judgment as defined formally and argues that higher stages more closely approximate the formal features of a truly moral judgment as defined by philosophers. (Kohlberg & Candee, 1984, p. 61)

Finally, Kohlberg's (1976) theory includes substantive assumptions with respect to the nature of moral standards. Kohlberg has argued extensively for the principle of justice as a universal moral principle (Kohlberg, 1958, 1976, 1981). Thus, Kohlberg has proposed not only that moral reasoning develops through a sequence of culturally universal and invariant stages, but also that as such reasoning unfolds it is knowledge of what is just. Each successive stage of development, he suggested, represents an increasing movement toward a more mature (i.e., more formally adequate) understanding of the universal principle of justice.

Kohlberg's normative assumptions are thus rooted in the naturalistic, objectivistic, rationalistic, and deontological-formalist tradition in moral theory that finds its earliest historical expression in Socrates. Kohlberg himself acknowledged the historical roots of his normative assumptions. He has stated that

I have found a no more recent summary statement of the implications of our studies than that made by Socrates:

"First, virtue is ultimately one, not many, and it is always the same ideal form regardless of climate or culture.
Second, the name of this ideal form is justice.
Third, not only is the good one, but virtue is knowledge of the good. He who knows the good chooses the good.
Fourth, the kind of knowledge of the good which is virtue is philosophical knowledge or intuition of the ideal form of the good, not correct opinion or acceptance of conventional beliefs." (Kohlberg, 1971, p. 232)

Not all theorists in the stage structural tradition, however, share Kohlberg's normative assumptions, particularly with respect to the view of justice as the ideal form of the good. Gilligan (1982), for example, adopted a set of normative assumptions

that contrasts Kohlberg's "ethic of justice and rights" with an "ethic of care and responsibility." According to Gilligan, the ethic of justice and rights, characteristic of men, is an expression of an autonomous, independent, "individuated" self following principles defining rights and duties without due consideration of specific circumstances and costs implied. The ethic of care and responsibility, in contrast, corresponds to the experience of the self as part of relationships, as the "connected self" guided by an interest in minimizing the overall harm done and a sensitivity to the specific details of concrete situations.

According to Gilligan (1982), moral development proceeds through three stages (caring for self, caring for others, caring for self and others) that roughly parallel Kohlberg's (1976) stages, but with a different outcome. The developmental emergence of an ethic of care and responsibility, which represents the female voice, is rooted in differences in the manner in which boys and girls resolve identity issues in adolescence. For boys, separation and individuation represent mature resolutions of the identity crisis; for girls, attachment, that is, the formation of relationships, is the mature solution:

Thus, in the transition from adolescence to adulthood, the dilemma itself is the same for both sexes, a conflict between integrity and care. But approached from different perspectives, this dilemma generates the recognition of opposite truths. These different perspectives are reflected in two different ideologies, since separation is justified by an ethic of rights while attachment is supported by an ethics of care.

The morality of rights is predicated on equality and centered on the understanding of fairness while the ethic of responsibility relied on the concept of equity, the recognition of difference in need. While the ethic of rights is a manifestation of equal respect, balancing the claims of other and self, the ethic of responsibility rests on an understanding that gives rise to compassion and care. Thus the counterpoint of identity and intimacy that marks the time between childhood and adulthood is articulated through two different moralities whose complementarity is the discovery of maturity. (Gilligan, 1982, pp. 164–165)

Behavioral-Learning Theory

The behavioral-learning approach provides not only an alternative to the normative assumptions of Kohlberg's (1976) cognitive developmental theory, but also an alternative set of theoretical assumptions. Work on behavioral-learning theory has been characterized by a diversity of theorists and researchers whose positions on theoretical issues range from operant theory to social learning, cognitive behavioral, and cognitive social learning theory (e.g., Burton, 1984; Liebert, 1984; Mischel & Mischel, 1976). Despite this diversity of positions, behavioral-learning approaches tend to adopt a common set of normative assumptions that are representative of the relativistic, teleological, and empiricist tradition in moral theory, in the case of behavioral-learning theory with an individualistic emphasis.

Liebert (1984), who represents the cognitive behavioral approach, contrasted what he termed the *absolutist paradigm* of Kohlberg's cognitive-developmental approach with the *relativist paradigm* that he viewed as providing the basis for the behavioral-learning approach. According to Liebert, the view that objective or absolute truth is within the reach of human capability is no longer taken seriously. Instead, he noted, natural phenomena necessarily are observed and understood relative to some

position in space and time. Moreover, this relativism generalizes to moral phenomena: "Moral relativism finds expression today through the modern cognitive-behavioral approach" (1984, p. 183).

Other proponents of the behavioral-learning theory share Liebert's (1984) reservation about the existence of objective or "absolute" moral standards or principles. Mischel and Mischel (1976), for example, have pointed out that

History is replete with atrocities that were justified by invoking the highest principles and that were perpetrated upon victims who were equally convinced of their own moral principles. In the name of justice, of the common welfare, of universal ethics, and of God, millions of people have been killed and whole cultures destroyed. In recent history, concepts of universal right, equality, freedom, and social equity have been used to justify every variety of murder including genocide. (p. 107)

In addition to adopting an alternative position with respect to the ontological status of morality, behavioral-learning theory also adopts an alternative set of assumptions with respect to the epistemological status of morality (i.e., the issue of rationalism vs. empiricism). Theories in the behavioral-learning tradition reject the view that development proceeds through a series of stages that can be defined independent of context. The behavioral-learning approach views moral development from the perspective of the individual person, whose behavior is shaped by the same laws of effect governing the actions of all living organisms (Liebert, 1984). Moral development, according to this view, is a function of the individual's experiences within a particular environment. The individual's moral development is thus dependent on experience and, consequently, relative to context. Moral judgment involves evaluation and, as Liebert (1984) pointed out, "Evaluation invariably involves preference, and preference is invariably relative" (p. 183).

Finally, the behavioral-learning approach adopts an alternative set of normative assumptions. As noted earlier, behavioral-learning theory views the individual's behavior as shaped by the same laws of effect that govern the actions of all living organisms. In this context, the goal of action is to maximize gain and minimize loss. Thus, the normative assumptions of the behavioral learning approach are more closely allied with the teleological-axiological (stressing consequences and goals) tradition in moral theory than with the deontological-formalistic tradition. The behavioral-learning approach thus views human behavior as governed by self-interest in the sense of maximizing gain and minimizing loss for the individual. Moreover, within this framework, moral development involves the development of an increasingly sophisticated sense of self-interest, including knowing how to further one's own long-term self-interest (see Liebert, 1984).

When combined with the empiricist orientation of the behavioral-learning tradition, the view that the individual's actions are governed by self-interest yields a view of the process of moral development distinctly different from that of the cognitive-developmental tradition, which emphasizes that what develops is the understanding of what is just. Liebert noted,

According to the cognitive-behavioral view, what develops in moral development is moral sophistication. *Moral sophistication* is the general term for knowing how to pursue one's own long-term self-interest effectively, through both direct and indirect means. As a

result of the interplay of cognitive development and social experience, humans achieve an increasingly profound grasp of both the direct and immediate and the indirect and long-term effects of their words and deeds. This knowledge is integrated into new levels of practical understanding, which in turn, determine what we say or do. (1984, p. 184)

Clearly, the individual's pursuit of self-interest need not exclude social interest. As Waterman (1981) has argued, the pursuit of individualistic values involves the fulfillment of personal goals (self-interest) through prosocial interdependencies, which requires an awareness of the needs and values of others. Nonetheless, the behavioral-learning approach adopts the position that self-interest serves as the standard for moral action.

Thus, moral development is a matter of learning *what* the moral standards and norms of one's society are, of determining *how* and *when* they are applied, including *by whom, to whom, and with which* short-term and long-term consequences. A human being can learn that one is expected to make (or can benefit from making) lofty moral pronouncements in certain circumstances, and a human being can learn that immediate short-term losses can be in his or her own self-interest if they lead to larger, long-term gains. This remarkable cognitive capacity underlies and can account for the full range of moral reasoning and conduct. (Liebert, 1984, p. 184)

Dialectic Materialistic Theory

The dialectical materialistic perspective is rooted in Marxism. Dialectical materialism is a philosophy of practice that seeks to understand the world in order to change it and thereby to realize man's destiny in it (Baumrind, 1978). The work of Baumrind (1978) provides not only a systematic presentation of the theoretical assumptions of the dialectical materialist approach to moral behavior and development, but also a well-developed statement of the normative assumptions characteristic of such a perspective.

According to Baumrind (1978), Marx's major contribution to a theory of knowledge and consciousness is centered in his analysis of alienation. Alienation, for Marx, occurs when the individual separates himself from others, or when the human species separates itself from its social and natural environment. To be reconciled to their own social nature, humans must coordinate their social and sensuous nature, their immediate and long-range objectives, and their personal and general interests. Morality is consequently inherently linked to both individual and collective interests.

Dialectical materialism defines good or right as relative to sociocultural-historical context. Behavioral-learning theory and cognitive-developmental theory both share in common an individualistic orientation that has characterized much of the theorizing in contemporary psychology and that has been the subject of a number of critical reviews (cf. Hogan & Emler, 1978; Sampson, 1981; Waterman, 1981). Although the dialectical materialistic approach thus has its roots in the relativistic, teleological, empiricist tradition in moral theory, it represents this tradition from a sociocultural rather than an individualistic perspective.

The dialectical materialist's assumptions with respect to the issue of the ontological status of morality have been contrasted with the deontological-formalistic assumptions of the Kantian-Rawlsian tradition. Rawls (1971), for example, argued

that in the hypothetical state of the "original position," in which the individuals making ethical or meta-ethical judgments are ignorant of their own specific interests and circumstances, all rational individuals would agree to adopt the universal principle of justice.

The dialectical materialist, however, emphatically disagrees . . . asserting that fundamental principles of justice intended to resolve concrete disputes in real life require knowledge of the protagonists' special interests, cultural identities, and competencies, as well as their position in the course of history. . . . Moral universals are abstractions which fail to do justice to cultural differences in historically determined values. Even if we knew all there was to know about cultural variations in this world and had a precise and refined description of moral-stage structures (for a given class in Western society), individuals from different cultures, or different subcultures within the society, still would (could) not agree that certain values or behavioral patterns were universally more acceptable in a moral sense than others. The definition of the "common good" is not universalizable but dependent entirely on the concrete attributes of a given social order. (Baumrind, 1978, p. 67)

The dialectical materialist assumptions with respect to the nature of moral development have also been contrasted with the universal stage assumptions of Kohlberg's (1976) cognitive-developmental approach, although in this case from the perspective of sociocultural relativism rather than individual relativism.

As there are no moral universals, so are there no culturally invariant stages of moral development . . . [advanced] stage progression requires coordination with the concrete characteristics of the social structure and depends on the individual's place in it, precluding culturally invariant stage sequencing at "higher" levels—and thus moral universals. In cultures that do not require a meta-theory of social relations for survival, higher Kohlberg-stage reasoning should fail to appear. An understanding of many preindustrial cultures *within their own terms* could probably produce at least as differentiated and integrated a stage structure for those cultures as Kohlberg has produced for ours. The final stages, however would not necessarily be characterized by abstract notions of universalizability, although they might well reflect equally developed sensibilities and differentiated and integrated moral systems. (Baumrind, 1978, p. 69)

Finally, the dialectical materialistic perspective adds yet another set of assumptions with respect to the nature of moral standards to theoretical discourse in the field. Such a perspective is opposed to the adoption of any particular set of substantive moral standards as universal.

From a Marxist perspective, ideals of right and justice are justified by how far they serve the common good and advance progress in society; from a universalist perspective, a social system can be justified by the extent to which it corresponds to ideals of justice. This inversion of the ideal and actual is what Marxists call ideology. Rawls' theory of justice, which reflects the individualistic ideology of our age, is available in practice only to the most privileged and secure members of an abundant society—and perhaps not even to them except when enthroned in the academic's ivory tower. (Baumrind, 1978, pp. 68–69)

Socioanalytic Theory

Socioanalytic theory (Hogan, Johnson, & Emler, 1978) conceptualizes the process of moral development within the context of personality development. Socioanalytic theory attempts

to overcome theoretical limitations of both the cognitive-developmental and behavioral-learning approaches. As Hogan and Busch (1984) noted,

In their own ways, both traditions have substantially advanced our knowledge regarding various aspects of the moralization process. Nonetheless, there are sound theoretical reasons for trying to develop alternative perspectives. Our efforts along these lines are motivated by the belief that both the social-learning and the cognitive/developmental approaches to moral psychology are rather circumscribed in their theoretical focuses. Although we are also critical of many aspects of psychoanalytic theory, psychoanalysis, as a theoretical account of moral development, has the singular virtue of placing the moralization process in the context of personality development broadly conceived. . . . Let us simply note, then, that our perspective is unique in its attempt to consider moral development from the perspective of a systematic theory of personality. (pp. 227–228)

Socioanalytic theory, however, not only provides an alternative to the theoretical assumptions of cognitive-developmental and behavioral-learning theory, it also provides an alternative view on a number of normative assumptions that have characterized these approaches. Like the behavioral-learning and dialectical materialist approach, the socioanalytic perspective provides an example of a set of normative assumptions rooted in the relativistic tradition. In the case of the socioanalytic perspective, however, right and wrong are defined as relative to neither the individual nor the sociocultural context but to the social evolutionary history of the species.

Socioanalytic theory differs from other perspectives first of all in its ties to evolutionary theory and evolutionary ethics as developed by Charles Darwin and Herbert Spencer and more recently by Donald Campbell (1975), Erik Erikson (1950), and C. H. Waddington (1967). Here, moral behavior is assumed to be a solution to the problems of survival that confronted our ancestors nearly four million years ago . . . the distinct feature of man's evolution is his group-living, culture-bearing tendencies. Groups that on the whole were more structured and cohesive, and that had superior technology, would have had greater reproductive success. Culture also includes rules and values that support those behaviors that proved to be evolutionarily adaptive; thus the process of transmitting culture across human generations is fundamental to human survival. (Hogan et al., 1978, pp. 5–6)

Such an evolutionary perspective yields a modified form of relativism. Hogan et al. (1978) suggested that dichotomy between moral relativism and moral absolutism is, on closer analysis, a split among relativism, absolutism, and relative absolutism. Moral relativism, according to Hogan et al. (1978), maintains that there are no defensible grounds for preferring one set of moral values to another. Moral absolutism, on the other hand, assumes that through rational thought one can discover timeless, universal moral principles applicable to all mankind. Both positions have distinct limitations. For example, nearly everyone, including moral relativists, has intuitions about the wrongness of genocide, torture, and slavery, yet moral relativism provides no means for criticizing these practices. Moral absolutism, on the other hand, provides an important counterfoil to the problems of moral relativism in that it suggests grounds in terms of which such practices can be criticized. Moral absolutism, however, has problems of its own in that it has never been possible to achieve a consensus on a set of universal principles.

In view of the preceding, what are the alternatives to moral absolutism and moral relativism?

Our perspective, which we call *relative moral absolutism*, has the following tenets: Certain behaviors are essential for group living and the survival of culture. These are necessary for the existence of any social group and are therefore universal. There are other behaviors that if unchecked would destroy any society. The morality of a culture therefore includes rules that make such behaviors either mandatory or forbidden. At a deep level all viable cultures share the same set of rules—rules about lying, cheating, stealing, incest, and so on. Each culture also has rules that reflect what people have to do to survive in their unique ecological circumstances. There are two points to be noted about this perspective. First, there is no ultimate justification for those rules shared by all ongoing social groups; the rules are justified only by the fact that they make social life possible. This justification is not trivial, however, since social living is the key to man's evolutionary success. If the rules are ignored, social living is impossible. . . . Second, the moral rules that make social living possible only tell us what kinds of behaviors were necessary for survival in the past; they may not be valid for the future. Moreover, the conditions under which any social group live may change. Thus cultures must always be open to the possibilities of change and evolution. (Hogan et al., 1978, p. 3)

The relative moral absolutism of a socioanalytic perspective thus provides an alternative position on the issue of the ontological status of morality. Morality is, at least at one level, relative to the individual and to the sociocultural context, but it is not relative to the evolutionary history of the species. In addition to providing an alternative perspective on the ontological status of morality, the socioanalytic approach also provides an alternative epistemological perspective. There are, Hogan and Emler (1978) pointed out, alternatives to rationalism as an epistemology and theory of cognition.

There is the tradition of empiricism, exemplified by David Hume and William James, which holds that knowledge begins in experience and must ultimately be verified by experience. Implicit in this empirical tradition is a profound skepticism regarding the degree to which human actions are or even can be governed by reason; as Hume noted, "Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them." (p. 481)

In addition to empiricism, there is a second tradition rooted in irrationalism as characterized by the works of Freud and Jung. Finally, there is classical sociological theory, which adopts an even more extreme view regarding the limits of human reason. The socioanalytic perspective on moral development attempts to incorporate these three epistemological orientations: empiricist, irrationalist, and sociological.

Morality should be considered from two perspectives. In the social perspective, morality exists as an external and verifiable code of conduct, a set of rules that specifies mutual rights and obligations and prohibits certain grossly unsocial acts. In the individual perspective, morality is defined phenomenologically in terms of each person's subjective orientation to the rules and values of his or her culture. As a psychological study, moral development consists of tracing the nature and origins of these subjective orientations, which can be fruitfully approached from the perspective of personality development. (Hogan & Busch, 1984, p. 229)

A person's moral orientation—the way he or she reacts to rules, to others' expectations, and even to moral judgment interviews—is fundamentally related to the structure of that person's personality. . . . Personality structure reflects each person's developmental history; depending on the person's age, this may mean how the person

deals with authority, with the expectations of his or her peers, or with the obligations of family and vocation. (Hogan & Busch, 1984, p. 238)

Finally, a socioanalytic perspective makes substantive assumptions about the nature of moral standards. The deontological-formalistic orientation of the cognitive-developmental approach views morality in terms of moral obligations defined by universal principles; the behavioral-learning approach defines morality as relative to the individual's short- and long-term interests; the dialectical materialistic approach defines morality in terms of the common good. The socioanalytic view, in contrast, views morality from an evolutionary perspective as having social evolutionarily adaptive value. Thus, morality is viewed as a set of (usually codified) rules that defines a network of reciprocal rights and obligations, prohibits gross acts of malevolence, and specifies the range of persons to whom the rules apply. According to Hogan et al. (1978),

This definition means that morality has to do with rules, moral behavior has to do with conduct oriented toward these rules (obeying, disobeying, justifying, and criticizing them), and the rules may not extend to everyone. Moral relativists argue that these rules are perfectly arbitrary. Absolutists maintain that these rules are related only conditionally to morality; true morality is defined by a set of universal principles, discoverable by the use of reason and/or moral intuition, which is then used to evaluate and criticize the existing rules of a culture. Our view, in contrast with the preceding two, is that the rules are important not in themselves but because they serve to legitimize, sanction, and promote certain behaviors that are essential to the operation and survival of culture. Whether or not these rules are "truly moral" is a debatable point—but one for which a sound argument can be made (Gert, 1970). Their philosophical status aside, these rules are what most people mean by the word *morality*. (p. 4)

Conclusion

In this article, we sought to move forward debate over the role of values in science. Our starting point was the growing consensus that values play a role in science and the recognition of the need to address the issue of *how* values influence science. We outlined a critical co-constructivist framework for conceptualizing the role that debate over normative assumptions plays in science. In formulating this conceptualization we argued in some detail for the view that debate over normative assumptions is an integral part of *all* scientific discourse. In addition, we also argued that although debate over normative assumptions in science ordinarily can and does take place at the meta-theoretical level, in the study of moral phenomena such debate takes place at the theoretical level. We then described a number of dimensions along which normative assumptions have historically varied. Finally, we applied this framework to the current literature on moral behavior and development.

This article, which calls attention to the integral role of debate over normative assumptions in scientific discourse, highlights the need to develop consensually agreed-on methods for resolving such debate. Although consensually agreed-on methods exist for resolving conflicting factual and methodological issues that arise, there are no such methods for resolving conflicting normative issues. The absence of such methods raises a number of critical issues with respect to how debate over normative assumptions is resolved. One issue has to do with the

role of factual data in resolving conflicting normative claims. This question is currently the subject of considerable scholarly debate (see Waterman, 1988, for an extensive review of this issue). The question of how debate over normative claims is resolved, however, extends beyond the role of empirical evidence.

This question also raises the issue of nonempirical methods for testing the validity of normative claims and the role of such methods in scientific discourse. For example, as we noted earlier, Habermas (cited in McCarthy, 1981) has offered the principle of universalizability as a test of normative claims. Other principles have been proposed to play a role in resolving conflict over normative assumptions. Laudan (1984) has argued that the validity of normative assumptions can be challenged or criticized on a number of different grounds. For example, according to Laudan, infallibility or universal knowledge, a central cognitive value of 19th-century science, was challenged on the ground of its unrealizability. Because most scientists would not accept any mode of verifying scientific propositions other than proof by experience, the evident impossibility of testing the universal truth of a scientific claim by empirical means forced the abandonment of infallibility as a cognitive value.

The question of how debate over normative assumptions can be resolved is thus, in our view, critical (Kurtines, Azmitia, & Alvarez, 1989). At this point we would note that there appears to be no compelling justification for ruling out either empirical or nonempirical (e.g., universalizability, unrealizability, etc.) tests. Although we do not consider it possible to state in advance how such issues can be resolved, the framework that we have been developing does suggest some guidelines with respect to the type of discourse processes that facilitate the constructive resolution of such issues. Consistent with Habermas's (1971, 1973, 1979) argument, we would suggest that the possibility that debate over such issues will lead to a rational consensus is made more likely when such debate occurs in contexts involving the freedom to move between levels of discourse, including theoretical, practical, and metatheoretical discourse. That is, the emergence of consensus with respect to these issues is facilitated by conditions under which in the long run no theoretical, practical, or metatheoretical claim (either explicit or implicit) is exempt from critical examination.

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