

## Creating Consilience: Integrating the Sciences and the Humanities

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# We're All Connected: Science, Ethics, and the Law

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## Abstract and Keywords

Though empirical claims have always played a prominent role in theories advanced by moral philosophers, until recently, findings in psychology, neuroscience, and evolutionary biology have made very little impact on moral theory. Over the last decade, however, that situation has changed dramatically as a new generation of scientifically informed philosophers and philosophically sophisticated scientists have begun to transform the way moral philosophy is done. This chapter illustrates some of the ways in which empirical theories and findings can advance traditional debates in moral theory and contemporary debates in legal theory. A central theme of the discussion is that scientists who aspire to contribute to debates in moral theory must understand the issues that philosophers have been concerned with, how they are interconnected, and why they are thought to be important.

*Keywords:* moral psychology, definition of morality, moral realism, moral skepticism, moral relativism, moral distinction, conventional distinction, Elliot Turiel, disgust, experimental philosophy

## Introduction

From Plato and Aristotle to the present, empirical hypotheses have played an important role in moral philosophy. Moral theorists have made claims about a long list of broadly empirical issues including the role of character in fostering moral behavior, the role of reason and emotion in moral judgment, the nature of moral motivation, the sources of moral disagreement, the extent to which moral beliefs are innate, the extent to which genuinely altruistic behavior is possible, and a host of others. In support of these claims, the great moral theorists of the

past used the only sources of evidence available to them: introspection, careful observation of human behavior, and human history. Perhaps not surprisingly, these sources of evidence were not adequate to establish or refute the empirical claims moral philosophers made, and thus most of the debates over issues in moral psychology remained unresolved.

In the late nineteenth and early twentieth century, psychology became an experimental science, and by the last decade of the twentieth century, experimental psychology and the various branches of neuroscience had developed quite sophisticated techniques for testing hypotheses about the mind. But, as late as 1990, neither neuroscience nor experimental psychology had made a significant impact on moral theory. The reasons for this are many and complex. One important factor was the behaviorist orientation that prevailed in much of experimental psychology until the early 1970s. Since talk about mental states was taboo in behaviorist psychology, philosophers could find little in this literature that addressed the questions they were interested in. A second factor that played a role was the lamentable fact that many philosophers (and many others in the humanities) were taken in by the claptrap of psychoanalysis. A third factor was the influence of arguments and claims variously attributed to Kant, Frege, G.E. Moore, the logical positivism, and even Hume, which suggested that moral theory, or philosophy more generally, is (or should be) an a priori discipline that is independent of the sciences.<sup>1</sup> It was also the case that some of the prominent scientists who wrote about morality had only the most superficial understanding of the philosophical issues about which they were writing. So it is hardly surprising that moral philosophers who dipped into that literature decided it could safely be ignored.

**(p.286)** All this began to change in the 1990s when a small, but growing group of psychologically sophisticated philosophers and philosophically sophisticated psychologists began to use the data and the methods of experimental psychology, neuroscience, cognitive anthropology, evolutionary biology and, more recently, behavioral economics in an attempt to sharpen and resolve traditional issues in moral philosophy.<sup>2</sup> In this paper I will survey some of this work with the goal of making the case that scientific research can and does advance and transform traditional philosophical debates. However, in order to participate productively in conversations in the humanities, scientists must understand the issues being discussed and how they are connected. Since I am one of the “designated humanists” in this section of this volume, I will begin by attempting to explain and clarify some of the philosophical issues to which the sciences have lately been contributing.

## Some Issues in Moral Theory

### The Definition of Morality

In the first sentence of an article called “What Morality Is Not,” first published in 1957, the eminent moral philosopher, Alasdair MacIntyre, observed that “the central task to which contemporary moral philosophers have addressed themselves is that of listing the distinctive characteristics of moral utterances” (MacIntyre 1957). Figure 1 will help to clarify what this “central task” is. The large rectangle represents the class of all judgments (or beliefs or rules). The circle represents the subset of these that are *moral* judgments (or beliefs or rules). I will explain the oval within the circle in the section that follows. Philosophers who pursue the project that MacIntyre has in mind are trying to determine what distinguishes the moral judgments from the nonmoral judgments. Of course, that latter class is itself very heterogeneous. As indicated in Figure 1, it includes scientific judgments, religious judgments, prudential judgments, etiquette judgments, aesthetic judgments and, no doubt, various other sorts of judgments as well. In 1970, MacIntyre's article was reprinted in an anthology, called *The Definition of Morality*, that also reprinted a dozen other papers by such leading figures as Elizabeth Anscombe, Kurt Baier, Philippa Foot, William Frankena, and Peter Strawson (Wallace and Walker 1970). In one way or another, all these papers tackled the question of how “morality” or “moral judgment” is best defined. As one might expect from this distinguished list of authors, many of the arguments to be found in that book are careful and sophisticated. And as one might expect, in just about any group of 13 philosophers, no consensus was reached.

It is clear that the question of how to define terms like “morality,” “moral judgment,” and “moral rule” is one that philosophers think is important. But in my experience, nonphilosophers are often puzzled by the debate. “Why,” they ask, “does it *matter* how terms like ‘morality’ or ‘moral judgment’ are defined? So long as they are clear about it, why can’t each theorist define them as he or she sees fit?” Since this puzzlement may be shared by many readers, let me illustrate why the issue is important beyond the confines **(p.287)**

of philosophy. One clear example of the importance of the debate can be found in Richard Joyce's widely discussed book, *The Evolution of Morality* (2006). Joyce notes that one cannot address the evolution of morality seriously unless one has some account of what morality *is*. He then goes on to argue that most of the extensive literature that purports to address the evolution of morality is simply irrelevant, because it is aimed at explaining the evolution of biological or psychological

*altruism*, and altruism is neither necessary nor sufficient for morality. What Joyce is claiming is not that altruism is neither necessary nor sufficient for morality *as he chooses to define it*. Rather, he is making the much more interesting and important claim that altruism is neither necessary nor sufficient for morality *correctly defined*. Obviously, this critique of the existing literature makes little sense unless there is a correct definition of morality—a definition that tells us what morality really is.

Another illustration of the importance of the issue can be found in some recent work by Jonathan Haidt and his collaborators who have accused other researchers in the field of moral psychology of “inappropriately narrowing the moral domain.” According to Haidt,

the psychological study of morality, like psychology itself ...has been dominated by politically liberal researchers.... The lack of moral and political diversity among researchers has led to an inappropriate narrowing of the moral domain to issues of harm/care and fairness/reciprocity/justice. Morality in most cultures (and for social conservatives in Western cultures), is in fact much broader, including issues of ingroup / loyalty, authority / respect, and purity / sanctity.... (Haidt and Joseph 2007, 367)

The paper from which this quote is drawn is about “how morality might be partially innate,” and in that paper Haidt and Joseph “begin by arguing for a broader conception (**p.288**) of morality and suggesting that most of the discussion of innateness to date has not been about morality per se; it has been about whether the psychology of *harm* and *fairness* is innate” (Haidt and Joseph 2007, 367). To make their case for a broader conception of morality, Haidt and Joseph offer a brief overview of norms that prevail in other cultures, which include “rules about clothing, gender roles, food, and forms of address” and a host of other matters as well (Haidt and Joseph 2007, 371). They emphasize that

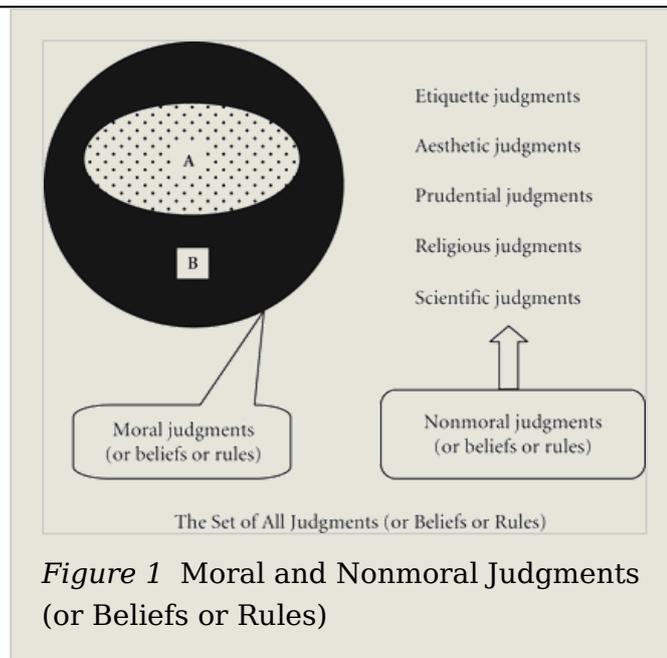


Figure 1 Moral and Nonmoral Judgments (or Beliefs or Rules)

people in these cultures care deeply about whether others follow these rules. This is, however, an odd way to proceed. For surely Haidt and Joseph do not think that the “politically liberal researchers” responsible for the “inappropriate narrowing” of the moral domain are unaware that rules governing these matters are widespread in other cultures. They are not accusing those they criticize of being anthropologically illiterate. The issue in dispute is not whether rules like these exist in many cultures or whether people care about them. What is in dispute is whether these rules are moral rules. And to resolve that dispute we need to have a correct account of what it is for a rule to be a moral rule—an account that will enable us to draw the distinction depicted in Figure 1 in a principled way.

#### Moral Realism, Moral Relativism, and Moral Skepticism

Once we have some idea about which judgments are moral judgments, an obvious question to ask is: Which moral judgments are correct and which are incorrect? Philosophers who embrace the view called “moral realism” have no qualms about this question. They maintain that most moral judgments are correct or incorrect—true or false—in roughly the same way that judgments in mathematics or science or history are correct or incorrect.<sup>3</sup> Moral realists would have no objection to labeling oval A in Figure 1 “correct moral judgments” and labeling B “incorrect moral judgments.” However, other philosophers would strenuously object to that picture. Moral relativists maintain that in an important respect moral judgments are like legal judgments, which can be true in one jurisdiction and false in another. So, for example, “Gay marriage is legal” is true in Canada but it is false in Florida. According to moral relativists, it might also be the case that “Gay sex is morally permissible” is true in one cultural setting and false in another. So moral relativists would be willing to replace “A” and “B” in Figure 1 with “correct in our culture” and “incorrect in our culture,” but they would insist that different ovals would be required to represent the moral judgments that were correct in ancient Athens, or in Aztec society, or in Yanamomö society.<sup>4</sup>

Moral realism and moral relativism do not exhaust the range of options in this area. Moral skeptics, who disagree with both moral realists and moral relativists, maintain that no moral judgments are either true or false, even when relativized to a culture. Moral judgments, the skeptics argue, just are not in that line of work. So, although moral skeptics have no qualms about the project of characterizing the judgments that are in the circle in Figure 1, they would reject any suggestion that some of those judgments are correct in a **(p.289)** society, or correct without qualifications. For moral skeptics, there should be no light oval at all in Figure 1.<sup>5</sup> One influential group of moral skeptics, the emotivists, maintain that moral judgments are expressions of emotion, like smiles or shouts of joy or wincing of embarrassment. If a Yankees fan leaps from her seat and shouts “Way to go!” when the Yankees score a run, it would be misguided to ask whether what she said is true or false, and equally misguided to ask whether it is

true in the Bronx and false in Boston. Much the same, the emotivists insist, is true about moral judgments. No moral judgment is true in New York and false in rural India, because no moral judgment is true or false at all.<sup>6</sup>

Moral realism is compatible with lots of disagreement about moral matters, just as scientific realism is compatible with lots of disagreement on scientific matters. Indeed, moral realists recognize that scientific disagreement and other sorts of factual disagreement is a major source of moral disagreement. For example, if George and Al have a factual disagreement about the causes of global warming, this might lead Al to believe that the United States *should* sign the Kyoto Treaty, and it might lead George to believe that the United States *should not* sign the Kyoto Treaty, but the disagreement might well dissolve if they came to agree on the factual issues in dispute. Since moral realists think that moral judgments are correct or incorrect in roughly the same way that judgments in math and science are, most of them maintain that moral disputes are in principle resolvable.<sup>7</sup> For example, Richard Boyd, who played an influential role in the development of contemporary moral realism, claims that “careful philosophical examination will reveal ...that agreement on nonmoral issues would eliminate almost all disagreement about the sorts of issues which arise in ordinary moral practice” (Boyd 1988, 213). David Brink, another well-known moral realist, insists that “it is incumbent on the moral realist ...to claim that *most* moral disputes are resolvable at least in principle” (Brink 1989, 200).

#### How Science Can Join the Conversation on the Definition of Moral

There is, of course, much more to be said about the debates sketched in the previous section. However, it is time to turn to our central concern and ask how work in the sciences can contribute to these ongoing conversations in philosophy. I will begin with the definition of morality.

What we saw earlier is that getting the definition of morality right is important both within philosophy and beyond. But how are we to know whether a proposed definition is correct or incorrect? And, to ask an even more basic question, what counts as getting a definition right; what are the facts that a proposed definition is trying to capture? When philosophers or ordinary folks disagree about the definition of a term, it is often the case that the right answer is determined by how reflective speakers actually use the term. So, for example, when philosophers debate the merits of the venerable view that “knowledge” **(p.290)** can be defined as “justified true belief,” what is usually at issue is whether reflective speakers would say that a person knows that *p* if and only if that person has a justified true belief that *p*. However, when the term whose definition is in dispute is what philosophers and semanticists call a natural kind term, ordinary usage can be overruled by scientific discoveries about the nature of the kind that the term picks out. The word *fish* is the standard example. At one time, reflective common-sense usage applied the term *fish* to whales. However, biologists discovered that whales and fish are members of very different natural

kinds. And since *fish* is a natural kind term, the correct definition of *fish* excludes whales, even though speakers who are not biologists may be unaware of this. So perhaps science could make a similar discovery about moral judgments or moral rules. Perhaps psychology could discover that moral judgments and rules are a psychological natural kind, in which case it would be the nature of the kind, uncovered by scientific research, rather than ordinary usage, that determines the correct definition.

Is it the case that moral judgments or moral rules are psychological natural kinds? Some philosophers and psychologists have interpreted Elliot Turiel's influential work on the moral/conventional distinction as providing a positive answer to this question (Turiel 1983; Turiel et al. 1987; Nucci 2001). Beginning in the 1970s, Turiel and his associates developed an experimental paradigm that has become known as the moral/conventional task. In this task, participants are presented with examples of transgressions of prototypical moral rules and prototypical conventional rules, and are asked a series of questions in order to determine how the participants think about the behavior in question. Standard versions of the moral/conventional task are designed to explore the following issues:

1. Do the participants consider the action to be wrong, and if so, how serious it is?
2. Do the participants think that the wrongness of the action is "authority dependent"? To determine this, a participant who has said that a specific rule-violating act is wrong might be asked: "What if [some appropriate authority figure—for example the teacher, if the transgression occurred in a classroom] said there is no rule in this school about that sort of behavior. Would it be wrong to do it then?" If the participant says that it would *not* be wrong under those circumstances, then she thinks that the wrongness of the action is authority dependent. However, if she says that the action would still be wrong, despite what the teacher said, then she thinks that the wrongness of the action is authority *independent*.
3. Do the participants think the rule is general in scope: is it applicable to everyone, everywhere, or just to a limited range of people, in a restricted set of circumstances?
4. How do the participants justify the rule; do they invoke harm (or justice or rights), or do they invoke other factors?

What Turiel and his associates found was that, when asked about prototypical moral transgressions, like one child hitting another or one child pushing another child off a swing, and prototypical conventional transgressions, like a child talking in class when she has not been called on by the teacher or a boy wearing a dress to school, participants' responses differed systematically. Transgressions of prototypical moral rules (almost always involving a victim who has clearly been harmed) were judged to be wrong and to be more serious than

transgressions of prototypical conventional rules; the wrongness of **(p.291)** the transgression was judged to be authority independent; the violated rule was judged to be general in scope; and judgments were justified by appeal to harm. By contrast, transgressions of prototypical conventional rules were judged to be wrong but usually less serious; the wrongness of the transgression was judged to be authority dependent; the violated rule was judged not to be general in scope; and judgments were not justified by appeal to harm.

During the last 30 years, this pattern of results has been found in an impressively diverse array of participants, including people of different ages, ranging from preschool and grade school children to adults, people of different nationalities and cultures, including Americans, Chinese, Koreans, Israelis, Indians, Brazilians, and Nigerians, and people with a number of different religious affiliations.<sup>8</sup> On the basis of these findings, some have concluded that moral rules are indeed a natural kind, and that the essential properties that characterize the kind are those revealed in typical moral/conventional task experiments. Moral rules are judged to have objective, prescriptive force—they are not authority dependent; people believe that they hold generally, not just locally; they are justified by invoking harm (or justice or rights); and violations of moral rules are typically more serious than violations of conventional rules. The conclusion that moral rules are a natural kind plausibly follows from the fact that they are a class of rules that exhibit a “homeostatic cluster” of properties and there is an important lawlike generalization about members of the class—transgressions of moral rules always involve harm (or injustice or the violation of someone's rights).<sup>9</sup> It is not surprising that work in the Turiel tradition has had a profound influence on many naturalistically inclined philosophers and on many philosophically astute psychologists as well. For the conclusion that moral rules are a natural kind is a profoundly important one. But, alas, it may not be true.

In addition to the studies by Turiel and his associates, the literature also includes a substantial number of studies by Shweder, Haidt, Nisan, Nichols, and others who report that in many societies, including our own, some transgressions that do not involve harm (or justice or rights) do not evoke the conventional response pattern. Rather, these transgressions evoke one or more component of the signature moral response pattern (Shweder et al. 1987; Haidt et al. 1993; Nisan 1987; Nichols 2002). Perhaps the most famous of these is a study by Haidt and colleagues (1993) using a colorful range of nonharm transgressions including eating the remains of the family dog who had been accidentally killed in a traffic accident, cleaning the toilet bowl with an old and unwanted national flag, and having sex with a dead chicken that has been purchased at the market, then cooking the chicken and eating it for dinner. Haidt found that low socioeconomic status participants in both Brazil and the United States judged all of these nonharm transgressions to be both authority independent and generally applicable, despite the fact that these judgments are central components in the moral response pattern. More recently, Kelly et al.

(2007) explored people's reactions to a range of transgressions that clearly involve harm but that do not take place in the schoolyard settings that are typically invoked in Turiel's studies. They found that for many participants these transgressions do not evoke the full "moral transgression" profile. In some cases, participants judged (p.292) that the wrongness of the harmful transgressions was authority dependent. In other cases, they judged that the harmful actions would not be wrong in other countries or at other times in history. These findings, along with the findings of Haidt and others pose a *prima facie* challenge to the argument that purports to show that moral rules are a natural kind, since they suggest that the "homeostatic clustering" of responses, on which that argument was based, comes apart in a variety of ways.

This is not the place for an extended debate about whether Turiel and his colleagues have shown that moral rules and moral judgments are a natural kind.<sup>10</sup> What is important for present purposes is that, no matter how that debate is resolved, it is clear that experimental work on the moral/conventional task has become an important component in the philosophical conversation about the definition of morality. And the project of constructing and defending that definition, it will be recalled, was described by MacIntyre as "the central task to which contemporary moral philosophers have addressed themselves."

#### How Science Can Join the Conversation on Realism and Disagreement

There has been much discussion, in the last few years, about the emergence of a new field called "experimental philosophy" (Appiah 2007; Shea 2008; Knobe and Nichols 2008), and from time to time I am described as a pioneer of the experimental philosophy movement, or more ominously as "the Godfather." However, an excellent case could be made that the real pioneer of contemporary experimental philosophy was the late Richard Brandt who taught for many years at the University of Michigan. Brandt was deeply interested in the phenomenon of moral disagreement, and he was familiar with the rich anthropological literature, going back to Westermarck (1906), documenting radically divergent moral outlooks in different cultures. But he found that traditional ethnography gives little guidance about what people's moral attitudes would be under "idealized" circumstances in which relevant factual disagreement has been eliminated. So, in the 1950s, Brandt launched a study of the moral views of the Hopi Indians in the American southwest, with the goal of doing the sort of ethnography that would be useful to philosophers. In his book, *Hopi Ethics* (1954), Brandt recounts a number of moral differences between the Hopis and white Americans that he could not trace to nonmoral disagreement. Perhaps the best-known example deals with the treatment of animals. The Hopi, Brandt observed, had no moral qualms about allowing children to "play" with small animals in a way that caused them great pain, broke their bones and ultimately killed them. Brandt looked for evidence that the difference between the Hopis' moral view and the view of contemporary white Americans was based on some nonmoral disagreement, but he found none. Among the possibilities he explored

were that the Hopi might believe that the animals subjected to harsh treatment by children do not feel pain, or they might believe that the animals are rewarded for martyrdom in the afterlife, but the Hopi assured him that neither of these was the case. Nor could Brandt find any other nonmoral belief or failure of imagination that could account for the moral disagreement between the **(p.293)** Hopis and white Americans of the time. He concluded that these moral disagreements are fundamental: they reflect a “basic difference of attitude” that would not disappear under idealized circumstances—like those specified by the moral realists—in which factual disagreement had been eliminated.

A much more recent project that sheds light on the nature of moral disagreement is the study by Joseph Henrich and his collaborators of decisions made by people in fifteen small scale societies who were offered the opportunity to play a number of standard economic games including the Ultimatum Game, the Dictator Game, and the Public-Goods Game (Henrich et al. 2004). All these games have been extensively investigated in a number of industrialized western societies. However, Henrich and his collaborators found much more diversity in small-scale societies than had been found in the West. They also showed that the cross-cultural diversity in behavior in these economic games cannot be entirely explained by strategic considerations or culturally variable risk aversion. Rather, the data seem to indicate that people in these fifteen small-scale societies distribute windfall gains differently because they hold different culturally transmitted views about fairness. More specifically, they appear to have different views about what counts as a fair or morally acceptable distribution of windfall gains. It is unlikely that these culturally transmitted differences in what people take to be a fair distribution depend on disagreements in nonmoral beliefs. If that's true, it would pose a significant problem for moral realists like Richard Boyd who maintain that most moral disagreement depends on nonmoral disagreement.

Though they are very suggestive, the studies by Brandt, by Henrich et al. and other studies that point in the same direction are not enough to convince those philosophers who think that most moral disputes are in principle resolvable. These philosophers have raised a variety of objections, some focusing on the details of the studies and others pointing to possible factual disagreements that might underlie the moral disagreements but that have not been ruled out. One way to address these concerns is to do further studies that explore whether the proposed factual disagreements really exist. But, of course, the number of possible factual disagreements is open ended, and only a limited number of them can be investigated in any one study. So to move the debate forward, I believe that what is needed is an empirically supported theory of the psychological mechanisms underlying the acquisition and utilization of moral norms. As it happens, Chandra Sripada and I have recently published just such a theory (Sripada and Stich 2006). Figure 2 depicts the mechanisms posited by our account. The theory claims that moral judgments are largely determined by

rules stored in a norm “database,” and that those rules are acquired by an acquisition mechanism that is heavily influenced by the norms that prevail in the individual's social environment. If this model is on the right track, people who grow up in social environments in which different norms prevail would often make different moral judgments, even under ideal conditions where there are no relevant factual disagreements.

In our paper, Sripada and I survey a substantial body of empirical evidence that, we maintain, is consistent with the model in Figure 2. But since the editors of this volume have steadfastly rejected my request for another twenty pages, I want to focus on just one strand of that evidence. According to our model, emotions play a central role in generating moral judgments. Indeed, a moral norm, on our model, can be viewed as one kind **(p.294)**

of socially acquired emotion trigger. In recent work, Daniel Kelly (forthcoming) has argued that at least one pre-existing component of the emotion system—the component that subserves the human emotion of disgust—was co-opted by the moral judgment system when that latter system evolved. Prior to that, the human disgust system had itself been cobbled together from a pair of pre-existing systems, one designed to foster the avoidance of poisonous foods, the other designed for the avoidance of parasites and pathogens.

Homologues of each of these systems exist in many other animals, but only in humans have they fused together. Because the disgust system has its own complicated evolutionary history and an array of adaptive functions, it can be triggered in lots of ways that have nothing to do with norms. A number of important and disquieting studies have shown that even when it is activated by these nonmoral triggers, the disgust system can have a dramatic and persistent influence on a person's judgments about moral issues. In one study, Wheatley and Haidt (2005) used hypnosis to induce participants to feel a brief pang of disgust when they encounter the word *often*. Participants were then presented with very similar vignettes describing some morally problematic behavior. The only difference between paired descriptions was that some of them said that an agent engaged in the problematic behavior “often” while others said that the agent engaged in the activity “frequently.” When asked to make moral judgments about the agent's behavior, the judgments of those who had heard the description containing the word *often* were

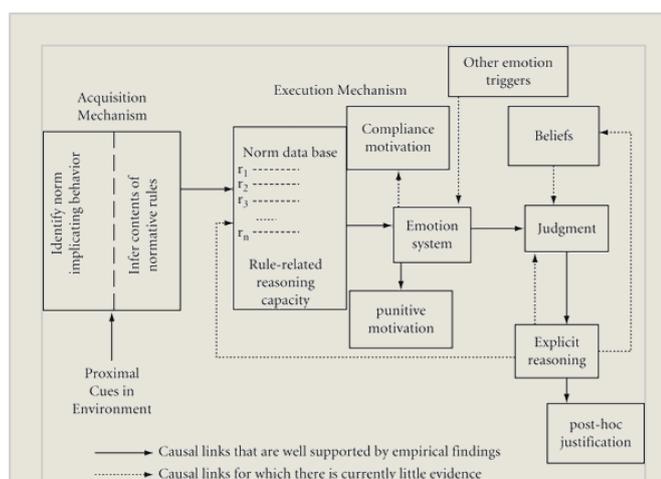


Figure 2 The Sripada and Stich Model of the Psychological Mechanisms Underlying Moral Norms.

significantly more severe. Even more unsettling was the finding that participants made negative moral judgments about behavior that control subjects found to be completely unproblematic. Here is a scenario that Wheatley and Haidt used: **(p. 295)**

Dan is a student council representative at his school. This semester he is in charge of scheduling discussions about academic issues. He often picks topics that appeal to both professors and students in order to stimulate discussion.

Many participants who had been hypnotized to feel disgust when they heard the word *often* insisted that Dan was doing something wrong—though not surprisingly they were hard pressed to give any plausible reason for their judgment.

In another study, Schnall and her colleagues (2008) compared the moral judgments that participants made when seated in a neat and clean office with those of another group of participants who judged the same scenarios in an office arranged to evoke mild feelings of disgust. There were greasy pizza boxes in the trash, the desk chair was sticky, there was a dried up smoothie on the desk, and to record their judgments, participants were given a chewed up ball point pen. The judgments that were made in the mildly disgusting setting were significantly more severe.<sup>11</sup> In a later study, exploring what has become known as “the Lady Macbeth Effect,” Schnall and her colleagues (2008) compared judgments about moral severity in two groups of participants. One group had just used an alcohol-based cleansing gel on their hands; the other group had used an ordinary, noncleansing hand cream. Strikingly, the moral judgments of those using the cleansing gel were significantly less severe.

Each of these studies can plausibly be interpreted as supporting two hypotheses that are built into the Sripada and Stich model. The first is that disgust plays a significant role in generating some moral judgments; the second is that moral psychology co-opted a pre-existing emotion system that could be triggered by factors that have nothing to do with moral norms. As François Jacob (1977) famously observed, natural selection is like “a tinkerer who uses everything at his disposal to produce some kind of workable object.” And in the case of moral psychology, what the tinker came up with is a kludge.<sup>12</sup>

### Science, Ethics, and the Law: Kludge Meets Kass

In this final section, I want to illustrate how experimental findings in moral psychology can play a role in conversations about issues in political philosophy and the law. The findings I will focus on are those sketched at the end of the previous section, which suggest that moral psychology is kludge, and the conversation I will target is one in which the eminent, politically conservative, bioethicist, Leon Kass, has played a central role. Kass was appointed to the President's Council on Bioethics by George W. Bush and served as chairman

from 2001 until 2005. In a widely reprinted article that first appeared in *The New Republic*, Kass argues that “in crucial cases ...repugnance is the emotional **(p.296)** expression of deep wisdom, beyond reason's power fully to articulate it.” “In this age,” Kass tells us, “in which everything is held to be permissible so long as it is freely done, and in which our bodies are regarded as mere instruments of our autonomous rational will, repugnance may be the only voice left that speaks up to defend the core of our humanity. Shallow are the souls that have forgotten how to shudder.” (Kass, 1997) These ideas play a central role in Kass' critique of human cloning, and other writers have adopted them to argue against abortion, pornography, and same-sex marriage. All these activities apparently evoke repugnance—disgust—in the deep souls of Kass and other social conservatives who have not forgotten how to shudder. Some philosophers, most notably Martha Nussbaum (2004), have challenged Kass. Borrowing an idea from Paul Rozin (Rozin et al. 1999), Nussbaum argues that disgust should be discounted in moral and legal deliberation because it reminds us of our animal origins. I am more than a bit dubious about this idea, and I think that the empirical work I have been discussing offers a far more plausible and powerful critique of Kass. There is no reason to think that there is wisdom in repugnance or in the moral judgments that disgust can engender. Disgust is a kludge, and the psychological system that bases moral judgments on disgust is a kludge twice over. The covert effects of greasy pizza boxes and antiseptic cleansing gels serve as a stark warning of how unwise the effects of repugnance can be.

A final word: All the empirical claims I have presented in this chapter should be taken with a big grain of salt. It is early days in the scientific study of moral judgment; there is much more to learn, and it is inevitable that some of the findings and theories that I have discussed will turn out to be misleading or mistaken. My primary objective in this chapter is not to defend any specific claim about moral psychology but to make the case that moral theorists, political philosophers, and legal scholars must include empirical investigators in their conversations. I will be well satisfied if I have convinced you that the rapidly developing scientific study of moral psychology has a crucial role to play in advancing and transforming some of the most important debates in the humanities.

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Notes:

(1.) For an insightful critical discussion of these arguments, see Rachels (2000).

(2.) Many of these scientists and scholars are associated with the Moral Psychology Research Group whose web site (<http://moralpsychology.net/group/>) is an excellent resource for those interested in learning more about empirically informed moral psychology.

(3.) For a useful collection of essays defending and criticizing moral realism, see Sayre-McCord (1988).

(4.) For a sophisticated defense of moral relativism and an equally sophisticated critique, see Harman and Thomson (1996).

(5.) For an excellent discussion, see Sinnott-Armstrong (2006).

(6.) For a classic statement of emotivism, see Stevenson (1944).

(7.) Most, but not all. There are some moral realists who argue that moral realism would not be challenged if many moral disputes are not in principle

resolvable. For discussion of these “divergentist” realists, see Doris and Plakias (2008).

(8.) For reviews, see Smetana (1993), Tisak (1995) and Nucci (2001).

(9.) For more on homeostatic clusters and natural kinds, see Boyd (1991).

(10.) For further discussion, see Sousa, Holbrook, and Piazza (2009) and Stich, Fessler and Kelly (2009).

(11.) Though my focus in this paper is on theoretical issues, it's worth noting that findings like this have important practical implications as well. You don't want to be tried by a jury that deliberates in a filthy room!

(12.) Though there is some dispute about the exact meaning of this slang term that is widely used by computer programers, my favorite definition is: “An ill-assorted collection of poorly matching parts, forming a distressing whole.” Better still is the backronym (or post hoc acronym) **klumsy, lame, ugly, dumb, but good enough**.