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Moral Intuitions and the Religious System

An Adaptationist Account*

The study of moral intuition has come to incorporate several disciplines, including philosophy, cognitive science, neuroscience, anthropology, and moral psychology. Despite its interdisciplinarity, the study of moral intuitions nevertheless remains centered on investigations of emotional cognition and evolved cognitive modules. Yet, there are difficulties in focusing so strongly on the cognitive mechanisms that underlie moral intuitions and so minimally on the social conventions that engender them. Furthermore, it is not clear that all moral intuitions reduce to evolved cognitive modules, as many leading theories purport. To address these concerns, we advance the discussion of moral intuitions by building on research concerning moral foundations theory. However, in contrast to most moral foundation theorists, who emphasize modularity, we emphasize the role of social conventions in the development of moral intuitions. We specifically argue that within religious communities some moral intuitions emerge from the dynamics of the religious system itself, rather than from a set of evolved cognitive modules. By advancing this argument, we discuss the advantages and implications of the religious system for the study of moral intuitions.

1. Intuitions, Morality, and Religion

The scientific investigation of intuition, or the study of "perception via the unconscious," as originally christened by Jung ([1923] 1971, 538), was once a burgeoning topic but withered away after Jungian psychology fell into disfavor in the 1960s (McCrae and Costa 1989). However, the study of intuition began to blossom once more, beginning in the 1980s, this time with an even stronger scientific leaning, due to its reemergence alongside studies of nativism (e. g., Fodor 1983), risk and decision making (e. g., Kahneman, Slovic, and Tversky 1982), and nonverbal communication (e. g., Giannini

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et al. 1978). Since then, it has developed into an important topic of science, centering around two questions. The first is: What cognitive mechanisms are responsible for our intuitions (e. g., Gigerenzer 2007; Haidt 2001; Kahneman 2011)? The second is: What are the social conventions that give groups of individuals – for example, doctors, police officers, taxi drivers, and so forth – the ability to know immediately, and preconsciously, that something is the case (e. g., Gambetta 2005; Pinizotto, Davis, and Miller 2004; Quirk 2006)?

It is difficult, if not impossible, to make a sharp distinction between these two questions, since most intuitions are triggered by social conventions of some kind. For instance, even mathematical intuitions, though outwardly psychological and rooted in numerical cognition (e. g., Dehaene 1997), are still dependent on numerical systems that are social conventions. Despite this, many scholars have focused almost entirely on the first question, and not for want of good reason: Advancements in neuropsychology have put a priority on explaining the neural substrates and cognitive underpinnings of intuition (e. g., Damasio 1994; Kuo et al. 2009). From these studies it is becoming clear that many intuitions are, in fact, bounded and governed by distinct neural regions (e. g., Greene and Paxton 2009; Parkinson et al. 2011).

However, when it comes to the study of moral intuitions, the investigatory priority given to cognition has turned into a kind of doctrine. Moral intuitions are said to be primarily the work of emotional cognition that gets shaped only secondarily by social conventions (Greene and Haidt 2002; Haidt 2001, 2007, 2012; Haidt and Joseph 2004, 2007; Hauser 2006; Mikhail 2007). It is widely accepted, for instance, that humans possess a universal set of moral modules (e. g., Haidt and Joseph 2004) or innate moral grammar (e. g., Mikhail 2007) upon which social conventions act as mere parameters. Although that is undoubtedly true for several moral intuitions, it is unlikely to be the case for all of them, especially those that emerge chiefly from religious systems. Religion, after all, has been shown to engender unique intuitions about mental health (Cohen and Rozin 2001), life strategies (Gladden et al. 2009), and group solidarity (Alcorta and Sosis 2005). Might religion do the same for moral intuitions?

It is likely that religious systems, by virtue of being dynamic complexes, bring about new intuitions concerning the appropriateness of certain behaviors, which are adaptive within local communities and ecologies. To illustrate, consider the importance of observing taboos, engaging in rituals, promulgating myths, entering the sacred, and imagining supernatural agents. These exercises, among other things, are highly specialized social conventions that, despite varying across cultures, nearly everywhere inculcate an implicit sense of what is good and bad with respect to the religious

group in question. Of course, such inculcations are feasible because religious exercises exploit innate cognitive abilities, such as theory of mind, collective intentionality, and the like, which together serve as the mental impetus for religion, just as a cognitivist outlook would claim (e. g., Atran 2002; Boyer 2001; Bulbulia 2004). However, as anthropologists have long observed, religious exercises – such as totemic observances (Durkheim [1912] 1995), taboos (Douglas [1966] 2007), and rites of passage (van Gennep 1966) – instill within adherents moral sensibilities that often outstrip inherent feelings about what is good and bad, and function ultimately to preserve the welfare of the group. In some cases, these moral sensibilities result in acts that are unblushingly immoral to outsiders – for instance, in groups that engage in rituals of violence, such as the Ilongot, where boys become men by beheading nearby villagers (Rosaldo 1980). Admittedly, this is an extreme example regarding the kinds of moral variance that can result from religious practices, but it illustrates an important point that is familiar to most anthropologists, and often noted by scientists of religion and morality (e. g., Doris and Plakias 2008; Prinz 2008). Religious systems not only passively function as the cultural parameters to innate abilities, but also actively expound human nature in fundamental ways that are unique to religious communities.

Yet, that point has somehow gone overlooked by the most prominent scholars of moral intuitions, and it is for this reason that the point must be revisited. Still, we do not wish to tread on the familiar ground covered by relativists and absolutists, nor do we wish to simply raise counterexamples to challenge viewpoints contrary to our own. Instead, we wish to draw from the evolutionary study of religion to complement some the latest advancements in moral psychology, and thereby engage in an analysis that highlights the potential consilience between these two research programs. In order for that consilience to be realized, we argue that a more dynamic outlook on religion, one that recognizes its adaptive interplay between adherents and ecologies, is necessary for discerning its relationship to moral intuitions.

2. The Standard View of Moral Intuitions

The dominant view of moral intuitions, and the focus of our analysis, derives from the work of Jonathan Haidt, although we will consider it alongside the work of other moral psychologists in this section and the next. Before doing so, there are three terms that call for some elucidation here at the outset – 'moral intuition,' 'social conventions,' and 'emotions.' A 'moral intuition' is

any strong and immediate feeling that something, either the truth of a claim or an object of apprehension, is good or bad (e. g., Gigerenzer 2008; Haidt 2001, 2012; Sinnott-Armstrong 2008). By 'social conventions' we mean the customs, norms, and standards of a group, as well as their social signals. A social signal is any symbolic interaction or form of non-verbal communication that conveys the intentions and social obligations of individuals. As adaptationists have argued (e. g., Irons 2001), because these signals are often hard-to-fake, they can indicate one's commitment to their particular group. An 'emotion' is a mode of cognition, or information processing, which initiates behavioral responses to patterns of physiological arousal to external stimuli (e. g., Damasio 1994; Haidt 2012; Lazarus 1991).

It is emotions, rather than social conventions, that are taken by most moral psychologists to be the primary source of our moral intuitions (e. g., Greene and Haidt 2002; Haidt 2001, 2007, 2012; Nichols and Knobe 2007; Prinz 2006). However, as contemporary sentimentalists observe (e. g., Nichols 2004), an intuition typically concerns social conventions of some kind, contributing to what Haidt (2001) calls the "rational tail" of the "emotional dog" known as "moral judgment." This metaphor still captures the basic idea of how moral intuitions are generally understood: When we have a moral intuition, we experience it as a flash of insight, characterized by distinct moral emotions, and then only afterwards do we engage in reasoning to convince others of our intuition, drawing from our social conventions to do so (Haidt 2012, 47). And thus, when we offer reasons for our intuitions, we rarely give disinterested accounts, but rather explanations that reflect our social agendas (Haidt 2001, 822).

Suppose, for example, that a man asserts that incest is morally wrong, and when pressed to explain why, claims that incest violates God's law. Here the intuition and reasoning are, respectively, disapproving of incest and invoking a religious explanation. Why is the first and not the second an intuition? According to Haidt (2012), the assertion is driven by an emotion – namely, disgust – and the religious explanation is a *post hoc* justification for the emotion. It would be useful, however, to know more about the reasoning behind the man's explanation in general and his social context in particular. But for moral psychologists, what has been said already explains the main source of the intuition. Here the disapproval is experienced as an emotion that is driven by an evolved cognitive module – namely, what Haidt calls "sanctity/degradation" – and the explanation is a deliberative act that reflects the man's worldviews (125). Haidt (2001, 820–21) also describes moral explanations as having "relatedness" and "coherence." In this case, relatedness is the impression that the man wants to have on others, and the coherence is the defense

he gives with respect to his social identity and community. Specifying the relatedness and coherence will tell us much about the man's culture, but it will not explain the source of his intuition. Moral psychologists defend this point by appealing to the dual aspects of moral judgment (e. g., Greene and Haidt 2002). Given that the man's gut reaction to incest is quick, automatic, and innate, his moral disapproval is intuitive. However, given that his explanation is slow, deliberative, and learned, his reasoning is cultural. To take another example, suppose a woman discovers her neighbor lighting a fire with the Bible. She condemns the act, but when asked to explain why, makes an appeal to the book's sacredness. The moral intuition here is again driven by evolved cognitive modules – namely, what Haidt calls "authority/subversion" and "sanctity/degradation" – and the justification is a *post hoc* explanation that relates the woman to her ingroup and coheres with her social identity.

It would appear from this that any account of moral intuition that relates to religion should involve, in a central way, reference to emotional constituents and modular properties. However, this should not encourage us to suppose that social phenomena are always to be analyzed secondarily, as externalities that simply "tweak" our "primitive" emotions (Greene et al. 2004, 389). It should also not encourage us to adopt some kind of ontological prioritizing – for instance, in terms of focusing on the neurological at the expense of the social (e. g., Shook 2012). Rather, we argue that a relevant source of information for many moral intuitions is to be explained primarily in terms of social conventions that, as they relate to religious groups, have some strikingly group-level (and even non-reductive) consequences.

The role of social conventions in shaping moral intuitions is nothing new, of course. Haidt gave a classical exposition of them in *The Emotional Dog and Its Rational Tail* (2001). Perhaps as a charter for moral psychology, he summarized matters this way: Social conventions mold innate intuitions during development and provide propositional knowledge for them during adulthood (828). What is new about our account is that we build upon a more promising direction for social conventions, as suggested by Haidt in *The Righteous Mind* (2012). Haidt observes that moral intuitions operate within moral systems: interlocking sets of social conventions and evolved psychological mechanisms that work together to regulate self-interest (270). Haidt then suggests that some moral intuitions might be explained by "a Durkheimian approach to religion (focusing on belonging) and a Darwinian approach to morality (involving multilevel selection)" (272). We find this line of argumentation persuasive, but we think there is more to be said for Haidt's observation than he himself has said. Specifically, we offer an *adaptationist* account of moral intuitions among religious communities.

The religious system, we maintain, is "a complex adaptation that serves to support extensive human cooperation and coordination, and social life as we know it" (Sosis 2009, 317). If moral systems are an integral component of the religious system, which is an adaptive complex, then several moral intuitions are group intuitions that function to regulate the religious system itself. Our central thesis is that some moral intuitions can neither be explained by the alleged cognitive modules of moral judgment nor divorced from the religious groups in which they function. This species of intuition, which we will call 'group intuition,' is a kind of expert knowledge on behalf of adherents and feedback from the religious system that functions to regulate group activity.

In the next two sections, we will fill in the details to this sketch, giving special attention to emotional cognition and moral foundations theory. Then we will discuss how some intuitions function as group intuitions within the religious system. In so doing, we shall show how social conventions among religious communities engender moral intuitions that regulate the religious system. To conclude, we discuss some of the advantages of our account for contemporary studies of religion.

3. The Emotional Cognition Thesis

Why do moral psychologists focus so strongly on emotions? That story begins with Hume. Unlike many of his contemporaries, Hume ([1739] 1967) recognized that much of human thought is intuitive and experienced as flashes of emotion, which guide reason and initiate action. Thus he famously wrote: "Reason is, and ought only to be, the slave of the passions" (section 3). Intellectual descendants of Hume still dominate normative accounts of intuition today, especially among neo-sentimentalists – philosophers who believe that intuitions guide moral judgment, but because intuitions are driven by emotions, they are not truth apt. Nowadays, sentimentalists are sure to distinguish themselves from rational intuitionists – philosophers who believe that moral judgments are grounded in intuitions that are taken to be a priori truths. We shall not here dispute the truth of sentimentalism or rational intuitionism, nor shall we mettle in normativity, although what we say about group intuitions may have some bearing on ethical accounts.

We are concerned instead with another line of Humean descendants, namely moral psychologists. For most, intuitions are 'flashes of insight,' 'gut feelings,' or 'hunches' whose underlying reasons are unknown, but whose affects are strong enough to initiate action, just as Hume observed. For

example, someone may have a 'flash of insight' that some course of action is bad, and then find reasons to justify that insight, thereby rendering it right or wrong. In such cases, the intuition springs from the automatic operations of what Kahneman (2011) calls 'System 1 thinking' (i.e., emotional, subconscious, stereotypic), which contrasts with the reasons or justifications that come from the controlled operations of 'System 2 thinking' (i.e., rational, conscious, logical). As a kind of 'System 1 thinking,' moral intuitions are automatic and instantaneous feelings that precede and guide moral reasoning (Haidt 2012, xiv).

The term 'moral intuition' is thus used in such a way that for any moral judgment there is an underlying set of properties that makes that judgment feel good or bad. In light of fMRI studies, it is evident that such feelings are the product of neural processes that comprise cognitive appraisals and somatic perceptions (Thagard and Finn 2011). Cognitive appraisals are the subconscious assessment of goals concerning information that an organism needs to react adaptively to its ecological niche (Sander, Grandjean, and Scherer 2005; Thagard and Abie 2008; Thagard and Finn 2011). For example, recognizing offspring is a cognitive appraisal that is conducive to parenting and inclusive fitness (Aktipis and Fernandez-Duque 2011). Likewise, avoiding intentional harm to others is a cognitive appraisal that appears favorable to reciprocal altruism (McCullough, Kimeldorf, and Cohen 2008). Somatic perceptions, on the other hand, are internal representations of bodily states that respond automatically to external stimuli – for instance, anger represents the perception of bodily changes such as increases in heart rate, blood pressure, and adrenalin due to external events (Damasio 1994). Because somatic perceptions alone are no different from emotional consciousness (e.g., the activation of the insula, amygdala, and dopamine system), they require a guiding set of cognitive appraisals to constitute an intuition (Thagard and Finn 2011). For instance, amygdala activity is associated with emotional discharge such as fear, hormonal changes, and attentional processes (e.g., Davis and Whalen 2001). However, when coupled with modules for social judgment in the orbital frontal cortex and insular cortex, such amygdala activity constitutes the intuition for trust or distrust (Adolphs 2003). As we shall see in the next section, the six cognitive modules of Haidt's moral foundations theory appear to be the modules behind moral intuition. For now, what should be appreciated is the basic Humean formula, or what we shall call the 'emotional cognition thesis,' that psychologists use to talk about moral intuitions: A moral intuition is a neural process that is guided by cognitive appraisals and somatic perceptions to generate the gut feeling that something is good or bad (Thagard and Finn 2011, 156).

There are several reasons to take this thesis seriously, including its virtual paradigm status among moral psychologists. First, neurobiological evidence (e. g., Greene et al. 2004) indicates that the substrates of moral intuitions are, in fact, subcortical structures associated with emotions (e. g., the basal ganglia, cingulate, and amygdala) and neural circuitry dedicated to cognitive appraisals (e. g., orbital frontal cortex, anterior cingulate cortex, and insular cortex). This line of evidence is further strengthened by the fact that similar substrates and circuits are responsible for an array of other intuitions – for example, which novel foods are wholesome and unwholesome (Rolls 2005), who is honest and dishonest (Spence et al. 2001), and what situations are humorous and grave (Watson et al. 2006). Second, it explains why some persons have atypical moral behavior – for instance, psychopaths have impaired executive functions and significantly dysfunctional paralimbic systems, suggesting that their brains make abnormal cognitive appraisals and experience gross emotional deficits (e. g., Kiehl 2008). Third, it is consistent with philosophical accounts of moral sense theory, that is, the view that morality is grounded in sentiments. This theory countenances the fact that our cognitive appraisals have evolved to pick out salient features of the world such as those that are moral, just as our other cognitive appraisals pick out adaptive features, such as food, predators, and so forth (e. g., Hauser 2006). Fourth, as Thagard and Finn suggest (2011), emotional cognition appears capable of accounting for moral agreement across groups, which is likely to be true given our shared human biology. Specifically, because people share similar emotional physiology, such as hormones, prefrontal cortex, and amygdala, there should be moral agreement in kind – but not necessarily content, as the content of morality (e. g., what constitutes 'care') is defined by local context. Likewise, emotional cognition seems equally capable of accounting for moral disagreement across cultures. After all, cultures will emphasize and deemphasize different moral goals (Shweder et al. 1997), magnify and prune cognitive appraisals through social conventions (Haidt 2001), and imbue moral acts with varying emotional saliency (Thagard and Finn 2011), leading to differences in moral intuitions. In other words, most cultures will show the same forms of moral concern, but differ in terms of the content of those concerns – for example, all cultures show a concern for cruelty, but they differ in terms of what constitutes cruelty (e. g., Doris and Plakias 2008).

In addition to acknowledging the strengths of the emotional cognition thesis, we must also mention its advantages over other theories. First, its neurological support makes it superior to longstanding accounts that, albeit ontological, take moral intuition to be factually innate, but remain silent about how human minds come to have such innateness (e. g., Ross 1930).

Second, it is more compelling than competing theories in the cognitive sciences that argue for a single brain system dedicated solely to moral decision-making (e. g., Mikhail 2007). This latter group of theories suffers from several setbacks, the most telling of which is that there is no evidence for a single brain region responsible for moral judgment. Furthermore, there is a sense in which such theories fail to accommodate for the obvious role of emotions in moral judgment (Thagard and Finn 2011). Put simply, scientific accounts of morality need a broader notion than that of a single brain system if they are to explain moral intuition.

4. Moral Foundations Theory

It is becoming part of today's conventional wisdom in moral psychology that the emotional cognition of moral intuition is realized by an interrelated set of evolved cognitive modules. Leading the way on this front, Haidt and Joseph (2004; see also Haidt 2012) have argued that six modules in particular take human behavior as input and emit feelings of approval or disapproval as output. When summarizing their view, Haidt says this: "morality is innate (as a small set of modules) and socially constructed (as sets of interlocking virtues). It is cognitive (intuitions are pattern-recognition systems) and it is emotional (intuitions often launch moral emotions)" (2012, 64). The purpose of this section is to unpack this assertion and, in so doing, show how Haidt and Joseph attempt to bring together innateness, cognitive appraisals, emotions, and social construction under what they call moral foundations theory (MFT).

To set the stage, we must first say a few things about modularity. Evidently, Haidt and Joseph's outlook on innateness is owed, for the most part, to arguments originally developed by Fodor (1983) and elaborated further by Sperber and Hirschfeld (2004). The latter argue that all animal brains comprise networks of evolved cognitive modules – that is, distinct neural circuits – designed to recognize ecological patterns, initiate adaptive behaviors, and resolve cognitive tasks. For example, discerning the movement of another animal, recognizing hunger and the need for nourishment, and undertaking fight-or-flight are all behaviors performed by cognitive modules. Such behavior is automatic, unreflective, and instinctual. Admittedly, it is worth noting the explanatory advantages of modularity, despite being somewhat controversial among philosophers (e. g., Churchland 1988). Consider, for instance, the 'snake recognition module' in primates (Sperber and Hirschfeld 2004). Evolutionarily speaking, the fact that the entire phylogeny

of primates reacts adversely to snakes indicates that the module was selected for survival in primate niches. Proximately speaking, the module is 'switched on' by any snake-like object, such as a rope, whose false-positives are actually adaptive; for it is better to mistake a rope for a snake than vice versa. Finally, as it relates to emotional cognition, the module appraises any snake-like pattern and activates emotional arousals to it. For Sperber (1994) humans are no different than animals in this regard: We have evolved a unique array of modules for surviving in our ecological niche (e. g., see Kanwisher, McDermott, and Chun 1997). Yet, we are different from other animals to the extent that many of our modules, such as the language acquisition device and theory of mind, have evolved for living in highly social groups (Sperber and Hirschfeld 2004, 41).

Building on theories of modularity, Haidt and Joseph (2004, 2007) claim that to survive in our social niche we have evolved a set of cognitive modules for appraising and reacting to human behavior, such as detecting cheaters or maintaining alliances. They argue:

> We propose that human beings come equipped with an *intuitive ethics*, an innate preparedness to feel flashes of approval or disapproval toward certain patterns of events involving other human beings … these intuitions undergird the moral systems that cultures develop, including their understandings of virtue and character (2004, 56).

From this, Haidt and Joseph (and Haidt 2012) provide a rather complex (and largely inferential) argument. Here is a thumbnail sketch as we see it:

1. Moral intuitions are a kind of preparedness for surviving in social niches.

2. Preparedness depends on, or is constituted by, evolved cognitive modules.

3. Moral intuitions are the work of evolved cognitive modules (from 1, 2).

4. But cultures can strengthen or weaken any module.

5. Although people everywhere design similar moral systems, those systems will inevitably vary due to culture (from 3, 4).

In the next two sections, we shall take aim at Premises 1 and 3. For now, the above argument can be spelled out as follows.

First, when people are faced with moral dilemmas their immediate judgments emerge from an automatic, effortless, and affective cognitive system – what Haidt (2001) calls the 'Intuitive System' (IS) and what Kahneman (2011) calls 'System 1 thinking.' Then, when asked to explain their judgments, people search for familiar arguments or cultural justifications by using their deliberative, effortful, and calculating cognitive system – what Haidt calls the 'Reasoning System' (RS) and what Kahneman (2011) calls 'System 2 thinking' (Haidt and Joseph 2004, 57). Although RS is comprised

of social content and developed mostly by culture, IS is comprised of mostly innate content and designed almost entirely by selection (Haidt and Joseph 2004, 58; see also Haidt 2001, 818). At least that much seems true, given that IS houses much of what cognitive scientists call 'nativistic' or 'hard-wired skills' (Haidt 2007). These rather inherent skills come in two varieties: either innate knowledge, such as face recognition, or preparedness for easily learning some skills, such as language (e. g., Barkow, Cosmides, and Tooby 1992; Fodor 1983).

Second, given the automatic, effortless, and affective character of moral intuitions, they are likely to be a kind of preparedness for facing adaptive challenges, namely social ones (Haidt and Joseph 2004, 60). Furthermore, and herein lies the third premise, moral intuitions are cognitive adaptations, which entails their dependence upon, or realization within, cognitive modules (60). For Haidt and Joseph, this makes good sense: If our hominin ancestors faced a number of social threats from conspecifics, such as cruelty, freeloading, cheating, and hostility, nature would have selected for cognitive modules that resolved such threats (56). Modules of this sort would quickly appraise social patterns and initiated adaptive behaviors – for instance, compassion at the sight of a suffering child and responding to the distress of one's own child, respectively (63).

However, this begs an important question: How do we know that people actually have the same moral intuitions and underlying cognitive modules? On this very question, Haidt and Joseph have made a rather elegant inferential leap that represents the centerpiece of MFT. To appreciate that leap, we must briefly consider five related steps that, in Haidt and Joseph's view, link adaptive challenges to innate moral emotions. First, Haidt and Joseph (2004) posit six adaptive challenges, which Haidt (2012) summarizes as follows:

[1] Caring for vulnerable children, [2] forming partnerships with non-kin to reap the benefits of reciprocity, [3] forming coalitions to compete with other coalitions, [4] negotiating status hierarchies, [5] keeping oneself and one's kin free from parasites and pathogens … [6] living in small groups with individuals who would, if given the chance, dominate, bully, and constrain others (125–27).

Second, these challenges correspond exactly with six behavioral patterns, such as neglecting children, cheating, and so forth, to which humans everywhere react strongly. When people are confronted with these patterns, it is as if a 'switch' in their minds is turned on, just as Sperber's snake detection device, thus suggesting six underlying modules (123). Based on the latest reading of Haidt (2012), those modules are: care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, sanctity/degradation, and liberty/oppression. Third, just like other evolved cognitive modules, such as agency

detection (e.g., Boyer 2001), these modules respond to original triggers and current triggers – in other words, positives and false-positives, respectively. For instance, our care module was originally triggered by the needs of our own offspring, but such things as baby seals or cartoon characters can trigger it today. Fourth, the cognitive modules correspond with six cross-cultural moral virtues: Care/harm to kindness, fairness/cheating to justice, loyalty/betrayal to patriotism, authority/subversion to deference, sanctity/degradation to piety, and liberty/oppression to honor. Finally, people everywhere respond automatically with the same emotions whenever one of the purported modules is strongly activated: Care/harm elicits compassion; fairness/cheating elicits anger, gratitude, or guilt; loyalty/betrayal elicits group pride or rage at traitors; authority/subversion elicits respect or fear; sanctity/degradation elicits disgust; and liberty/oppression elicits righteous anger (Haidt 2012, 124). Taken together, Haidt and Joseph (2004) infer the following: Natural selection has endowed us with a built-in morality, which influences moral development and functions to constrain moral attention, thereby laying the foundation for all moral systems (61).

However, as thus formulated, this view seems plainly mistaken. Humans are undoubtedly similar biologically, with several innate features, but that biological similarity is plastic enough to engender vast cultural and moral differences (West-Eberhard 2003). Furthermore, it seems plain that what some cultures consider to be, for instance, morally sanctified varies significantly – consider the famous example by Herodotus regarding the Callations who felt it was good to eat their dead fathers and bad to cremate them, and the Greeks who felt the exact opposite (see Rachels 1995).

To address such concerns, Haidt has stressed the following points, which together address the fourth and fifth premises to MFT. Cultures can expand or contract the number of current triggers that activate the six modules, thus explaining cross-cultural differences. For instance, certain cultures such as the Yanomamo, Ilongot, and Aztecs appear to have contracted the care/harm module, while other cultures such as the Semai seem to have expanded it (e.g., Prinz 2008). On this view, moral differences are not a matter of kind but rather scope. To buttress this claim, Haidt borrows from Shweder (1991) to show that expansion and contraction are due to cultural emphases on autonomy, community, and divinity – in other words, individualism, collectivism, and supernaturalism, respectively. Individualistic cultures expand triggers for care/harm, collectivistic expand loyalty/betrayal, and divine oriented communities stress sanctity/degradation (Haidt 2012, 99–100). From this point, we can presume that such differences will translate into direct neurological changes to the substrates of moral intuition, especially during

the development of sensory systems in adolescence (Haidt 2001, 827). However, customs and conventions – such as cultural beliefs, values, sanctions, rules, and motives – do not create moral intuitions, but rather tweak our IS by emphasizing and deemphasizing the triggers to our six inner modules (828). That said, customs and conventions do provide a great deal of explicit content to our RS, especially during adulthood, by offering culturally relevant reasons for our emotional flashes. For MFT, then, Hume had morality right nearly three centuries ago: "The first principle of moral psychology is *Intuitions come first, strategic reasoning comes second*" (Haidt 2012, 70).

5. Challenges: Expert Intuition, Group-Traits, and Dynamic Religions

Considerations of these sorts have succeeded in persuading a large majority of scholars that morality is largely innate, modular, and emotionally driven (e.g., Cushman, Young, and Greene 2010; Miller 2008; Winterich, Zhang, and Mittal 2012). The upshot of all this has been impressive: MFT has not only ushered in sentimentalism and nativism as the orthodox theories on moral intuition, but in the process has made the very word 'intuition' synonymous with 'emotion,' making neurological studies of moral sentiments the target of research and the touchstone of moral intuition studies. Although we agree with much of MFT, we believe there is room to reappraise it with regard to religious groups, and this goes beyond defending modularity simply as it relates to group cooperation (e.g., Graham and Haidt 2010). As a stepping-stone to our discussion of the religious system, we wish to identify three shortcomings to MFT in this section, which draw into question Premises 1 and 3 from above.

First, there is something right and instructive in stressing emotional cognition and modularity, but we believe something is missed in stressing that all moral intuitions, in some way, depend upon evolved cognitive modules. After all, while many intuitions spring forth from modules, others – namely, expert intuition – arise from 'System 1' without being a kind of preparedness, and thus without being necessarily modular. For instance, Kahneman tells the story of a seasoned firefighter, who upon hosing down a routine kitchen fire intuitively commanded his entire unit to exit the home, immediately after which the floor collapsed (2011, 11). In this case, the firefighter was not operating on some kind of inborn ability, such as a cognitive preparedness for fighting fires, but rather an expertise about house fires, including what is typical and atypical of kitchen fires, which became

intuitive over time. Such expert intuition is familiar to certain professions, such as firefighters, and members of certain groups, such as musicians, who gain their intuition through recurring adherence to social conventions and other repeated exercises. When discussing the process by which individuals acquire and utilize their expert intuition, Kahneman notes: "The situation has provided a cue; this cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is nothing more and nothing less than recognition" (2011, 11). Albeit demythologizing, this quote reminds us that some intuitions may not be robustly hardwired, but rather expertise expressed as implicit knowledge. Is it possible that some moral intuitions are expert intuitions?

Addressing that question leads to our second point. Although modular intuitions function at the level of individuals, expert intuitions often exist among members of groups. With regard to religious groups, some moral intuitions are likely to function as group-level traits that, because they can serve as collective phenotypes for group-selection, are emergent properties that cannot be reduced to modules within individuals (Smaldino 2014). This is achieved because religion, like other highly coordinated group activities, such as warfare, becomes a group-level trait insofar as distinct leaders coordinate its activities and cooperative adherents maintain its functions (e.g., Wilson 2002). Because religion allows for such collaboration, which goes beyond the inclinations of individuals, it constitutes a group-level trait: a phenotypic effect of social organization where individual activities are subsumed under those of the group (Smaldino 2014). Given that group-traits constitute phenotypes, which are differentiated between groups, selection can operate on them, allowing the structural organization of the group to survive into future generations. However, because group structures emerge and survive at the group-level, they cannot be reduced to individuals (Richerson and Boyd 2005; Smaldino 2014). Having said that, it is possible that some moral intuitions, which bear directly on group-traits, such as spiritual leadership or communal integrity, emerge among seasoned group members, informing them whether or not certain group activities are functioning. One kind of moral intuition that is likely to be engendered by religious groups is the feeling that it would be good or bad to change certain religious exercises, and thus whether or not aspects of the religion ought to change. In the next section, we shall argue that such feelings emerge from the religious system as a kind of feedback from the system itself.

Still, it should be noted that Haidt (2012) has recently acknowledged the importance of group-level traits and the evolution of religion on moral intuitions. With regard to the former, Haidt echoes Durkheim ([1893] 1964) by

saying that morality is everything that promotes group solidarity and controls self-interest, which is achieved through moral systems: "the interlocking sets of values, virtues, norms, practices, identities, institutions, technologies, and evolved psychological mechanisms that work together to suppress or regulate self-interest and make cooperative societies possible" (Haidt 2012, 270). Nonetheless, the primary source of moral intuitions, Haidt argues (272), is the set of evolved cognitive modules as identified by MFT – for example, the rituals that bind people together, as originally addressed by Durkheim ([1912] 1995), still make use of the modules for loyalty, authority, and sanctity. Turning to the importance of religion, Haidt claims that morality was not only selected at the level of individuals, which has been a dominant outlook in evolutionary ethics (e. g., Ridley 1996; Wright 1994), but also at the level of groups. Specifically, Haidt recognizes that aspects of the evolution of religion, such as hyperactive agency and threat-detection (e. g., Shariff and Norenzayan 2007) and costly religious rituals (e. g., Sosis and Alcorta 2003), make people more cooperative than their secular counterparts. He thus arrives at the following conclusion: If religion united our ancestors into moral communities, then our cognitive modules for moral intuitions could have emerged alongside religion, probably before the exodus from Africa, and strengthened over time since then (Haidt 2012, 259).

Haidt thus characterizes religion as the kick-starter to morality, which was an influential force primarily in the past, particularly the Holocene and Neolithic, when it coevolved with genetics and culture to produce the first moral systems (273). Haidt points out, however, that our moral systems today, which are comprised more of laws and science than religion, have split away from religion in many communities – for example, American liberals place care, liberty, and fairness as the most sacred values, often without any reference to religion (297). And though religion continues to bind people together in modern environments, any pseudo-religious group activity, such as a football game, can tap into the religious sentiments that promote cooperation (267).

Of course, this picture gets part of the evolutionary story right, but it fails to capture the adaptive story. Religion is more than just an evolutionary vestige that, through group selection, laid the foundations for moral sentiments and modern moral systems. To put it simply, religion *was* not only part of our evolutionary story, but *is* a continual aspect of it: The religious system is an adaptation and contemporary religious systems often foster adaptive behaviors (Alcorta and Sosis 2005; Sosis 2009; Sosis and Alcorta 2003). Albeit subtle, this point changes the picture of religion and morality in significant ways. Most of all, if religions are adaptive, then many moral systems are not breakaway extensions of religious systems, but rather inte-

gral components therein. On our view, when moral systems are part of the religious system, wherein group traits are possible, some moral intuitions are the direct product of the religious system. To address this point, we must now consider the religious system.

6. The Religious System

One of the fundamental changes that we propose in approaching moral intuition is to examine it alongside religions as dynamic systems, not basic entities. The main difference between religions as basic entities and religions as dynamic systems is that the former are understood as sets of abstract practices and beliefs, while the latter are recognized as adaptive complexes. Religions are often portrayed as basic entities or relics of the past, if not abstract beliefs, whose meanings can be easily divorced from other parts of the religion. We believe it is more practical – and far more accurate – to examine religions as dynamic systems that are comprised of interconnected components that function to promote group cooperation and coordination. Those components are supernatural agency detection, ritual behavior, symbolic interpretation, taboo observance, sacredness, authorities, and moral systems (Sosis 2012). Because these components are universal but nevertheless flexible enough to fit the changing environments in which humans finds themselves, they together comprise an adaptive complex: They are microstructures that, having coalesced throughout human evolution, dynamically network to one another in order to increase the survivability of the macrostructure (Purzycki and Sosis 2010). The macrostructure here is the religious community, and like any other large-scale organism, its microstructures play an integral part in its survivability.

For example, the religious group is similar to an organism insofar as it can be a unit of selection. Within it, supernatural agent concepts regulate behavior, symbolism provides shared meanings, authorities coordinate the group, and rituals, taboos, and moral systems cohere members. This entails that, contrary to MFT, some moral systems are often not extensions of religious communities, but rather integral microstructures therein. Given this integrity, new moral intuitions can emerge specifically from a religious community's moral systems or other microstructures.

This claim is supported by the fact that the religious system, as an adaptive complex, engenders social conventions that promote cooperation and coordination, which in turn render feedback to adherents. That feedback comes in the form of expert intuition, whereby the adherent intuits that the religious
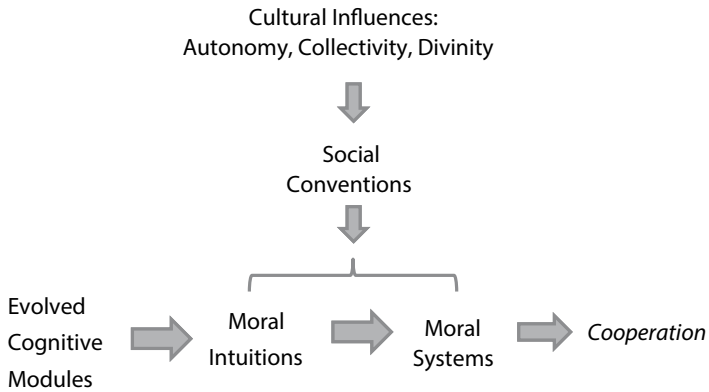
Cultural Influences:
Autonomy, Collectivity, Divinity

Social
Conventions

Evolved
Cognitive
Modules

Moral
Intuitions

Moral
Systems

Cooperation

Figure 1. Moral Intuitions in Moral Foundations Theory.

system is fostering or not fostering group-level cooperation and coordination. This outlook differs from MFT insofar as the latter does not view social conventions as products of the religious system, but instead the aspects of the greater culture, such as its level of autonomy, collectivity, and divinity. As Haidt argues, these conventions expand or contract the types of triggers that activate the individual's cognitive modules, thereby engendering culturally relative moral intuitions that interlock with the culture's moral systems to promote social cooperation. The central difference in our view and MFT is this: MFT treats cognition and culture as two intersecting forces, such that the latter places parameters on the development and trajectory of the former (Figure 1), while we view cognition and culture as mutual components of a dynamic relationship (Figure 2). Furthermore, although MFT takes evolved cognitive modules to be the primary impetus of moral intuitions (Figure 1), we take such modules to be the primary constraints on the microstructures of the religious system, which are themselves mutable (Figure 2). Hence, we agree that most moral and religious intuitions depend on evolved cognitive modules, such as those identified by MFT, but we believe there is room for additional intuitions to arise within the feedback of the religious system itself.

In what remains of this section, we shall clarify the foregoing picture. The basic idea of the religious system is that it is a kind of niche that cross culturally involves the same components. These components, such as the internal mental structures that support religion and the external behavioral structures that respond to socioecological variation, are functionally inter-related (Bulbulia 2008; Purzycki and Sosis 2010). As such, it is an example of coevolution (Richerson and Boyd 2005), where evolved cognitive modules
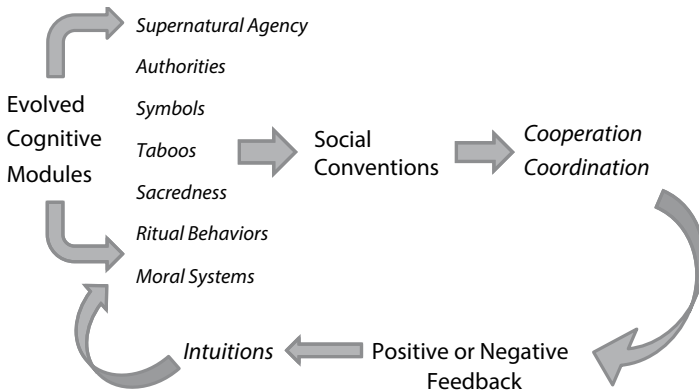
Figure 2. Moral Intuitions in the Religious System.

and religious exercises coalesced at one point in human evolution, thereafter altering ecologies for human survivability. Based on patterns of socioecological variation in religions, it is evident that such survivability is largely due to the reliable feedback religious systems give to adherents, especially with regard to group-level behavior. When the religious community, greater culture, or surrounding ecology causes significant changes to the religious system, adherents initiate change to restore, if not maintain, benefits to themselves (Bulbulia 2008). For instance, as religions coevolve within expansive societies, such as ancient Greece, they almost always tend to transition from non-moralizing to moralizing gods (e. g., Roes 2009). Although this may be due to the cultural evolution of laws within such societies (72–73), it is more than likely the result of selection pressures for prosocial behavior therein (Baumard and Boyer 2013). At any rate, important evidence for the religious system as a human niche is that many of its components, in fact, promote the fitness of adherents (Alcorta and Sosis 2005; Sosis and Alcorta 2003).

There is, however, another way (originally outlined by Purzycki and Sosis 2009, 2010) of approaching the religious system, and that is to examine the functionality of its main features. By 'functionality' we mean evolutionary trajectories within the patterns of a system. After examining these features, it will become apparent how the religious system is adaptive and why moral intuitions play an important role within it.

First, like any other dynamic system, the religious system requires energy, which in this case is constituted by human action (Sosis 2012). The motivation for human action derives from evolved cognitive modules, such as agency detection for spirits and gods, disgust reactions for taboos, threat-

detection systems for ritual, coalition psychology for membership, memory systems for symbols and meanings, and language for conversing with the supernatural (e. g., Baumard and Boyer 2013). As cognitive scientists observe (e. g., Atran 2002; Boyer 2001), these modules constrain the possible concepts that adherents will find compelling, and thus serve as the primary force behind religion – a point that Haidt and Joseph (2004, 61) stress with regard to the module constraints on morality. However, the cognitive modules undergirding religion are not so rigid as to remain static over time, for they would have to be flexible enough to change with the religious system and its respective environments, otherwise the modules would not be adaptive (Tomasello 1999). Theory of mind, for instance, is an underlying module for supernatural agency detection, but it is flexible enough during development to be molded by the local culture to believe in specific deities (Purzycki and Sosis 2009, 245). As a final point, motivation also derives from religious concepts that, having evolved culturally and achieved authority, provide adherents with shared meanings and serve as the catalysts for engaging in religious exercises (Alcorta and Sosis 2005).

Second, by participating in religious exercises, especially costly rituals, adherents reinforce the meanings of religious concepts, demonstrate their commitment to the group, and give the social conventions of their group an air of naturalism (Bulbulia and Sosis 2011). It is here that emotional responses to religious exercises become especially significant. Most religious exercises evoke emotional responses from adherents. Besides imbuing religious experiences, these emotions yield reliable information about the physical and psychological states of adherents – they are emotional displays that signal religious commitments. When adherents engage in religious exercises, namely rituals, they indexically signal to others their acceptance of the act, and thereby provide information about themselves to the group (see Purzycki and Sosis 2009; Rappaport 1999). Such displays often translate into an array of prosocial effects, as evidenced by empirical investigations of religious signaling (e. g., Ruffle and Sosis 2007; Sosis and Bressler 2003). Additionally, emotionally intense religious rituals, when coupled with religious instruction, instill within adherents collectively shared cultural models of the world (Alcorta and Sosis 2005).

Third, when the adherents abide by the social conventions of the group, they engender a shared ethos and contribute to the cooperation and social coordination of the group (Bulbulia and Sosis 2011). Perhaps the most important component in this regard is religious specialists, who use their authority to maintain or introduce new ideas to sustain order (Purzycki and Sosis 2009). Such specialists are necessary to any system insofar as they

validate the transmission of information, encourage collective acceptance of ideas and exercises, and coordinate the system (250–51). Without religious leaders, then, it is unlikely that the system will cohere long enough for the benefits of cooperation and coordination to be realized.

Fourth, the degree to which adherents cooperate and coordinate serves as the output and feedback of the system, which is experienced by adherents directly through social interactions and indirectly through health, reproduction, and survival (Sosis 2012). Feedback of this sort is unlikely to be experienced until there are perturbations to the equilibrium of the religious system, at which time adherents will sense the positive or negative outcomes of change. When the equilibrium is offset, religious authorities or laypeople will initiate alterations to the religious system by changing one of its main components. If the change is successful, the system will adapt to the environment, yielding positive feedback to its adherents. If not, the system will continue to experience negative feedback, eventually leading to the revival or death of the religion (Rappaport 1999).

7. Group Intuitions

We are now in a position to appreciate the role of expert intuitions in the religious system. Recall that expert intuition occurs within any situation where the expert, having sufficient familiarity with such situations, operates on information in stored memory and thereby knows implicitly what to expect and, when expectations are violated, what to do (Kahneman 2011, 11). These intuitions are often valid judgments because they constitute an acquired skill that the expert has unconsciously developed through prolonged exposure to instructions, social conventions, and exercises in environments with sufficient regularities (242). As a kind of acquired skill, which develops alongside others within a domain of expertise, such as playing chess, firefighting, and so forth, the expert gains an uncanny ability to know when something is or isn't the case. However, skills of these sorts are often limited to the domain of expertise and do not show the same degree of accuracy outside of it (417). For instance, consider taxi driving, one of the most dangerous professions in America when measured for the likelihood of being killed on the job. As such, taxi drivers develop an array of expert intuitions, including the ability to know, at a glance, individuals they ought to pick up and others they ought to avoid, which has been demonstrated to be valid knowledge in most instances. These intuitions underscore an accurate, unconscious screening process, but outside of taxi driving, the drivers do not seem to have the abil-

ity to judge trustworthiness any better than the common person (Gambetta 2005). This highlights an important aspect of expert intuition: When limited to their domain of expertise, experts have uncanny intuitions; but outside of that domain, they resort to the same cognitive biases of human judgment (Kahneman 2011, 417).

There are good reasons to believe that religious adherents develop a battery of expert intuitions pertaining to the social conventions of their religious system. However, because they arise from the system itself, where the ultimate function is to foster cooperation and coordination therein, expert intuitions in religion often reflect an expertise and sensibility relative to the group, which may not make sense to outsiders. That is to say, expert intuitions in the religious system may be internally applicable but externally inapplicable – and in the case of expert moral intuitions, they may even appear amoral or immoral to outsiders. To illustrate, let us turn to examples. Religious adherents tend to show expert intuitions about what constitutes valid or invalid testimony with respect to their religion (Harris and Koenig 2006). Similarly, adherents generally have a sense that someone is or isn't a true believer, and an intuition that one ought to perform a religious activity, which demonstrates their own commitment or level of belief (e. g., Lalich 2004). In contexts of worship or prayer, another intuition is the feeling of divine presence, or distinguishing the voice of God from one's own, and how one ought to interpret such encounters (Luhrmann 2012). Still, many religious intuitions carry normative implications, and it is here that their role in the religious system comes into view. An example is the goodness or badness of maintaining a ritualistic or orthographic language on the one hand, or changing it to strengthen conversion efforts on the other (Spolsky 2003). Yet another example is the suitability of accepting certain outlooks, such as scientific discoveries that overlap with one's religion, and whether one ought to incorporate such views into their religious discourse (Harris and Koenig 2006). Finally, the appropriateness of novel behaviors within the religious system, and likewise whether it is good or bad for authorities to punish such behaviors, are other examples (e. g., McAdams et al. 2008).

Provided these examples, three things must be stressed about expert moral intuitions within the religious system. First and foremost, they are experienced just as the emotional cognition thesis and MFT claims they would: They are felt as hunches or flashes of insights, but are eventually rationalized in a religious sense by the adherent. However, over time the adherent may go farther than what the emotional cognition thesis and MFT recognize, and that is arrive at new moral ideas – for example, before his strategic decisions in the civil rights movement, Martin Luther King Jr. was

compelled by intuitions regarding segregation and Christianity (Duggan 2007). It is worth noting here that several moral rights stemmed from religions, and may have been the rationalization of moral intuitions within religious communities – for example, the rise of abolitionism among English Quakers (Tomkins 2007).

Second, unlike most moral intuitions, which the individual can experience regardless of his or her community, expert moral intuitions are responses to perturbations to the religious system. Indeed, this makes good sense given its cooperative goals. When the religious system is successfully fostering cooperation and coordination, adherents experience the benefits of solidarity (Sosis and Alcorta 2003). However, when changes perturbate the system, adherents often intuit the kind of changes that will return the system to equilibrium. When warfare threatens group living, for instance, religions often institute costly rituals, such as body scarification or tattoos, which function to signal group commitments among warriors (Sosis, Kress, and Boster 2007). In these cases, the moral intuitions, such as 'we ought to scarify ourselves' or 'our gods demand scarification and we ought to oblige,' lead to positive outcomes for the group, which would neither be experienced nor understood by outsiders. Furthermore, because the intuition leads to actions that bear on the religious community, they are an impetus of group traits, and thus an essential link in group-selection. Hence, such intuitions are unique among moral intuitions insofar as being group intuitions.

Third, expert moral intuitions are not only concerned with the basic moral precepts identified by MFT, but also higher-order concerns relative to the religious community. Yet, although these higher-order concerns are framed in religious rhetoric, they indirectly address the social wellbeing of the community in some way. In other words, when the religious system falls into disequilibrium, the adherent will intuit that change is necessary, but such an intuition will be interpreted as being congruous with the religion, if not divinely inspired. Among the Nuer, for instance, resolving discord typically involves the reinforcement of moral norms, such as giving one another cattle, which is framed in a religious light (Evans-Pritchard 1956, 278). In these cases, the moral intuition to restore cooperation is certainly motivated by modules for fairness, loyalty, and authority, just as Haidt (2012) would argue. However, the Nuer sometimes experience moral intuitions to move their villages – oftentimes resulting in positive results – which they almost always interpret in religious terms, not as being simply pragmatic (Evans-Pritchard 1956, 279). Intuitions along these lines, like other expert intuitions, are not inborn but rather gained, in the context of religious systems, through repetitive religious instructions, conventions, and exercises.

Before concluding, we would like to address three matters that may have arisen amid our discussion. First, contrary to many theological positions on intuitions that take experience to be primary to religious exercise (e.g. Auman 1985), we follow suit with the social science of religion, which shows that religious exercises often precede intuitions and even belief (e.g. Rappaport 1999; Sosis 2003). Although we cannot resolve this debate here, we acknowledge its importance and encourage cross-disciplinary research on the matter. Second, the philosophically minded reader may wonder whether expert moral intuitions carry propositional content. From our vantage point, given that expert intuitions arise from 'System 1,' they are experienced primarily as strong affects only after which 'System 1' gives it propositional content (Kahneman 2011). However, this is an open question for further discussion, and one that may harken back to debates on the propositional content of emotions raised during medieval philosophy (Knuutila 2004). Finally, we are unsure whether expert religious intuitions lend themselves to positions in metaethics, and thus we are more inclined to view them in a pragmatic sense, where they are often useful despite their so-called 'truth aptness.' Nonetheless, we are confident that the approach to understanding how religious intuitions develop that we have outlined here will further advance the study of moral psychology and open up new avenues of inquiry.

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