

Motivation and Justification: A Dual-Process Model of Culture in Action¹

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This article presents a new model of culture in action. Although most sociologists who study culture emphasize its role in post hoc sense making, sociologists of religion and social psychologists tend to focus on the role beliefs play in motivation. The dual-process model integrates justificatory and motivational approaches by distinguishing between “discursive” and “practical” modes of culture and cognition. The author uses panel data from the National Study of Youth and Religion to illustrate the model’s usefulness. Consistent with its predictions, he finds that though respondents cannot articulate clear principles of moral judgment, their choice from a list of moral-cultural scripts strongly predicts later behavior.

This article seeks to move toward a more satisfactory answer to a simple question: What role do cultural meanings play in people’s behavior?² Contemporary sociologists who care about this question—mainly those who study culture and religion—are nagged by a basic theoretical confusion. On the one hand, scholars claim that cultural understandings about what is good or bad, right or wrong are tools that people use to

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² Weber (1978) distinguishes between “action,” which is subjectively meaningful, and “behavior,” which is not. Though this is an important distinction for understanding single acts, I am here concerned with patterns of conduct that occur over time. In this article, therefore, I understand both of these terms to mean simply “things people do.”

solve their everyday problems.³ According to this view, culture is best viewed as a loose repertoire of justifications that rationalize or make sense of the choices that individuals make in their lives (Boltanski and Thévenot 1999; Swidler 2001). On the other hand, the idea that meanings or values play a motivational role in shaping behavior remains, primarily in studies of religion (Lakoff 2002; Smith 2003; Hitlin and Piliavin 2004; Smith and Denton 2005). Even there, however, this perspective is waning, as many researchers now apply the notion of problem-solving “repertoire” to religious beliefs (Lamont et al. 1996; Clydesdale 1997; Bartkowski and Read 2003; Smilde 2005). While motivational and justificatory understandings of culture are not necessarily contradictory, the choice to apply one or the other to a specific empirical problem seems largely a matter of the researcher’s personal preference (Jackson 2006). There is little sense of how one might coherently combine the appealing possibility that culture matters both as a social and psychological justification *and* as a motivation for action. The goal of this article is to take one step toward synthesizing these two distinct conceptualizations by offering a dual-process model of culture and cognition.

My argument has four parts. First, I briefly outline the history of the motivation/justification split in cultural sociology, with the goal of identifying and questioning the assumptions held by each side. Second, I introduce insights from sociological practice theories and research in cognitive science to sketch a dual-process model that considers specifically how culture might be implicated in both motivation and justification. Third, I consider some of the substantive and practical implications of the model, outlining two major empirical propositions. Finally, I provide an empirical illustration of the model that relies on interviews and longitudinal survey data from the National Study of Youth and Religion. This exercise demonstrates the consistency and usefulness of the dual-process model for understanding how culture matters for action. I conclude by suggesting some practical ways to improve empirical research and theory in the sociological study of culture and religion.

THEORETICAL BACKGROUND

Tracing the Motivation/Justification Split

Once upon a time, sociologists believed that people were motivated by the values they learned from society. From Weber’s *Wertrationalität* to

³ “Culture” is a word with many meanings. In this article, I understand culture to mean something like “conceptions of the desirable,” “cosmologies,” “worldviews,” or “values” (see Kluckhohn 1951; Thompson, Ellis, and Wildavsky 1990; Smith 2003; Davis and Robinson 2006).

Parsons's voluntarist theory of action, the idea that consciously desired ends provide the motivation for individual behavior was a building block of sociological theory (Joas 1996; Campbell 2006). Culture was held to be the repository of those values that were transmitted via socialization from parents, schools, and churches to children (Joas 1996, 2000; Hitlin and Piliavin 2004). A few decades ago, however, this assumption began to undergo a sustained critique from a number of sources.

Though C. Wright Mills questioned the motivational power of cultural values as early as 1940, his position did not become mainstream until more than four decades later. Mills's (1940) view that cultural scripts (or "vocabularies") provide justifications rather than motivations for behavior ultimately found its most influential proponent in Swidler, who famously critiqued values as "the unmoved mover in the theory of action" (Swidler 1986, p. 274).⁴ In some respects this was a bold claim, but in others, it was an idea whose time had arrived. Just as Swidler's essay was published in the *American Sociological Review*, social movement scholars, for example, were moving away from the idea of ideological motivation toward a notion of "framing" as persuasive social practice (e.g., Snow et al. 1986). Around the same time, Erving Goffman's "dramaturgical" perspective—which focuses on the ways actors manipulate symbols and appearances—had reached the height of its popularity.⁵ Consistent with their larger theoretical project, symbolic interactionists disregarded subjective states in favor of intersubjective states. From there, it was a short jump to conclude that subjective understandings were the product of situations rather than a possible influence upon them (Campbell 1996).

In other quarters, scholars enamored of the Marxist perspective were beginning to take culture seriously—not as a causal factor in its own right but as a necessary prerequisite for the expression of material imperatives (e.g., Bourdieu 1984). Scott and Lyman's (1968) influential paper on "accounts" was amplified by neoinstitutionalists who emphasize cultural legitimacy as being an external environment of action that otherwise-rational organizations have to face rather than as shaping action in any motivational way (Meyer and Rowan 1977; DiMaggio and Powell 1983; see also Alexander 2003, p. 23). Rethinking cultural meanings as tools of social sense making instead of as internalized motives was not confined

⁴ For brevity and clarity, I focus the discussion around the work of Swidler (1986, 2001), undoubtedly the most well-known and exemplary member of the "repertoire" school among sociologists of culture. For a much broader and more comprehensive account of the rise of "situationism" in action theory, see Campbell (1996).

⁵ As reflected, among other things, in Goffman's 1982 election to the presidency of the American Sociological Association.

to any single subfield but was simply part of a developing sociological zeitgeist that continues to this day.

For her part, Swidler's critique was anything but fashionable or fad-dish. It was based on two novel and highly insightful observations. The first was grounded in a compelling interpretation of Weber's *Protestant Ethic and the Spirit of Capitalism* (1930). Swidler argued that whereas the ideology of Calvinism (e.g., the concern with glorifying God through work) gave way to that of capitalism, its practices—thrift, industry, and so on—persisted. From this, she concluded that what survive and causally matter are not subjectively internalized cultural meanings but “strategies of action”—the practical styles and skills that actors bring to bear on the problems of everyday life.

This societal-level realization was further strengthened by the second, more micro observation, which was not fully codified until her 2001 book, *Talk of Love*. This insight is that individuals are *remarkably bad* at giving consistent reasons for their behavior. In her discussions about marriage with middle-class Americans, Swidler found little evidence that ideology motivates action. Rather, she found that people tend “to trim their philosophy to fit their action commitments” (2001, p. 148). In other words, she argues that while people under different kinds of institutional pressures may act differently in their marriages, the reasons they give for their actions are efficacious only in that they “make sense” of these actions, both to interlocutors and to the actors themselves (see also Mills 1940).

This is not to say that the tool kit model denies cultural meanings *any* causal role in shaping action. If an actor realizes prospectively that she lacks an adequate social justification for undertaking an action, she will probably not undertake it. Similarly, if she has not mastered the cultural styles or skills necessary to carry out a particular action, she will probably not attempt it. Culture is certainly causal in this respect. But thinking of the mastery of certain cultural tools as a necessary condition for particular actions still leaves meaning and motivation decoupled. If, as Swidler rightly claims, people know more culture than they use, why do they use what they do? By treating culture as something that people use, this approach—intentionally or not—rules out the possibility that cultural understandings or beliefs could be motives for action.

I am not arguing that this is the conclusion Swidler or other tool kit theorists *want* to reach regarding motives, though I do contend that it follows necessarily from this line of reasoning.⁶ In fact, there are promising

⁶ My interpretation of Swidler's work is not idiosyncratic. Kaufman (2004, p. 340), in a review of recent work in the sociology of culture, sees Swidler's work as arguing that cultural values are “rationales for predetermined ends” and “a repertoire [people] use to make sense of their thoughts and actions.”

hints in *Talk of Love* that Swidler understands motivation as somehow grounded in identity—“who [people] already think they are” (p. 87). Unfortunately, hints like these are not brought together in any systematic way, and—in this case, at least—they are ultimately contradicted when Swidler argues that the self is “one of many tools” a person may “pick up or put down” in the course of social interaction (2001, p. 24). Though she seems to realize that a needed account of motive is missing and regards “identity” as a potential way out, this possibility succumbs to the overarching logic of the metaphor of “culture as tools.”

Similarly, the distinction in Swidler’s 1986 paper between “settled times” and “unsettled times” seems to suggest that cultural meanings might shape motives, at least some of the time. But the argument here is somewhat unclear. Swidler argues that during unsettled times, cult members (for example) act in specific ways “because their beliefs tell them to” (1986, p. 279), suggesting the possibility that internalized states can motivate. But this seemingly straightforward statement becomes blurred in the context of other claims in the same section of the paper. Calvin, for instance, is described (following Michael Walzer) as having “bent his doctrine” to control the citizens of Geneva, and this is given as an example of how “style[s] of regulating action” shape “the selection and development of doctrine” (Swidler 1986, p. 280). Once again, the meanings themselves seem to be subordinate to other forces and remain uninvolved in motivating one course of conduct over another. Summarizing her own argument, Swidler concludes that “unsettled times” allow culture to have “independent causal influence” because culture “*makes possible* new strategies of action” (p. 280; emphasis added). As above, she seems to be arguing that culture works by providing skills and styles necessary for acting rather than by emphasizing different “conceptions of the desirable” that tend to motivate some possible actions rather than others. As was the case with identity, an interesting theoretical possibility succumbs to the overarching metaphor of the cultural tool kit or repertoire. I will return briefly to the issues of identity and unsettled times in the conclusion.

It should be noted here that although Swidler is the most often cited proponent of this tool kit or repertoire approach to culture, her view is in no way idiosyncratic (see Campbell 1996; Hechter et al. 1999; Kaufman 2004). Boltanski and Thévenot (1999) refer to moral justification as socially required sense making; DiMaggio (1997, 2002) argues that we grab bits of culture seemingly at random to justify ourselves; Lamont (1992) sees symbolic repertoires serving primarily as tools of social inclusion and exclusion; and Lichterman (1996) claims that moral languages are simply different ways of talking while we go about the “life-ways” (actions, habits, or customs) we learn in organizations and networks. Even scholars who might not identify with the “justificatory” school tend to assume a priori

that the pressure to maintain particular beliefs is social rather than intrapsychic (e.g., Martin 2000). Though the terminology may differ, most sociologists—whether they intend to or not—now see cultural meanings as rationalizing, making sense of, or (at most) allowing action rather than motivating it (Campbell 1996, 2006; see also Shweder 1992). Swidler is simply the most important contemporary theorist to work out an explicit formulation of this view.

The Unstated Premise of Tool Kit Theory

In order to understand the problems with the repertoire theory of culture, we must briefly consider the reasons behind its appeal. The history of the justificatory view is too complex to trace here, but the argument goes something like this: people generally pursue consistent lines of action; however, when asked to explain these lines of action, they invariably give contradictory or incoherent accounts. Being contradictory, the accounts themselves cannot really be motivating, and we must therefore turn outside the person's subjectivity to find the true springs of action. These springs of action are found in "situational contexts" (Swidler 2001, p. 82) and in institutions because they have the power to control "departures from the [institutionalized] pattern" via application of "rewards and sanctions" (Ronald Jepperson, quoted in Swidler 2001, p. 202). Therefore, institutions both large (e.g., the legal structure of marriage) and small (e.g., my friendships) seem to be what drive action, while culture's role is limited either to imposing constraints on action via one's available repertoire or—most important—to "making sense" of one's behaviors and choices after the fact.⁷

This argument for tool kit theory is simple, insightful, and elegant. However, it also turns out to be based on unrealistic assumptions about the necessary cognitive link between cultural meanings and motivation. Swidler, the clearest theorist on this point, assumes that if cultural meanings were in fact motivational, they would have to be grounded in articulable, rulelike cognitive structures. Though she rarely asserts this directly, she continually argues against the notion that "cultural meanings operate . . . as *logical structures* that integrate means and ends" (2001, p. 187; emphasis added). Similarly, she only allows that "*explicitly articulated* cultural models" (1986, p. 278; emphasis added) could potentially be mo-

⁷ It is not tenable to suggest here that tool kit theorists are only interested in post hoc sense making and are unconcerned with the processes—subjective or otherwise—that give rise to action itself. As I have shown above, tool kit theory is founded in an express denial of the causal power of subjective states (Mills 1940; Scott and Lyman 1968; Swidler 1986; see also Campbell 1996; Hechter et al. 1999; Kaufman 2004).

tivating. Her foil is thus a conception of cultural meanings as propositional, articulated, and logically complicated. If meanings were motives, Swidler contends, we would find consistency between the understandings people articulate and their subsequent actions. For example, if people really believed in the romantic model of marriage, they would divorce the instant their marriage no longer promised fulfillment. Failing to find either logical or behavioral consistency in her research, she concludes that the contradictory understandings her informants articulate must be causally unrelated to the things they do.

DiMaggio (1997, 2002) makes a similar point. He argues that people indeed know a lot more culture than they use and that much of this cultural information is contradictory and stored away without reference to its truth value. It follows from this reasoning that the cultural schemas people internalize (being contradictory) cannot be motivational, presumably because they would motivate people in contradictory directions. Consistent with the institutional and situational focus of tool kit theory, DiMaggio maintains that we should look to the “physical and social environment” (1997, p. 267) for cues that activate particular cultural schemas rather than others, thereby accounting for behavioral consistency over time.

The power of this argument is in its simplicity, yet accepting it requires accepting an unstated premise: that cultural motivation (were it to occur) would have to be a deliberative, logical affair. On the face of it, this premise seems uncontroversial. The primary moral philosophical tradition going back to Kant holds that moral judgment is a matter of logical reasoning. In a more recent incarnation, the dominant empirical research program on moral psychology makes the same assumption and asks people to reason verbally through moral dilemmas (e.g., Kohlberg 1981). Utilitarianism, the main philosophical competitor to the deontological approach, prescribes purposeful mathematical computation about the overall happiness that a decision is expected to confer (Haidt 2005).⁸ Given the distinguished intellectual heritage of the unstated premise that moral judgment must necessarily be a form of conscious deliberation, one can hardly fault repertoire theorists for not questioning it.

There are, however, very serious reasons to question this premise. Over the past two decades or so, many scholars have reached a consensus that recognizes two primary levels of consciousness—deliberative and automatic—and understands that most of our cognitions occur below the level of conscious awareness. I will outline the evidence for this dual-process

⁸ Incidentally, the battle between deontological and utilitarian approaches to morality also took on sociological form, respectively, in normative (Parsons, Durkheim) and instrumentalist (rational choice) theories of action (see Joas 1996).

approach to cognition from two different directions. I begin with insights from the practice theories of Giddens and Bourdieu. Though these theorists have many followers, their insights into the dual nature of consciousness have been either largely neglected or treated as an optional “perspective,” disconnected from more fundamental considerations. Next, I provide a brief overview of developments in cognitive science that confirm and clarify the prescient insights of these sociological theorists. After outlining the evidence for dual-process models, I return to repertoire theory, question it in light of this discussion, and consider several empirical and methodological implications.

“THE DIVIDED SELF”

Practice Theories in Sociology

Giddens (1984) was among the first contemporary sociological theorists to highlight the difference between discursive and practical levels of consciousness.⁹ His concern with the “stratified self” emerged from an insightful critique of Goffman, who famously demonstrated that people go out of their way to manage appearances and coordinate face-saving rituals. Giddens argues that although Goffman’s work is indeed brilliant, it lacks an important ingredient—an account of motivation. While Goffman focuses on how people manage their self-presentation and maintain order in their lives, Giddens asks, *Why* on earth do people go through all this trouble? Drawing on Erikson and Freud, Giddens argues that motivation is unconscious and grounded in what he calls the need for “ontological security”—a sense that the world is meaningful and stable.

Bourdieu’s work also provides an account that relies on the power of unconscious dispositions. In *Distinction* (1984), for instance, Bourdieu argues that the inclination to appreciate different types of art, music, and literature is not conscious at all. Rather, he seems to suggest that these motives come from an unconscious tendency to reproduce one’s class position.¹⁰ Though Bourdieu’s field theory is more general than this (see Martin 2003), it is vital to remember that according to Bourdieu himself, the unconscious dispositions of the habitus cannot be understood without simultaneous reference to capital and field—or, more specifically, to one’s

⁹ Camic (1986) offers an important discussion of the concept of “habit” in early sociological theory. In light of that discussion, I certainly do not argue here that Giddens and Bourdieu were the first to take “practical consciousness” seriously. I focus on these two “practice theorists,” however, because their work in this area has broad contemporary influence and its general familiarity will spare the necessity of establishing in detail their position on the subject.

¹⁰ See Bourdieu’s *Logic of Practice* (1990) for a more general version of this argument.

position in the field generated by the intersection of economic and cultural capital (Bourdieu and Wacquant 1992). Thus, while Giddens grounds unconscious motivation in the need for ontological security, Bourdieu grounds an actor's dispositions toward action in the deployment and reproduction of his or her mix of capitals.

Insights from Cognitive Science

Though the practice theories of Giddens and Bourdieu differ from one another in some respects, cognitive science has confirmed their shared insight into the stratified nature of consciousness. There is neither the space nor the need to conduct a thorough review of the related literature here, since there are many good and accessible reviews.¹¹ The idea that human cognition is based on two basic processes—one fast, automatic, and largely unconscious, and one slow, deliberate, and largely conscious—is now uncontroversial (Schwarz 1998; Chaiken and Trope 1999; Wilson 2002; Greene et al. 2004; Evans 2008). As I will argue below, understanding the different ways these processes operate is vital for understanding the role of cultural meanings in sociological models of human behavior.

On the basis of work in dual-process theory, Haidt (2001, 2005), a social psychologist, offers a useful metaphor for this “divided self”: a rider on the back of an elephant. The rider, who represents our conscious processes, is the part of ourselves we know best—she can talk, reason, and explain things to our heart's content. Yet, for the most part, she is not in charge. The elephant, which stands for our automatic processes, is larger and stronger than the rider and is totally unencumbered by the need, or the ability, to justify itself. Driven by the simple mechanism of attraction and repulsion, the elephant goes where it wants.¹² As the metaphor implies, the rider is no match for the elephant in a direct struggle. While the rider usually only pretends to be in control, she can slowly train the elephant over time or perhaps trick it into going a different way. But in any given moment, the elephant—practical consciousness—is usually in charge. For the most part, this is quite advantageous. Having a durable practical consciousness means that rather than having to weigh pros and cons on a daily basis (e.g., “Should I continue to value hard work today?”), we can leave some things up to our habits of judgment and evaluation. Having to consciously reevaluate our political leanings, religious com-

¹¹ One popular treatment of this literature that may be familiar to many sociologists is *Blink* (Gladwell 2005).

¹² The bodily nature of attraction and repulsion was also central to Durkheim's thinking on morality (see Ignatow 2007).

mitments, hygienic habits, and life goals on a daily basis would be cognitively overwhelming.

Though the rider/elephant metaphor may be intuitively attractive to some, it is important to note that it is not merely a metaphor but a heuristic encapsulation of decades of research (see Chaiken and Trope 1999; Wilson 2002; Evans 2008). It is also imperative to point out that reliance on cognitive science to develop a more realistic model of human cognition is by no means reductionistic. Rather, “the elephant” provides a validated mechanism for understanding an important way society can “get into” human beings that is homologous with Giddens’s practical consciousness and Bourdieu’s habitus.¹³ These insights can also remove some of the sting of “black box” critiques that have been leveled against the habitus (e.g., Boudon 1998).

Toward a Synthesis

While the research of cognitive scientists is essential for understanding the form or process of the divided self, sociology is particularly suited to understanding its substantive content. What distinctions are important to it? What kinds of things does it like or dislike? Psychologists are good at specifying general characteristics of human cognition, such as the seemingly universal tendency toward reciprocity. But there is much more to social cognition than human universals. From a sociological perspective, we might expect that some unconscious tendencies would be socially patterned, differing systematically across “cognitive subcultures” (Zerubavel 1997). Bourdieu’s research into aesthetic judgment is an obvious example, but there is no need to believe a priori that the habitus is limited to evaluating tastes or discriminating among other class-related goods. Developing a more thorough understanding of practical consciousness may help us answer the question motivating this article: What role does culture play in shaping what people do?

Substantial evidence supports the assertion that not only consciously stated values and beliefs but also moral intuitions—the unreflective attractions and repulsions of practical consciousness—vary between cultures. Cultural psychologist and anthropologist Richard Shweder and his colleagues have outlined a cross-culturally validated typology of three major ethics: the ethic of autonomy, concerned with harm, rights, and justice; the ethic of community, concerned with role obligations; and the

¹³ Because the focus here is on action rather than on socialization, this article is more concerned with the effects of particular forms of practical consciousness than with their origins. I will investigate the social sources of these forms of practical consciousness in a future study.

ethic of divinity, concerned with maintaining purity and not violating the “natural” order (Shweder 2003). This three-part typology is remarkably similar to the individualist, community-centered, and religious typology that Bellah and colleagues (1985) offer.¹⁴ Though Shweder, like Bellah, talks about these three ethics mainly in terms of “discourse,” subsequent psychological research has associated each with specific intuitions and judgments about right and wrong in natural and experimental settings (Rozin et al. 1999; Haidt 2001; Wheatley and Haidt 2005). These studies have shown important differences in moral intuitions between (for example) India, Brazil, and the United States but also between political liberals and conservatives in the United States. There is substantial evidence that culture shapes emotions, intuitions, and unconscious judgments as well as acceptable forms of talk.

There is also a growing acknowledgment that (despite Bourdieu’s later assertions) the habitus can serve as a general theoretical tool apart from its relationship to stratifying forms of capital.¹⁵ For instance, Lau (2004) and Sayer (2005) have argued that the habitus should best be thought of as produced by many kinds of experience—class-based, family-based, and so on. Sayer in particular contends that moral concerns are central to a complete understanding of habitus. After all, if a working-class person can internalize from experience that classical music is “not for the likes of us,” couldn’t (say) some evangelical Protestants internalize the notion that pornography is “not for the likes of us” and turn away from it in disgust, no matter what arguments are offered to justify it? In essence, Sayer revives parts of the classical notion of habitus that Bourdieu ignored and invites us to extend the logic of Bourdieu’s theory from “good music” or “good art” to “the good” more generally.¹⁶

Cognitive anthropologists D’Andrade (1995) and Strauss and Quinn (1997) make a similar argument, explicitly likening Bourdieu’s habitus to the set of unconscious schemas that people develop through life experience. Strauss and Quinn’s argument is particularly important for sociologists because their use of the “schema” concept is significantly different from that typically employed by sociologists of culture (see DiMaggio 1997). D’Andrade and Strauss and Quinn—and this article—rely on a very specific notion of cultural schema that is based on a connectionist

¹⁴ Close parallels can also be found with Triandis’s vertical/horizontal and individualist/collectivist typology (Triandis 1995; Oishi et al. 1998) and Douglas’s group/grid typology (Douglas and Ney 1998).

¹⁵ Lamont (1992) has similarly argued that Bourdieu overemphasizes “capitals” at the expense of morality, but she grounds her multivalent scheme in conscious “repertoires of evaluation” rather than in an internalized habitus.

¹⁶ Thanks to John Levi Martin for pointing out the classical grounding of Sayer’s work.

understanding of neural networks. In this view, cultural-cognitive structures are built up out of experience and allow a person to respond to stimuli in ways that are automatically generated by the weighted connections between the elements of the inputs at hand. Proponents of this view do not talk of schemas as things that are “deployed” like tools but rather as deep, largely unconscious networks of neural associations that facilitate perception, interpretation, and action (see also Lizardo 2006). This view is eminently compatible with Bourdieu’s own definition of habitus: “Systems of durable transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations . . . *without presupposing a conscious aiming at ends* . . . objectively ‘regulated’ and ‘regular’ *without being in any way the product of obedience to rules*” (Bourdieu 1990, p. 53; emphasis added).

Though schemas are nonlinguistic cognitive constructs, this does not mean that they lack the ability to motivate behavior. On the contrary, although there is evidence that people file away bits and pieces of culture and draw on them strategically (say, to win an argument), cognitive anthropologists have also come to the conclusion that some cultural schemas are more internalized than others. Far from rejecting the notion of internalized beliefs and values, D’Andrade discusses how “the beliefs and values of a culture may be internalized” through “secondary appraisals [i.e., evaluative discourse] and the cultural shaping of emotion” (1995, p. 227). D’Andrade, following Melford Spiro, outlines four levels of internalization, from simple acquisition to the “cliché stage,” belief, and belief with high salience. He contends that while the lower stages of internalization (on which DiMaggio [1997] focuses) concern classification, cultural knowledge and social reasoning, the final stage becomes truly motivational: “This cultural shaping of emotions gives certain cultural representations emotional *force*, in that individuals experience the truth and rightness of certain ideas as emotions *within* themselves” (D’Andrade 1995, p. 229; emphasis in original). He then spends the next 14 pages discussing precisely how cultural representations can serve as motives for action in some persons and groups (see also Shweder 1992). D’Andrade argues, in ways that are consistent with broader trends in cognitive psychology, that motives need not be conscious to be efficacious (e.g., McLelland, Koestner, and Weinberger 1989).

In sum, while arguing contra earlier anthropologists (e.g., Geertz 1973) that cultural schemas are not perfectly shared or perfectly internalized by all members of a given society, cognitive anthropology has certainly not rejected the idea of “culture as values that suffuse other aspects of belief, intention, and collective life [for one that sees] culture as complex, rule-like structures that can be put to strategic use” (DiMaggio 1997, pp. 264–

65). In fact, there is a robust notion of motivation implicit in the schema concept itself, since schemas automatically generate different evaluative and behavioral responses according to the interaction of the neural connections and the nature of the inputs.

On the whole, the model that emerges from combining practice theories with cognitive science is quite simple, but it differs significantly from the one most empirical researchers bring to bear (explicitly or implicitly) when studying culture. Research in a number of areas points toward a dual-process model of cultural cognition: actors are driven primarily by deeply internalized schematic processes (“the elephant”/practical consciousness/habitus), yet they are also capable of deliberation and justification (“the rider”/discursive consciousness) when required by the demands of social interaction. This simple theoretical heuristic is potentially quite powerful for thinking through the causes and consequences of action. For the purposes of examining the importance of cultural beliefs for behavior, this model also helps us consider how moral schemas might operate probabilistically to shape behavior over time. In the next section, I outline some of the practical implications of the basic dual-process model.

IMPLICATIONS FOR THEORY AND EMPIRICAL RESEARCH

Taking the existence of schematic cognition seriously and combining it with insights from sociology and related disciplines does not take us all the way toward a theory of how cultural meanings might matter for shaping behavior. It does two important things, however. First, it tempers our excitement about the evidence that has been offered for the tool kit or repertoire perspective. As I argued above, the evidence that repertoire theorists provide for this view rests on a highly questionable implicit premise—that beliefs, worldviews, and moral judgments would have to operate through conscious thought to be causally efficacious. Because interview methods engage with discursive consciousness alone, they cannot rule out the possibility that deeply internalized moral attractions and repulsions (grounded in schematic associations acquired through cultural experience rather than in conscious beliefs) are patterned in motivationally important ways. The foregoing argument suggests that some of, say, Swidler’s respondents might be less likely to divorce than others—even if their friends were divorcing or if the institution of marriage were weakened—because of internalized habits of moral judgment about marriage that they cannot themselves articulate. Given the methodological approach of Swidler’s work, we cannot know whether the kinds of “culture talk” her respondents tend to rely on is correlated with different types of marital

outcomes.¹⁷ We must therefore look for additional evidence to bolster or question her conclusions about the ways culture matters.

The second implication of the model is related to the first—it is that methods matter and that they matter in a very specific way. The unstructured or semistructured interview puts us in direct contact with discursive consciousness but gives us little leverage on unconscious cognitive processes. Discursive consciousness is incredibly good at offering reasons that may not be at all related to the real motives behind a person's behavior. In split-brain studies, for example, experimenters have directly exploited this discursive/automatic divide by flashing different pictures to different sides of a participant's field of vision (and therefore to different sides of the brain). In Michael Gazzaniga's celebrated study (described in Haidt [2005]), a picture of a chicken claw was flashed to the side of the brain that specializes in language while a picture of a house covered with snow was simultaneously flashed to the other side. When asked to select from a card the picture that went best with what he or she had seen, the patient's right hand pointed to a chicken, and the left hand pointed to a shovel. When the experimenter asked for an explanation of these choices, the patient inevitably said something like, "You need a shovel to clean out the chicken coop," completely unaware that the choice of the shovel was motivated by having seen a snow-covered scene.

While these studies prove nothing per se for sociologists, this line of reasoning suggests an unorthodox methodological possibility: interviews may not be the best way to understand how people make judgments. Carefully constructed and implemented, forced-choice surveys may be better suited to the study of the culture-action link.¹⁸ Let me offer some reasons to support this suggestion. First, in a domain related to sociology, moral psychological research comparing the Moral Judgment Interview, an open-ended instrument, and the Defining Issues Test, a fixed-response survey, suggests that the fixed-response format yields better estimates of people's actual moral decision processes (Narvaez and Bock 2002). More generally, research on the psychology of survey response shows that respondents use as little cognitive effort as they can to answer survey questions, suggesting that they rely more on heuristics and intuition than on deliberation (Tourangeau, Rips, and Rasinski 2000). Because choosing from a fixed list of responses is akin to solving a practical problem ("Which one do I like?"), fixed-response survey questions may draw disproportionately on practical consciousness, which has to *make* (as opposed to

¹⁷ Lamont and colleagues (1996) also treat cultural-moral boundaries as products of social location rather than as predictors of behavior.

¹⁸ Experiments, though powerful tests of specific formal processes, seem less well suited to exploring the culture-action link in everyday life.

discuss) many such decisions each day. Some neurological research again points in a similar direction. In different studies of patients whose corpora callosa had been severed, researchers flashed pictures of objects to different sides of a patient's field of vision.¹⁹ When a picture of a shape was flashed to the side corresponding to the brain's language center, the patient was able to report that he had seen that shape. Conversely, when the same picture was flashed to the other side of the field of vision, the patient was unable to report this verbally. Yet, when asked to select from a list of shapes, he could select the correct one (Gazzaniga 1987). Thus, just as a six-year-old is very good at recognizing incorrect grammar (e.g., she knows that "he are hungry" is incorrect) while remaining unable to explain *why* it is incorrect, we seem better able to recognize our tacit mental contents than to produce them on demand. All of these findings and interpretations are consistent with Giddens's and Bourdieu's views of practical consciousness, D'Andrade and colleagues' work on cultural schemas, and other research in moral and cultural psychology.

Let me summarize the methodological implications of this model by analogy. If talking about our mental processes with an interviewer is like describing a criminal suspect to a sketch artist, then answering survey questions is like picking the suspect out of a lineup. The latter is much less cognitively demanding and potentially much more accurate, provided the right choices are in the lineup. Getting the right lineup is, of course, the function of good theory and attention to previous research. If the "right" responses are not available, then the respondent will still guess, since that is what the situation requires. (There are, however, ways of detecting this sort of problem, as I discuss below.) But given a good lineup of responses, respondents' choices may reveal a great deal about their underlying cultural schemas. Well-designed survey questions may measure practical knowledge better because they present the respondent with situations that are homologous with everyday decision-making processes (like choosing which CD to listen to or what to have for lunch). When we hear a survey question, we simply have to pick the response our practical consciousness prefers, the response that "feels right" or "sounds right" to us. Bourdieu's respondents in *Distinction* all surely thought they listened to "good music," yet their responses were patterned in sociologically interpretable ways. In the same way, we may be able to rely on respondents' choices from a fixed list of cultural scripts to gain insight into their "moral habitus" and to predict their future behavior. The following section empirically illustrates this possibility.

¹⁹ The corpus callosum is a neural structure that allows communication between the hemispheres of the brain.

AN EMPIRICAL ILLUSTRATION OF THE MODEL

If the dual-process model of culture outlined above is indeed correct, it suggests two empirical propositions:

PROPOSITION 1.—*Because discursive consciousness is largely uninvolved in routine moral decision making, interview respondents will either (a) tend to explain their behavior in intuitive terms without a clear substantive referent or (b) offer multiple “loosely coupled” logics of justification to support their judgments.*

PROPOSITION 2.—*Because the practical consciousness or habitus will tend (probabilistically) to generate a response that is consistent with its underlying schematic organization, respondents’ forced choice of a cultural script will be predictive of their future morally relevant behavior, even when other factors are held constant.*

It should be noted here that only a dual-process model of culture in action can integrate both of these propositions in a noncontradictory manner. Parsonian-Weberian means-ends theory would be most consistent with the data if interviews and surveys yielded similar clear connections between morality and behavior. Tool kit–repertoire theory, on the other hand, would suggest that neither interviews nor surveys would be predictive of important outcomes once social networks and institutional locations are accounted for.

Data and Analytic Strategy

The data I use to illustrate the model come from in-depth interviews and a two-wave telephone survey included in the National Study of Youth and Religion (NSYR), a large multiyear, multimethod investigation in which I was directly involved. The telephone survey began in 2002 and obtained completed surveys from 3,290 respondents ages 13–18. The wave-2 survey in 2005 contacted around 79% of these respondents, then ages 15–20. I personally conducted around 35 in-depth interviews with respondents over a period of more than two years. I also have read through the 264 interview transcripts from the first wave. In addition, the researchers who were involved in the wave-1 and wave-2 interviewing spent a week together after each wave talking about general patterns and striving for consensus on major themes.²⁰

While proposition 2 can be compared with the data in a more straightforward statistical sense, proposition 1 is not as susceptible to easy demonstration. Because tendencies toward intuitive and loosely coupled explanations are patterns detected over time and by reading (and

²⁰ For more information on the study design, see Smith and Denton (2005) and <http://youthandreligion.org>.

conducting) hundreds of interviews, I cannot offer a single, compelling illustration. In any case, this proposition has already been demonstrated in a general way by other research on moral worldviews (Bellah et al. 1985; Swidler 2001). Nevertheless, in order to provide as much evidence as possible of the consistency of these particular data with proposition 1, I report in-depth analyses on a subset of 50 interviews chosen using a random-number generator. Using a combination of excerpts, coding, and descriptive statistics, I show that the NSYR respondents' discussions of how they make moral decisions are highly consistent with proposition 1.

To illustrate proposition 2, I use a single variable to measure the respondents' most accessible or salient moral schema. Consistent with previous research in this area (Hunter 2000), I rely on a question designed to mirror the moral typology developed in *Habits of the Heart* (Bellah et al. 1985). This typology includes four overarching moral logics: expressive individualist, utilitarian individualist, community-centered (what I call "relational"), and theistic. To get at which one of these four "sounds right" to each respondent, the survey asks, "If you were unsure of what was right or wrong in a particular situation, how would you decide what to do? Would you . . . (1) Do what would make you feel happy [*expressive individualist*; chosen by 27%], (2) Do what would help you to get ahead [*utilitarian individualist*; 11%], (3) Follow the advice of a teacher, parent, or other adult you respect [*relational*; 43%], or (4) Do what you think God or scripture tells you is right [*theistic*; 20%]"²¹ A single-item measure is, of course, not ideal, and, as a measure of moral schemas, this question is certainly not exhaustive of the possibilities. For example, it does not allow for certain answers that we might expect in this population (e.g., "Do what my friends would do"). Nevertheless, as a single item, it is well matched to the four moral schemas outlined in *Habits of the Heart* and was explicitly designed to measure them in the teenage and young adult population.²²

The rationale behind using this survey question is that the input of the survey question should activate underlying moral schemas that will tend (probabilistically) to produce a choice consistent with the underlying

²¹ This question was based on the question Hunter used in *Death of Character* (2000) but was significantly modified by Christian Smith, the principal investigator of NSYR wave 1.

²² One reviewer suggested that these four scripts might be thought of as "strategies of action" in their own right. This is not consistent with Swidler's usage, however. In her model, strategies of action are defined as "patterns into which action is routinely organized" (2001, p. 82), and culture is seen as "provid[ing] resources for constructing strategies of action" (1986, p. 284). In this account, then, the behavioral patterns themselves are the strategies of action, while culture provides the tools that make possible their execution (and explanation).

schema, even if the person does not understand why the choice is the most desirable (see D'Andrade 1995). To bolster my claim that this is an effective measure, I will present additional analyses below to show that, despite its limitations, this question is a robust measure of moral schemas that does not unduly force the respondent to guess in a random fashion.

Using this measure, I examine the effect of moral schema on several outcomes that teenagers regularly brought up during the in-depth interviews as examples of challenging moral dilemmas or choices. Chief among these concerns were deciding whether or not to use alcohol and drugs, cheat on assignments and cut class, and keep secrets from parents. Also, because morality also involves a proactive dimension in addition to prohibiting certain activities (Hitlin 2003), I examine volunteering and spontaneous helping behavior as well. (See app. A for specifics on these six outcomes.) Because I want to estimate the effect of moral-cultural schemas on behavior, I exploit the longitudinal design of the NSYR in order to maintain temporal ordering. Since the goal is to estimate not the effects of a change in moral habitus on a change in behavior but instead the effects of a *prior state* of particular moral schemas on future behavior, I use a lagged dependent-variable model rather than a fixed-effects specification (Haynie and Osgood 2005). Specifically, I use measured variables from wave 1 of the survey (2002) to predict outcomes at wave 2 (2005), controlling for the initial level of the outcome at wave 1. The two-and-a-half-year lag between waves may be longer than ideal, but since we are interested in durable moral dispositions, a lag of this length should not pose a significant problem. Since all the outcomes are ordinal and can be conceptualized as imperfect measures of continuous latent variables, all models are estimated using ordered probit regression (Long 1997). On the basis of previous research on morality (Hunter 2000; Hitlin 2003), I predict that theistic respondents will be the least likely to engage in "deviant" behaviors, followed by relational respondents and then by the expressive and utilitarian respondents. The opposite ordering is predicted for the prosocial behaviors.

In addition to moral schema and previous behavior, the models also control for the following sets of additional factors that may be associated with both moral disposition and the outcomes (for more information, see app. A): (1) age, gender, race (white, black, other), and Southern residence; (2) household income, parents' education, parent closeness, two-parent family status, and adult network closure; (3) religious attendance and religious tradition; and (4) the number of strong ties (up to five) and the proportions of them who have similar religious beliefs, volunteer regularly, use alcohol or drugs, and get in trouble for fighting, cheating, or skipping classes.

Altogether, the sociodemographic and network controls should account

for the mesolevel and microlevel context that is usually held to constrain behavior (Mills 1940; Lichterman 1996; Swidler 2001; see also Campbell 1996). Before considering these models, however, I illustrate proposition 1, using data from the NSYR.

RESULTS

Assessing Discursive Moral Consciousness

In the in-person NSYR interviews, each respondent was asked, “Have you ever been in a situation where you were unsure about what was right or wrong?” If the respondent had been in such a situation, then she was asked to describe the situation and explain how she decided what to do. In addition to this specific discussion, most respondents were also asked, “How do you normally decide or know what is good or bad, right or wrong to do?” As in previous sociological work on moral judgments, the NSYR interviewees showed little evidence of clear and consistent links between particular moral principles and decisions. Rather, the respondents often invoked intuitive language (“I just know”) or invoked multiple, contradictory logics of decision (e.g., “Look at the consequences” and “Do what my parents think would be best”).

To illustrate this point as persuasively as possible, I drew a random sample of 50 interviews from the 264 wave-1 in-person interviews for closer analysis. Of these, 42 contained discussions of how the respondent made a particular moral decision or an account of how the respondent normally makes such decisions.²³ In addition to using excerpts from these 42 interviews, I coded each for the way or ways the interviewee explained how he or she decides what is right or wrong. Most of the discussions fell into one (or more) of three categories that were inductively derived from my reading of the interviews: intuitive, social, or consequential. *Intuitive* statements involve reference to feelings, “instinct,” or “just knowing” that something is right or wrong. *Social* statements refer to consideration of what a significant other would think about a decision. *Consequentialist* statements reference “getting in trouble” or otherwise reference the outcome as a determinant of the rightness or wrongness of a particular action. Appendix B shows sample statements coded according to this simple scheme. Of course, there were other types of statements

²³ Eight of the interviews contain no such discussion because if the respondent said that he was never unsure about right and wrong, some interviewers probed no further about the decision-making process. This usually occurred when there was a time constraint and/or the previous sections had taken a long time to complete. By a Fisher’s exact test, never being uncertain about what to do was not statistically associated with a particular response to the moral schema question ($P = .406$).

that were not coded into one of these three major groups. For instance, three of the 42 teens relied on religious explanations (e.g., “I talk to my Heavenly Father about it and he can usually tell me what’s right for me”), and two respondents invoked utilitarian moral reasoning (e.g., “You have to look at society as a whole and determine whether or not it’s right and wrong for the society. Because if it’s right for you but wrong for society, you need to . . . try to figure out a way to compensate for both”). Neither was common enough for systematic analysis, however.²⁴ Despite the simplicity of this three-part coding scheme, it covers the interviews quite well. Most of the 42 teenagers offered intuitive (20), social (19), or consequentialist (18) accounts of their decision process. Only two used none of the three types of explanation.

Just as tool kit–repertoire theory would predict, there is little evidence that these types of reasoning are mutually exclusive. Using exact tests, I found that co-occurring intuitive and consequentialist codes and social and consequentialist codes were statistically independent ($P > .366$, two-tailed). Only the intuitive and social codes were negatively associated ($P = .002$, two-tailed), with just four of the 42 interviewees using both in the same interview. (Two respondents made use of all three codes.) Despite this difference in explanatory strategy, there is indeed evidence here that most respondents keep more than one discursive code “on tap” (Swidler 2001) to make sense of their judgments.

To illustrate further how teenagers talk about their moral judgments, table 1 provides excerpts from a randomly selected subset of 20 of the 42 interviews. The excerpts in the first part of the table rely primarily on intuitive explanations of moral decision making, and those in the second group do not invoke intuitive judgment. (Though many of those who invoke intuitive reasons also reference social [4/20] or consequentialist [7/20] decision rules, these reasons almost always come in after the initial statement about “feelings” or “just knowing.”) The excerpts in table 1 show that teenagers are quite likely to say they rely on intuition to determine what is right or wrong. And indeed, as many sociologists of culture have pointed out, this is nothing like what a straightforward means-ends theory of action would lead us to expect.

Linking the interviews to the survey data can help rule out some otherwise plausible explanations of these findings. First, there is no relationship at all between the invocation of intuitive judgment and a particular response to the “how would you decide” moral survey question ($P = .740$), suggesting that going with one’s “feelings” is not a substantive

²⁴ Two interviewees also referenced “the law,” two talked about reciprocity, and three talked about their church community. The word “duty” was not mentioned in any of these excerpts.

response but rather a phenomenological description of a particular process of judgment. That is, people choosing very different substantive moral rationales appear equally likely to rely on “gut instinct” in their decision making.²⁵ Second, neither age nor grade-point average (GPA) predicts reliance on intuitive judgment, suggesting that this response is not an artifact of age-based development or cognitive sophistication. (Gender, race, church attendance, parent education, and parent income are uncorrelated with intuitive judgment as well.) This simply appears to be the way that many teenagers understand their moral decision-making process, regardless of their level of cognitive development or social position.

In some important respects, however, these findings actually understate teenagers’ reliance on intuitive judgment. In order to ensure comparability with the survey question, I coded only discussions about decision making itself, rather than including subsequent exchanges about what respondents think “makes something right or wrong.” Some interviewees, for example, said they rely solely on consequences to make decisions but would argue later that some consequences (e.g., hurting others’ feelings) were “just wrong” without being able (when asked) to offer a substantive justification for this judgment.²⁶ One teenager, for instance, talked about right and wrong being determined by “the outcome” and then later went on to say that lying to his parents “just is wrong” without being able to provide any justification for this judgment when asked to do so. Others supposedly derived their judgments from principles but maintained their judgments even when the principles no longer applied. For example, one 17-year-old girl argued that tobacco and marijuana were wrong because they are “addicting” but continued to insist that they would be wrong for a terminally ill person with only days to live because “that would be awfully hard on their throat right before they die.” When pressed further, the respondent claimed that smoking would be wrong for a dying person “no matter what,” even though she acknowledged her inability to provide any compelling reasons.²⁷ For reasons of space, I cannot undertake a complete analysis of these discussions, but a further analysis of the data would

²⁵ This is unlike the social code, which was more likely to be invoked by those who offered the relational or theistic response on the survey ($P = .048$, one-sided), or the God or church codes, which were more likely to be invoked by those giving the theistic response ($P = .05$, one-sided).

²⁶ Consequentialist reasoning, too, was independent of the survey response, suggesting that it is also a formal type of judgment whose outputs depend entirely on what kinds of consequences count as good or bad.

²⁷ This is a prime example of what moral psychologists call “moral dumbfounding”: insistence on a moral judgment even when the person is incapable of arguing on its behalf (see Haidt 2001). This state is often accompanied by nervous laughter, as was the case in this interview.

TABLE 1
EXCERPTS FROM DISCUSSIONS ABOUT MORAL DECISION MAKING (NSYR Wave-1 Interviews)

Code	Age	Gender	Ethnicity	Religious Tradition	Survey Response	Excerpt
Intuitive:						
SV-04264	17	Male	White	Mormon	Theistic	I talk to my Heavenly Father about it and he can usually tell me what's right for me. [I: Okay, how does he tell you?] . . . Just a good feeling, I feel good.
YL-03198	13	Female	Iranian	Other	Expressive	I pretty much know what's right or wrong. . . . [I: How do you decide?] I don't know—it's spontaneous.
DP-10016	18	Female	White	Catholic	Theistic	I told myself . . . you can't drink and I didn't, which I was really proud of myself. I felt really good after that—I was like, okay, you know, that was awesome, you did, you know, like, you followed your heart.
MD-14728	18	Female	White	Mormon	Expressive	I think your sense of right and wrong would tell you. . . . I mean, if you feel bad about something, then obviously you think it's wrong. . . . I mean, my decision is going to affect me and my life, so I should go with what's comfortable to me.
EV-11306	16	Male	Black	Black Protestant	Theistic	[I: When you're unsure of what's right or wrong, what's your thought process?] I don't think. . . . [I: How do you decide?] I decide how I feel about it.
DD-05682	15	Male	Black	Black Protestant	Theistic	Um, you know, like, when something is right and when something is wrong. [I: How? How do you know?] You just do, uh, I can't, it's kind of hard to explain.
MR-12019	13	Male	White	Jewish	Expressive	I just use common sense. [I: What do you mean by common sense?] It's like you know in your mind that you shouldn't be messing.
SV-03447	16	Male	White	Mormon	Expressive	Just the way I feel, I mean, I know what's wrong before I do it.
DP-90576	16	Female	White	Jewish	Relational	Whatever you feel is right, I guess. . . . It's usually like a gut feeling, I guess.

MD-13531	18	Male	White	Mainline Protestant	Relational	Gut feelings, I mean, yeah, that's what I think. . . . If you feel it's wrong then it probably is.
MD-11176	14	Male	White	None	Relational	I just kinda know. . . . Um, it's just kind of a feeling you get, you know, you can tell if it's right or wrong.
TC-08876	18	Male	White	Evangelical Protestant	Utilitarian	I usually have feelings about things, so that's how I usually make my decisions.
CS-05014	18	Female	Hispanic	None	Expressive	You always know, you always have an idea in your head.
MR-07604	15	Male	Pacific Islander	None	Expressive	If it's something that I'm not comfortable, or if I don't feel comfortable, I just walk away. . . . You have, like, your own sense of feeling.
Nonintuitive:						
DS-12336	14	Male	White	Evangelical Protestant	Relational	I would think that, like, if my best friend heard me say something, would they think different of me or would they care or . . . ?
KE-04571	17	Female	Black	Black Protestant	Expressive	When I was younger, my mom was, like, when I used to do things wrong, Mom used to tell me that's not right, and if I used to do that something right, my mom said that's something that's right.
DD-08099	15	Male	Black	Black Protestant	Relational	I think about what would happen if I did this and what would be the consequences if I did this, and if it was right and if it was wrong. How my mother would feel about it.
MD-12868	16	Female	White	None	Theistic	If I could tell my parents I'll do it. . . . If they would be like okay, yeah, that's fine, but if they're like no, you know it's wrong. [I: Do you think about what they would say, or do you actually ask them?] Oh, I think about what they would actually say.
MD-10348	16	Male	White	None	Expressive	I just think what, usually, what my mom would think . . . what she would want me to do.
DD-10962	16	Male	Black	Catholic	Utilitarian	What will the consequences be, like from certain people. . . . just try to avoid getting myself in trouble . . .

NOTE.—The interviews in the intuitive category rely primarily on intuitive explanations of moral decision making. The ones in the nonintuitive category rely solely on other forms of explanation. "I" stands for interviewer.

show an even greater reliance on intuition as a vital part of teenagers' moral judgment.

These excerpts from the NSYR interviews are meant to complement previous research that has found loose coupling between beliefs, moral judgment, and action consistent with proposition 1. Considered alone, these illustrations are highly consistent with tool kit or repertoire theory. The qualitative data in general seem to rule out the idea that these interviewees engage much in deliberative moral reasoning or that their values or beliefs serve as clear, unambiguous motives for action. In fact, many of these teenage respondents sound remarkably like Brian Palmer in *Habits of the Heart*, who says, "Why is integrity important and lying bad? I don't know. It just is. It's just so basic. I don't want to be bothered with challenging that. It's part of me. I don't know where it came from, but it's very important" (Bellah et al. 1985, p. 7). However, rather than seeing statements like these as reflecting moral inarticulacy alone, as the authors of *Habits* do, perhaps we can better understand them as discursive attempts to describe the intuitions of practical consciousness, whose contents are not easily accessible to overt reasoning (see also Stout 1988).

Supplemental Analysis: Measuring Practical Consciousness

As I mentioned above, in order to illustrate proposition 2 I rely on a single, forced-choice question to measure the moral script that resonates best with each respondent. Above, I relied on the metaphor of a lineup versus a sketch artist to explain the idea that asking respondents to choose from a fixed list is in some ways preferable to asking them to describe their processes from scratch because it provides better access to schematic associations that are not consciously accessible. But what evidence is there that this question allows respondents to make a good choice that reflects their practical consciousness—their actual moral schemas—rather than simply to guess? Although I cannot fully justify the assertion that this question is superior to interviews for this purpose, I can offer some positive evidence. First, there is little reason to believe that respondents found this question difficult to answer. Only 1.13% said "don't know," less than half of 1% insisted on giving a nonlisted answer, and only three of 3,290 refused to answer the question. Second, because the order of the responses was randomized when this question was asked at wave 2, I was able to analyze how robust the responses were to ordering effects. If respondents were "guessing," we should observe a strong tendency for respondents to select disproportionately the last response offered because it is most accessible to running memory in telephone surveys (Tourangeau et al. 2000). Supplemental analyses using alternative-specific conditional logit models (not shown here) do in fact show some ordering effects. Compared with

the odds of choosing the first-ordered response, the odds that the second or third response would be chosen were 15% lower. The fourth position, on the other hand, was associated with a 21% increase in the odds of being chosen relative to the first position. (Additional tests showed that these question-order effects did not differ by age, ruling out an otherwise plausible developmental interpretation.)²⁸ These findings about question order should be kept in perspective, however. The alternative-specific logit analysis also found that the odds that a respondent would choose a particular response at wave 2 were increased by 132% (odds ratio = 2.32) if she had already chosen that response at wave 1. The odds of choosing a “neighboring” response (i.e., expressive and utilitarian vs. relational and theistic) were also increased by 23% relative to the nonneighboring category. The fact that the previous response—nearly three years earlier—is a much better predictor than question order strongly suggests that this response reflects something more than guesswork. That is, even though we see in the interviews that respondents have a hard time offering an account of their moral reasoning that contains consistent substantive content, they seem to have little difficulty choosing a substantive response that reflects—however imperfectly—something about their moral dispositions or “habitus.” The fact that this association endures over a three-year period suggests that these associations are more than purely ephemeral and may in fact reflect enduring, internalized cultural schemas.

Assessing Practical Moral Consciousness

Proposition 2 asserts that even though respondents have difficulty articulating a consistent substantive rationale for their moral decision making, their response to a forced-choice question about moral judgment should nevertheless help to predict their behavior. Table 2 shows the results of the ordered probit regressions predicting wave-2 behaviors. The outcomes considered here are marijuana use (*pot*), alcohol use (*drink*), cheating in school (*cheated*), cutting class (*cutclass*), doing something “that you hoped your [parents] would never find out about” (*secret*), volunteering (*volunteer*), and helping “homeless people, needy neighbors, family friends, or other people in need, directly, not through an organization” (*helped*; see app. A for more details). There is a great deal of information in table 2. However, since the main goal is to understand the effect of moral schemas on behavior rather than to explain the behaviors themselves, I

²⁸ The joint significance test of age \times question-order interaction terms had a *P*-value of .151. Models using interaction terms between question order and church attendance, GPA, gender, nonwhite ethnicity, and parents’ education were also tried, and they offered no improvement in fit (*P* > .214).

TABLE 2
 COEFFICIENTS FROM ORDERED PROBIT REGRESSIONS PREDICTING BEHAVIORS FROM NSYR WAVE 2

	Pot	Drink	Cheated	Cutclass	Secret	Volunteer	Helped
Moral schemas: ^a							
Expressive	.374***b	.243***b	.087	.350***b	.179***b	-.155*	-.126 ⁺
Utilitarian	.202 ⁺	.251***b	.184*	.212*	-.046	-.105	-.175*
Relational	.241**	.098 ⁺	.044	.108 ⁺	-.015	-.086	-.126*
Network characteristics:							
Number of friends	.025	.077**	.045	.069**	.026	.018	.014
Regular volunteers	-.028	-.022	-.074**	-.018	-.050 ⁺	.066*	.015
Use drugs	.105**	.094***	.048 ⁺	.098***	.013	-.012	.044
Get in trouble	.040	-.009	.058*	-.020	.054*	-.002	.061*
Similar beliefs	.022	-.007	.043	-.008	-.001	.068*	-.003
Parent closeness	.011	-.041 ⁺	.050 ⁺	-.097***	-.037	.044 ⁺	-.017
Adult network closure	.016	.061**	.022	-.010	-.025	.053*	.086**
Religious participation: ^c							
Church attendance	-.038	.000	.020	.001	-.009	.032	.018
Evangelical	-.014	-.207*	.039	.128	-.019	-.203 ⁺	.071
Mainline	.031	.009	.067	.097	-.006	-.037	.139
Black Protestant	.232	-.023	-.037	.125	.007	-.189	-.057
Catholic	.082	-.005	.246*	.006	.048	-.110	.010
Jewish	-.339	-.247	-.182	-.150	-.066	.023	.309

Mormon	-.224	-.825***	.117	.287	-.178	.325 ⁺	.278
Other	-.035	-.029	-.240	-.258	-.205	.057	.168
Indeterminate .....	.161	-.103	-.070	.420*	-.134	-.443*	.227
Demographics: ^d							
Female	-.061	-.078 ⁺	-.215***	-.105*	-.030	.063	-.073
Age	-.049	.128***	-.243***	.212***	-.065*	-.084**	.038
Race = black	-.213 ⁺	-.434***	.118	.170	.000	-.115	.197 ⁺
Race = other	-.185*	-.201**	.014	.119	.036	.096	.061
Region = South	-.122 ⁺	-.046	.096 ⁺	-.170**	.006	.006	-.080
Parent education .....	.065 ⁺	-.009	-.032	.007	.086**	.125***	-.059 ⁺
Parent income .....	.054	.122***	.008	.080*	.075*	.037	-.061 ⁺
Two-parent family	-.184**	-.190***	-.030	-.201**	-.090	.031	-.137*
GPA	-.111***	-.098***	-.018	-.116***	-.033	.093**	-.005
Wave-1 dependent variable .....	.313***	.257***	.346***	.193***	.272***	.216***	.185***

NOTE.—Coefficients for the dichotomous variables are y^* -standardized (i.e., by the latent outcome variable); all others are fully standardized (Long 1997). One-tailed tests were used for moral schemas (given specific hypotheses), two-tailed tests for all others.

^a Reference category: theistic.

^b Significantly different from the relational coefficient ($P < .05$, one-tailed).

^c Reference category: not religious.

^d Reference category: white male in non-two-parent family outside the South.

+ $P < .10$.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

will only discuss the control variables to the extent that they help contextualize the moral schema effects.

The first thing to note here is that there are many significant coefficients in the first three rows of the table, indicating that a respondent's choice of moral script in 2002 is a significant predictor of their behavior in 2005, even when holding other factors constant. As expected, compared with those who offered the theistic response at wave 1, those who chose one of the other responses tended toward more "deviant" behavior and less prosocial behavior between 2002 and 2005. For ease of comparing particular values, the coefficients of the dichotomous variables are standardized by the variance of the latent outcome variable so that they reflect the change in the outcome (in SDs) for a unit change in the predictor. The coefficients of the nondichotomous predictors were fully standardized so that they reflect the change in the outcome (in SDs) for a 1-SD change in the predictor (see Long 1997). (That means, e.g., that the difference in marijuana use at wave 2 between expressive and theistic respondents [0.374 SDs] is slightly larger than that predicted by a 1-SD difference in wave-1 marijuana use [0.313 SDs].)

Using this standard of comparison across all models, we can see that the average difference predicted by wave-1 choice of moral schema (0.245) is nearly identical to the average effect of a 1-SD change in the wave-1 dependent variable (0.255). The differences are even more pronounced when we consider other comparisons. For example, the average spread between responses to the moral schema question across all the models (0.245) is roughly equivalent to a 4-SD change in household income (average coefficient = 0.062), parents' education (0.055), or GPA (0.068).²⁹ When we look to specific comparisons, the moral schema effects are also quite large. In the models predicting marijuana and alcohol use, for instance, it would take an increase of between 2.5 and 3.5 SDs in the proportion of the friendship network who "use a lot of alcohol or do drugs" to equal the predicted expressive-theistic difference (i.e., $0.374/0.105 = 3.6$; $0.243/0.098 = 2.5$). Though the moral differences in prosocial behaviors are smaller, there is still evidence of relatively strong effects. For example, it would take a 2.3-SD change in the proportion of friends who are regular volunteers to equal the expressive-theistic difference in volunteering at wave 2 ($0.155/0.066 = 2.3$). Given the theoretical importance accorded to peer networks in the sociological literature, there is indeed evidence here of substantively large moral schema effects.

Many other specific comparisons could be made, but these can easily

²⁹ One potential concern here is collinearity between household income and parent education. While they are correlated (0.62), diagnostic tests show that collinearity (involving any variable) is not a problem in these models.

be computed by interested readers. The main point here is that the choice of moral script in 2002 is a very good overall predictor of behavior in 2005, even controlling for network characteristics, religious participation, and demographic factors. This suggests that the question is—on average—capturing something significant about the respondent’s internalized moral-cultural schemas. Though it is implicit in the analysis, it is worth repeating that the model reflects moral differences *net of* these other factors; the respondents who answered, “Do what makes me feel happy,” and those who said, “Do what God or scripture says is right” (for example), are held statistically to go to church the same amount, to belong to the same religious tradition, to have the same friendship networks, to live in the same types of families, to have the same socioeconomic status, and so on. Any alternative explanation for these observed differences cannot rely on differences in these factors, except, of course, insofar as these background factors were previously implicated in producing different moral schemas. Given the comprehensive nature of the controls, the data are quite consistent with the idea that the “how would you decide” question is tapping a fairly durable moral disposition that is consequential for shaping a variety of morally relevant behaviors.

DISCUSSION

Implications for Theory

The empirical exercises above are meant to demonstrate rather than prove the utility of a dual-process model of culture in action. Let us step back for a moment and consider what the results imply. First, the NSYR interviews show—consistent with previous research—that most interviewees claim to know the difference between right and wrong in an intuitive way yet are largely incapable of articulating their moral decision-making processes in substantive, propositional terms. Further, many young people who do attempt to articulate their moral reasoning maintain their judgments even when the evidence they offer is insufficient or even self-contradictory. Second, despite this inarticulacy, the survey analysis shows strong effects of moral schemas (measured by respondents’ choice of moral script) on a wide variety of behaviors nearly three years later. This finding is remarkable—a single, very general question about moral judgment, asked in a few seconds over the phone, turns out to be a better net predictor of deviance nearly three years later than household income, parents’ education, peer networks, family structure, or church attendance. How can these results best be understood?

Neither qualitative nor quantitative analyses of a single population can establish the adequacy of a particular theoretical model. They can, how-

ever, offer evidence that is more or less consistent with competing explanations and shift the parameters of plausibility. In this case, the combined finding of discursive inarticulacy with strong moral schema effects makes the dual-process model of culture seem a more satisfactory explanation than the available alternatives. If moral-cultural rules were consistently articulated and demonstrated to be causally efficacious, we might want to return to the days of Parsons's "voluntarist theory of action." Yet our results show that Mills, Scott and Lyman, Swidler, and others are right on in their assessment of how people use cultural repertoires—to make sense of their judgments and commitments after the fact. The interview data illustrate this process at work, casting doubt on the adequacy of the model of culture as conscious ends. Combined with survey data, however, we see that the tool kit–repertoire approach itself has a major flaw. It cannot easily incorporate the findings of the survey analysis in its own theoretical logic. There appears to be an effect of moral-cultural schemas above and beyond the institutional and interactional context surrounding the actor. Of the three theories discussed in this article—value-rational, tool kit–repertoire, and dual-process—only the last can account for the mixed-method results without introducing concepts foreign to its own logic.

In a research community increasingly interested in understanding mechanisms rather than documenting associations, the dual-process model also provides a more satisfying and empirically justifiable account of the way that culturally influenced "social mindscapes" (Zerubavel 1997) are related to action (Archer 1996). Without the insights of a dual-process model, we might have told one of two common but probably unrealistic stories about the relationship between teenagers' beliefs and actions: either that they have different moral beliefs that they consult as "moral compasses" to make their decisions (Hunter 2000; Smith 2003) or that they deploy the different moral repertoires they have learned to make sense of their decisions and judgments to others (Mills 1940; Scott and Lyman 1968; Swidler 2001). As we have seen, in this particular case at least, neither of these stories can make sense of all of the data. Understanding the possible disconnect between discursive and practical consciousness enables a more realistic interpretation of the findings: American teenagers seem to be profoundly influenced by cultural forces in ways that they are largely unaware of and unable to articulate but that nevertheless shape their moral judgments and choices. The case I have used here is merely an illustration of this model. Though it appears promising, future research is needed to confirm, refine, and expand on the basic model.

Before considering its methodological implications, I would like to emphasize the inherently social dimension of this model. Nothing in my argument should be construed as claiming that people simply internalize

certain cultural ways of thinking and then go on to make choices and judgments as independent agents. Though there is no space to discuss it here, interaction is clearly involved in the formation of people's cultural schemas as well as in the actions these schemas subsequently shape (Strauss and Quinn 1997). Of the outcome behaviors considered here, all typically involve social interaction, and most *inherently* involve interaction. Teenagers, for example, rarely drink or smoke marijuana in social isolation, nor are they likely to cut class in order to spend time with themselves. Volunteering and informal helping are impossible outside of a particular interactional context, and so on. In general, cultural schemas likely operate via interaction in two ways: first, by shaping—consciously or not—selection into particular interactional contexts, and second, by shaping one's "gut" responses to the possibilities raised in particular interactions (see Vaisey 2008). The model presented here should not be seen as an alternative to interactionist models of action formation but rather as a supplement to such models that emphasizes that people bring something with them from one interaction to another (Joas 1996, 2000).

Implications for Method

In addition to its implications for sociological theory, the dual-process model of culture in action has relevance for even the most theoretically disinterested sociological researcher. While many sociologists talk as if the survey is simply a necessary evil, a mass-scale substitute for the deep insight of an interview, these results suggest that fixed-response surveys play a vital role in inquiry about how meanings shape action. It appears that the vast majority of individuals, living as they do in a world that is not continuously narrated in theoretical terms, rely on practical consciousness for most of their decisions (Giddens 1984). Thus, they may be much better able to pick themselves out of the proverbial lineup than to describe themselves to a sociological sketch artist.³⁰

On the other hand, far from merely being a nice bonus or adding a certain richness to quantitative inquiry, interviews may be a vital component of theory testing, particularly in the sociology of culture. Interviews are also necessary for understanding how people "make sense" of the world to each other and to themselves in the face of an inquisitive questioner (Scott and Lyman 1968). But one methodological strategy is not appropriate for answering all questions. In particular, there are strong reasons to question the validity of interview methods as a sufficient window into the culture-action link. The insights yielded here into the mechanisms of

³⁰ Laboratory research in psychology has found parallel differences in the results of studies that "access" discursive vs. practical consciousness (Wilson 2002).

moral decision making simply could not have been found with one method alone. Future research ought to compare the results of ethnographies, focus groups, interviews, and surveys—ideally of the same subjects—in order to see how different methods encourage reliance on different forms of cognitive processing. Future research should also explore the types of actor-situation profiles that render certain forms of processing more relevant for predicting action. It remains to be seen, for example, which actor-situation combinations make deliberative thought more or less consequential for generating observed behavior.

CONCLUSION

This article has been an attempt at making a theoretical contribution and illustrating the usefulness of this contribution through an empirical illustration. My argument has four main parts. First, I have traced the development of the motivation/justification split in the sociology of culture and unearthed a questionable premise underlying both. Second, I have drawn on sociological practice theories, augmented and validated by research in cognitive science, to offer a simple synthesis of the motivation/justification approaches—a dual-process model of cultural cognition. Third, I have provided a mixed-method illustration that shows how the dual-process model can make more sense of the data than either its “Parsonian” or tool kit–repertoire theory rivals. Fourth, I have discussed some implications of these findings for empirical research.

Lest I be misunderstood, let me clarify what I have *not* done. First, I have not attempted to turn the sociology of culture on its head. My goal is simply to offer a heuristic model of culture in action that improves upon both the Parsonian-Weberian theory of action and the tool kit–repertoire model while preserving the strengths of both. Second, I have not offered radically new insights into the nature of human life. The notion of the “elephant”—a nondiscursive, practical side of cognition—is borrowed from contemporary social psychology (Wilson 2002; Haidt 2005) but can be traced back to Freud or even further back to Aristotle and the scholastics. The idea that we internalize moral dispositions through practice is straight out of the *Nicomachean Ethics* (Casebeer and Churchland 2003). Furthermore, there are already sociological approaches (outside the sociology of culture) that point in a broadly similar direction. Affect-control theory (Smith-Lovin 1995) takes seriously the role of unconscious evaluations, and the sociology of emotions more generally (e.g., Thoits 1989) invites us to look beyond “discourse” to causally efficacious internal states. Although I have focused here on the broadly shared ideas

of dual-process theory, sociologists can look for specific inspiration both inside and outside the discipline.

Rather than offer something new, my objective has been to bridge a gap between work in the sociology of culture and religion on the one hand and highly relevant work in cognitive science on the other. Because of the academic division of labor, psychologists have developed much better models of the forms of human cognition (e.g., schemas) than sociologists have. Yet our strength is in articulating and investigating how socially patterned cultural contents interact with these forms to produce observable human conduct (Zerubavel 1997). One of the goals of this article is therefore to encourage a fruitful cross-disciplinary dialogue in the domain of culture and moral judgment. This is not synthesis for the sake of synthesis. By relying on existing sociological theories that emphasize a single mode of processing, we are necessarily leaving out a sizable chunk of human life, not to mention forgoing explanatory power. Achieving greater cognitive verisimilitude will allow sociologists to explain social life in a more satisfactory fashion both qualitatively and quantitatively.

Taking the difference between discursive and practical consciousness seriously will help move toward a more realistic view of the role of cultural meanings in human action. As Swidler (2001) acknowledges in the introduction to *Talk of Love*, culture can “use us” as much as we can use it, yet repertoire theory is poorly equipped for dealing with that important aspect of “how culture matters.” Using a dual-process model of culture, however, can help us recover some of the neglected gems in Swidler’s research as well as in the work of other tool kit–repertoire theorists. For example, if we understand “identity” as having an unconscious component (our intuitions about “the kind of people we are”) and a conscious component (our discursive “identity projects”), then we can see how identities can be thought of—without contradiction—both as motives and as “cultural tools” that we can “pick up and put down” (Swidler 2001, p. 24).³¹ Similarly, we can use the dual-process model to think through how “settled” and “unsettled” times might favor different mixes of schematic and deliberative processing. Perhaps, as Swidler seems to suggest, internalized cultural understandings matter more when our “practical” routines are disrupted. Framed this way, this idea can help revive some of the neglected

³¹ Foote (1951) struggles with the relationship between identity and motivation in a similar way to Swidler. He endorses Mills’s view of motives as vocabularies and rejects “predispositionalist” theories while at the same time asserting that value experiences are “permanently registered in the organism” (p. 19). But read in light of a dual-process model, Foote’s work may be very helpful for thinking through this issue. Thanks to Ezra Zuckerman for introducing me to Foote’s paper.

threads in previous work by linking them to clear cognitive mechanisms and thereby improve our understanding of the culture-action link.

Finally, although the dual-process model is not a complete theory of culture and is not presented as such, it does offer a simple framework that is capable of generating and testing a host of research questions in a systematic way. It has clear constituent concepts (discursive and practical consciousness, schemas) and relies on models of human cognitive processing that have been cross-validated by cognitive science. The sociological study of culture is a growing enterprise, and its metaphors matter. Perhaps a simple change from “tool kit” to “rider on an elephant” would constitute theoretical progress.

APPENDIX A

The coding of the outcome variables is as follows (* = reverse coded for analysis).

Pot (wave 1).—How often, if ever, have you used marijuana?

1. Never
2. Tried it once or twice
3. Use it occasionally
4. Use it regularly

**Pot (wave 2)*.—How often, if ever, do you use marijuana?

1. Once a day or more
2. A few times a week
3. About once a week
4. A few times a month
5. About once a month
6. A few times a year
7. Never

**Drink*.—How often, if at all, do you drink alcohol, such as beer, wine, or mixed drinks, not including at religious services?

1. Once a day or more
2. A few times a week
3. About once a week
4. A few times a month
5. About once a month
6. A few times a year
7. Never

**Cheated*.—In the last year, how often, if ever, did you cheat on a test assignment, or homework in school?

1. Very often
2. Fairly often
3. Sometimes

4. Occasionally
5. Rarely
6. Never

Cutclass.—In the last year, how often, if at all, did you cut or skip classes at school?

1. Never
2. Once or twice
3. Three to five times
4. More than five times

**Secret.*—In the last year, how often, if ever, did you do things that you hoped your [parent type] would never find out about?

1. Very often
2. Fairly often
3. Sometimes
4. Occasionally
5. Rarely
6. Never

Volunteer.—In the last year, how much, if at all, have you done organized volunteer work or community service?

1. Never
2. A few times
3. Occasionally
4. Regularly

**Helped.*—In the last year, how much, if at all, did you help homeless people, needy neighbors, family friends, or other people in need directly, not through an organization?

1. A lot
2. Some
3. A little
4. None

Most of the control variables used in the analyses (see table A1) are either self-explanatory or can be found in the documentation at <http://youthandreligion.org>. I only note below variables that I constructed especially for these analyses.

Parent closeness is the maximum value of the closeness variable reported by the respondent for either parent. The resulting value was standardized (in the full sample) so that mean = 0 and SD = 1.

Adult network closure was constructed from three questions that were asked about each respondent's social network. For each reported friend (up to five), the respondent was asked which of these friends (1) "[do/does] your [parent type(s)] not really know that well"; (2) "have parents who know *you* by name"; (3) "have parents who know your [parent type(s)] well enough to call [him/her/them] on the phone." These responses were

combined (the first was reverse coded) to give a sense of how much adult networks were closed around the respondent. The resulting sum (0–15) was divided by three times the number of friends to make it comparable to the other network measures (i.e., ranging between 0 and 1).

GPA was constructed from the variable “grades” (question y91), which asked, “What kind of grades do you usually get in school?” The original responses were 10 ordinal categories ranging from “all As” to “mostly Fs” with an additional category for “mixed” ($n = 159$). The GPA scale used in these analyses was made into a scale with range 0–4 by rescaling the 10-point ordinal scale and setting the “mixed” responses to the sample mean.

Parent education is the highest level of education for either parent, measured on a 12-point ordinal scale.

TABLE A1
DESCRIPTIVE STATISTICS FOR ALL VARIABLES

Variable	<i>N</i>	Mean	SD	Min	Max
Pot	2,525	1.35	.74	1	4
Pot (W2)	2,498	1.72	1.60	1	7
Drink	2,527	1.71	1.18	1	7
Drink (W2)	2,509	2.77	1.78	1	7
Cheated	2,530	2.19	1.30	1	6
Cheated (W2)	2,138	2.29	1.34	1	6
Cutclass	2,451	1.51	.87	1	4
Cutclass (W2)	2,131	2.08	1.11	1	4
Secret	2,527	2.85	1.45	1	6
Secret (W2)	2,518	3.16	1.46	1	6
Volunteer	2,526	2.15	1.00	1	4
Volunteer (W2)	2,515	2.18	1.04	1	4
Helped	2,526	2.29	.95	1	4
Helped (W2)	2,514	2.34	.94	1	4
Expressive	2,489	.27	.44	0	1
Utilitarian	2,489	.11	.31	0	1
Relational	2,489	.43	.49	0	1
Theistic	2,489	.20	.40	0	1
Number of friends	2,504	4.78	.68	1	5
Proportion regular volunteers	2,499	.22	.31	0	1
Proportion use drugs	2,500	.14	.27	0	1
Proportion get in trouble	2,502	.11	.18	0	1
Proportion similar beliefs	2,504	.55	.42	0	1
Parent closeness	2,527	−.03	.99	−4.12	1.22
Adult network closure	2,504	.72	.22	0	1
Church attendance	2,526	3.27	2.19	0	6
Evangelical	2,530	.31	.46	0	1
Mainline	2,530	.11	.32	0	1
Black Protestant	2,530	.10	.30	0	1
Catholic	2,530	.26	.44	0	1

Motivation and Justification

TABLE A1 (Continued)

Variable	N	Mean	SD	Min	Max
Jewish	2,530	.02	.13	0	1
Mormon	2,530	.04	.18	0	1
Other	2,530	.03	.16	0	1
Indeterminate	2,530	.02	.15	0	1
Female	2,530	.51	.50	0	1
Age	2,530	15.48	1.41	12.95	18.49
Race = black	2,530	.15	.36	0	1
Race = other	2,530	.17	.38	0	1
Region = South	2,530	.37	.48	0	1
Parent education	2,525	7.61	2.79	0	12
Parent income	2,386	6.30	3.21	1	11
Two-parent family	2,530	.72	.45	0	1
GPA	2,444	2.90	.68	0	4

NOTE.—All variables were measured at wave 1 (2002) unless otherwise indicated by the label W2 (wave 2) and are weighted by the wave-2 NSYR survey weight.

APPENDIX B

Codes and Sample Statements

Intuitive

- I usually have feelings about things, so that's how I usually make my decisions.
- Um, you know, like, when something is right and when something is wrong. [Interviewer: How? How do you know?] You just do, uh, I can't, it's kind of hard to explain.

Social

- If I could tell my parents I'll do it. . . . If they would be like okay, yeah, that's fine, but if they're like no, you know it's wrong.
- I would think that, like, if my best friend heard me say something, would they think different of me or would they care or . . . ?

Consequential

- I think about what would happen if I did this and what would be the consequences if I did this.

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