

---

---

## Judging *Mens Rea*: The Tension between Folk Concepts and Legal Concepts of Intentionality

Bertram F. Malle, Ph.D.,\* and  
Sarah E. Nelson, Ph.D.†

---

**Concepts such as *intention*, *motive*, or *forethought* have generated a great deal of doubt, dispute, and confusion in legal decision making. Here we argue for an empirically based strategy of defining and using such *mens rea* concepts. Instead of the standard approach of settling these concepts by theoretical argument and the debaters' own intuitions, we rely on social psychological research to determine the meaning and significance of folk concepts concerning *mens rea*. We demonstrate the reliable and systematic use of people's concept of intentionality, contrast it with the bewildering variety of related legal concepts, and apply the folk model of intentionality to debated distinctions between intention and intentionality, desire and intention, and belief and intention. This folk-conceptual approach promises clarity of *mens rea* concepts and a reconciliation of the legal and layperson's view of human behavior. Copyright © 2003 John Wiley & Sons, Ltd.**

In the courtroom as in daily life, people care about what goes on in others' minds. The human tendency to reason about and infer mental states in other people is as natural as the tendency to speak a language; and indeed both capacities are fundamentally, and perhaps uniquely, human (Malle, in press; Povinelli, 2001). This capacity to infer mental states—typically called *theory of mind* or *folk psychology*—serves to coordinate social interaction and is thought to be a driving force in human biological and cultural evolution. Social contracts and political organization, cultural learning and education, aesthetics and ethics—all of them rely crucially on the ability to coordinate action by inferring emotions, goals, and knowledge (Baron-Cohen, 1999; Malle, 2002; Povinelli & Godfrey, 1993; Tomasello, 1996; Whiten, 1999).

The law is no exception. It, too, incorporates concepts of the human theory of mind. For several thousand years at least, moral and legal systems have, with some cultural and historic variations, encompassed concepts such as intention, motive, and forethought (Kenny, 1973b; Marshall, 1968; Williams, 1993; see also Aristotle, 1955/330 B.C.; Hume, 1998/1751; Smith, 1976/1759). There have been debates about the usefulness of these concepts, and debates about their precise meaning, but

---

\*Correspondence to: Bertram F. Malle, Ph.D., Department of Psychology, 1227 University of Oregon, Eugene, OR 97403-1227, U.S.A. E-mail: bfmalle@darkwing.uoregon.edu

†Division on Addictions, Harvard Medical School.

no modern human would accept as fair and just a legal system that eschews considerations of an agent's mental state when committing a transgression or crime. It is safe to say that the inference of mental states in evaluating action is firmly ensconced in the law. At the same time, the role of mental states in legal decision making has generated a great deal of doubt, dispute, and confusion.

There are at least two challenges to a fair and just treatment of mental states in the law. One is conceptual—the valid and precise use of the concepts of mental states in reasoning about the defendant's actions and in assigning responsibility, blame, and punishment. The second is inferential—making reliable and accurate inferences of mental states from behavior and circumstantial evidence. We have little to say about the latter. It remains a formidable task, in daily life as in the court room, to make judgments about other people's mental states with a high degree of accuracy (see, e.g., Ickes, 1993), but the task is far easier when the states to be inferred are well defined. Thus, meeting the first challenge is a prerequisite for meeting the second—well defined concepts are a prerequisite for reliable judgments. We shall argue for an empirically based strategy of defining and using the concepts of *mens rea* in the law that can support jurors' reasoning about defendants' mental states and can also satisfy the perceptions of justice by the social community at large.

## THE STANDARD APPROACH

The standard approach to issues of *mens rea* is theoretical argument. For decades, even centuries, legal scholars, philosophers, and judges have debated the proper definition of mental concepts such as *intention* and *knowledge* and their relation to responsibility, blame, and punishment (Duff, 1990; Hart, 1968; Kenny, 1973a; Mele & Sverdlik, 1996). The assumption underlying this approach is that theoretical analysis will uncover an ultimate truth about these concepts or at least lead to an optimal definition. In these discussions, a whole range of specific positions can be found. For example, some consider the concept of intentionality and its relatives defeasible, whereas others see it as indispensable. Some consider knowledge and intention to be equivalent, such that known or believed consequences of one's actions are *ipso facto* intended, whereas others draw a sharp distinction between intention and knowledge.

These and other debates are difficult to settle so long as the debaters' own intuitions are the deciding criterion for the suitability of a conceptual analysis of intention, intentionality, and related concepts. Worse yet, if legal concepts change their meaning in response to opinion shifts in the scholarly or judicial community (which has arguably happened many times over the last century), ordinary people will have trouble understanding these concepts and using them appropriately—be it as lay judges, jurors, or merely citizens who evaluate the system of justice that their society provides.

## THE FOLK-CONCEPTUAL APPROACH

This article describes an alternative to the standard approach: an empirical, *folk-conceptual* analysis that uses social psychological research to determine the meaning

and significance of folk concepts concerning *mens rea*. A folk concept (e.g., *agent*, *intentional*, *belief*, *desire*) operates like a filter that classifies certain perceptual input into significant categories and thus frames or interprets the perceptual input in ways that facilitate subsequent processing, including prediction, explanation, evaluation, and action (Malle, in press).

We do not wish to argue that the meaning of folk concepts is always consistent; nor that folk concepts necessarily suit legal goals. However, if a folk concept is used consistently, and if it does suit legal goals, it should be used without alteration in written laws and legal decision making. For despite their specialized rules and theories, legal proceedings are powerfully influenced by how people think and reason about human behavior (Amsterdam & Bruner, 2000; Bailis, Darley, Waxman, & Robinson, 1995).

Our specific argument for the inclusion of folk concepts into the law runs as follows. If people already have and consistently use a concept for a given phenomenon (e.g., the folk concept of intention) but are forced to learn a slightly different concept for this phenomenon (e.g., the legal definition of intent), their folk concept will interfere with the legal concept. This interference and confusion will yield unreliable decisions among jurors (Smith, 1993) and foster unfavorable perceptions of the justice system, because the system will seem to violate people's moral intuitions. By contrast, if people do not already have or do not consistently use a concept for a given phenomenon, they will be content to learn a new (technical) concept and will not experience interference with a preexisting folk concept. In this article, we shall try to show that the concepts of *intention* and *intentionality* constitute sophisticated, systematic, and reliable folk concepts, and we shall argue that these concepts should therefore be used in the law—if they are used in the law<sup>1</sup>—as they are ordinarily understood.

There are certainly critics of this approach. Lacey (1993), for example, tries to undermine the “assumption that a settled, widely shared understanding underpins the usage of all or most [*mens rea*] terms employed by criminal law” (p. 627). In support of her skepticism, Lacey points to repeated requests from criminal juries for further advice about the meaning of *intention*. She attributes these requests for clarification “not just to bewilderment in the face of legal ‘guidelines’ but also to uncertainty and disagreement over ‘ordinary language’” (p. 628). But how can one infer disagreement over ordinary meaning in the context of legal use? How often do we encounter similar requests for clarification about terms such as *intention*, *belief*, or *desire* in ordinary discourse outside the court of law? The only place to settle consistency of ordinary use is in ordinary use itself.

But ordinary use is not just community opinion. Such opinions can change, especially under political, cultural, and historic influences, and community opinions would yield no better guidelines for legal concepts than the intuitions of scholars and judges. What is relevant in ordinary use is the conceptual assumptions people make when using a term such as *intention*. Concrete use may be sloppy, but the underlying concepts are usually stable—at least in such knowledge domains as folk psychology,

<sup>1</sup>We shall not provide arguments for the usefulness of intention and intentionality in the law, as it appears self-evident to us. However, to the extent that legislators want to introduce laws that contradict folk concepts or rely on newly formed concepts, they should give these concepts new labels in order to avoid interference with potentially similar folk concepts. Manslaughter, negligence, and recklessness are examples of newly formed concepts that probably suffer from minimal interference.

which shows reliable and systematic developmental progress in acquiring the relevant conceptual structure (Gopnik & Meltzoff, 1997; Perner, 1991; Wellman, 1990). Below we try to show that the conceptual assumptions underlying adult use are just as reliable and systematic.

## THE FOLK CONCEPT OF INTENTIONALITY

In philosophy, the study of intentionality has usually centered on the question “What are the conditions for an action to be intentional?” This question is, of course, another way of asking how intentionality should be defined. In the last 30 years or so, philosophers’ answers have converged on a multi-component model of intentionality (see, e.g., Brand, 1984; Bratman, 1987; Davidson, 1963; Mele, 1992; Searle, 1983). This model roughly describes an action as intentional if it is caused by the agent’s intention, which is itself based on the agent’s beliefs and desires. Thus, it is the configuration of mental states (intention, belief, desire) that confers intentionality upon a behavior.

The problem with a philosophical model of intentionality, however, is that it defines an idealized concept. We do not know whether this concept is sufficiently similar to the one that ordinary people use when making judgments of intentionality in court or in daily interactions. Surprisingly little empirical research has been devoted to the folk concept of intentionality—to the question of how people, not legal scholars or philosophers, define intentionality. A number of researchers have offered theoretical discussions of the concept (Fiske, 1989; Heider, 1958; Jones & Davis, 1965; Maselli & Altrocchi, 1969; Shaver, 1985), but their respective models disagree on the specific components that make up intentionality.

The only way to settle these disagreements and arrive at a valid reconstruction of the folk concept of intentionality is through empirical studies. In a series of such studies, Malle and Knobe (1997) examined the agreement people show in their judgments of intentionality and identified the conditions that determine an intentionality judgment. In a first study, participants read descriptions of 20 behaviors and rated them for their intentionality, using an eight-point scale ranging from “not at all” (0) to “completely” (7) intentional. About one-half of the participants received a working definition of intentionality before they rated the 20 behaviors. The definition read “What do we mean by *intentional*? This means that the person had a *reason* to do what she did and that she *chose* to do so.” The assumption was that if people used their own folk concept to rate the behaviors, then there should be high agreement among participants with or without an experimenter-provided definition. Agreement was high in the whole sample. Any two people’s intentionality ratings showed an average intercorrelation of  $r(20) = 0.64$ , and any one person showed an average correlation of  $r(20) = 0.80$  with the remaining group, resulting in an inter-rater reliability of  $\alpha = 0.99$ . More important, the experimenter-provided definition had absolutely no effect on average agreement, so it appears that people share a folk concept of intentionality that they spontaneously use to judge behaviors. (This result also suggests that attempts to provide jurors with legal definitions of intention may be ineffective, a point to which we will return.)

The question now becomes what specific components, or “necessary conditions,” this folk concept has. Malle and Knobe (1997) answered this question in two

steps. The first was to examine people's direct and explicit definitions of intentionality; the second was to experimentally manipulate components of intentionality and thus demonstrate their reliable effect on judgments of intentionality.

A sample of 159 undergraduate students provided explicit definitions in response to the question, "When you say that somebody performed an action *intentionally*, what does this mean?." Twenty participants (13%) provided only synonyms of the term *intentionally* (e.g., "on purpose," "purposefully," "deliberately"). Of the remaining 139 participants, 54% mentioned exactly one component; 31% mentioned two or more. After initial inspection of the definitions, two coders classified them into various categories, of which four reached substantial frequencies, accounting for 96% of the meaningful definitions. These four components were *desire*, *belief*, *intention*, and *awareness*. To qualify for the desire category, a definition had to mention "the desire for an outcome or the outcome itself as a goal, purpose, or aim." To qualify for the belief category, a definition had to mention "beliefs or thoughts about the consequences of the act or the act itself *before* it takes place." To qualify for the intention category, a definition had to mention "the intention to perform the act, intending, meaning, deciding, choosing, or planning to perform the act." To qualify for the awareness category, a definition had to mention "awareness of the act *while* the person is performing it." Table 1 displays the relative frequencies and a sample description of each component.

It is worth noting that none of the participants mentioned all four components, presumably because the instructions to this study ("What does it mean that...") did not encourage exhaustive definitions. However, those who mentioned two or more components drew careful distinctions between them. They distinguished, for example, between intention and desire, "The person meant to act that way and was motivated to do so"; between belief and intention, "Someone gave thought to the action beforehand and chose to do it"; between belief and awareness, "This person thought about the action before he did it and was fully aware of performing the action while he was doing it"; and between intention and awareness, "They decided to do something and then did it with full awareness of what they were doing."

The folk concept of intentionality, as reconstructed from explicit definitions, thus encompasses four components. For an agent to perform an action intentionally, the agent must have (i) a desire for an outcome; (ii) beliefs about an action that leads to that outcome; (iii) an intention to perform the action; and (iv) awareness of fulfilling the intention while performing the action. None of the theoretical models of intentionality predicted this four-component concept. For example, Jones and Davis (1965) identified the belief and intention components but overlooked desire and awareness. Both Ossorio and Davis (1968) and Shaver (1985) identified desire

Table 1. Four explicit components of the folk concept of intentionality

Component	Frequency	Example
Desire	27%	He did it in hopes of getting some result.
Belief	39%	She thought about the act and its effect.
Intention	51%	She made a decision to perform the action.
Awareness	23%	He knows what he is doing.

From Malle and Knobe (1997), The folk concept of intentionality, *Journal of Experimental Social Psychology*, 33, 101–121. © Academic Press.

and belief but overlooked intention and awareness. And Heider's (1958) model of intentional action identified the intention and desire components but overlooked belief and awareness. Those philosophical models came closer that postulated belief, desire, and intention, (e.g., Brand, 1984; Bratman, 1987; Searle, 1983), but all of them omitted awareness.

Interestingly, some theoretical models postulated an ability or skill component (e.g., Mele & Moser, 1994), whereas people did not mention this component in their definitions. Malle and Knobe (1997) conducted a pilot study to explore whether skill may be implicitly used in people's intentionality judgments, even if it was not explicitly mentioned. In a vignette presented to 141 undergraduate students, a novice at darts surprisingly hits triple 20 (a very difficult throw) on his first try. His partner dismisses the throw as a fluke, so the novice tries again, this time missing badly. Surely, he *wanted* to hit the triple 20 in each try? Most participants (77%) agreed. But would people infer that he hit it *intentionally* the first time? Most did not, as only 16% said that he hit it *intentionally*. When the scenario was altered to include evidence of skill—the novice hit triple 20 twice in a row—a significantly greater number of participants (55%) were willing to infer that he hit it intentionally even at his first try ( $p < 0.001$ ). There was thus reason to believe that people are sensitive to skill information when making judgments of intentionality. The component may have been omitted from explicit definitions because people focused on social behaviors, for which skill can be assumed, in contrast to, say, artistic or athletic behaviors, for which skill cannot be assumed. A more systematic study explored this potentially fifth component of intentionality (Malle & Knobe, 1997, Study 3).

If skill plays a role, it can only be a condition of intentionally performing an action, not a condition of forming an intention. Forming an intention requires the presence of a desire for an outcome and beliefs about an action leading to that outcome (and of course a process of reasoning to combine desire and beliefs; see Malle & Knobe, 2001). Thus, the prediction was that a skill component should be necessary for judgments of intentionality (whether the agent performed the action *intentionally*) but not for judgments of intention (whether the agent *tried* to perform the action).

A sample of 132 undergraduate students read a vignette that described a person named David flipping a coin to land on tails, which settled a debate among David and his friends over whether they should go to a movie or not. Additional information was experimentally manipulated to provide information about the presence or absence of David's skill of making the coin land on the side he wants ("he has not been able to do better than chance" versus "by now, he almost always succeeds"); desire ("he wants to see the movie" versus "he does not want to see the movie"); and belief (David hears the suggestion that "tails" stands for going to the movie versus he does not hear it). The awareness component was always implied to be present. Participants then answered two questions: "Do you think that David *tried* to make the coin land on tails?" and "Do you think that David made the coin land on tails *intentionally*?" (Some people were asked only one question, others both, but the results were identical.)

As predicted, the presence of both belief and desire was necessary for an ascription of intention (81% for belief and desire versus 21% for desire only and 31% for belief only), and the presence of skill was necessary for an ascription of intentionality (76% for belief and desire and skill versus 3% for belief and desire only). This finding not only identifies skill as a fifth component of intentionality but

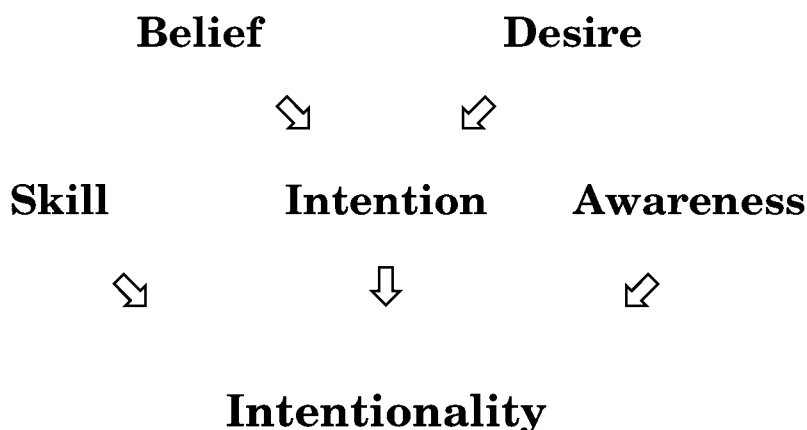


Figure 1. A five-component model of the folk concept of intentionality. From Malle and Knobe (1997), The folk concept of intentionality, *Journal of Experimental Social Psychology*, 33, 101–121. © Academic Press.

also highlights that people clearly distinguish between judgments of intention (trying, attempting, or planning) and judgments of intentionality (performing an action intentionally).

Malle and Knobe (1997) thus arrived at a five-component model of intentionality, displayed in Figure 1. According to the folk conception, the direct cause of an intentional action is an intention, and for it to be ascribed, a desire and a belief component are required, but in order for the action to be *performed intentionally*, skill and awareness have to present as well. The awareness component specifies the agent's state of mind at the time of acting (knowing what he or she is doing), and the skill component refers to the agent's ability and skill to perform the action he or she intends. This complex folk concept contains a number of important distinctions that have implications for moral and legal issues.

## DISTINCTIONS WITHIN THE CONCEPT OF INTENTIONALITY AND THEIR LEGAL IMPLICATIONS

### Intentionality Versus Intention

The concept of intentionality has many synonyms in the law. In American Law, they include *voluntarily*, *purposely*, *knowingly*, and *willfully*. There are two difficulties here. First, using many words for one concept is pragmatically confusing, because it creates the expectation that the different terms have different meanings (Grice, 1975; Markman, 1991; Sperber & Wilson, 1986), whereas in reality, they all mean the same in legal proceedings.<sup>2</sup> Second, each of the terms has different etymological

<sup>2</sup>*Willfully* sometimes has a more specific meaning—"voluntary and purposeful and . . . committed with the specific intent to do or fail to do what defendant knows is unlawful" (Ninth Circuit, 1997)—but sometimes it does not—"Willful' means an act done intentionally, knowingly, and purposely, without justifiable excuse" (Code of Virginia §56-265.15).

roots and thereby highlights different components of intentionality and modifies the search for evidence: *knowingly* focuses on beliefs and awareness; *willfully* focuses on desire and intention; and both *voluntarily* and *purposely* focus on desire.

The folk theory of mind separates intention from intentionality, whereby intention is a mental state that may or may not be accompanied by action and intentionality is a manner of performing an action. This distinction has moral and legal implications because sometimes intentions have to be evaluated separately from the intentionality of the subsequent action. The presence of an intention invites more blame than the absence of an intention, but intention is only one of three conditions that people use to ascribe intentionality (the other two being awareness and skill). Cases may occur in which an agent had an intention to perform a certain action but then *accidentally* performed the action (i.e., not as he intended). The law often treats these cases as identical to ones in which an agent intentionally performed an action. For example, the element of “malice aforethought” required to prove murder in the United States is met when an agent killed either the intended target or, in the course of trying to fulfil that intention, someone else accidentally (18 U.S.C. § 1111, 1999). Similarly, some legal writings (Duff, 1990; Hart, 1968; Kenny, 1973a) seem to suggest that the presence of an intention suffices to assign maximal blame. The folk concept of intentionality, however, suggests that the intentional performance of an action provides an additional factor that influences blame, over and above the presence of an intention. An experiment illustrates this phenomenon.<sup>3</sup>

A sample of 72 undergraduate students read a story about a hostile interpersonal event and rated the blame that accrues to the protagonist, Joan Edmonds, or rather to her intention and the action she performed. In the story, Edmonds strongly dislikes Jonathan Baite, a new employee in her company. Edmonds has heard that Baite absolutely hates to get phone calls at home, so she gleefully decides to give him a “wake-up call” the next morning when she gets to work at 6 a.m. When Edmonds arrives at her office the subsequent morning, she also remembers that she wanted to call her mother. In the intentional condition, she dials that number, but nobody answers. Then she calls Baite, who is extremely annoyed. In the accidental condition, Edmonds also dials her mother’s number, but—due to a central switchboard error—she ends up reaching Baite, who is extremely annoyed.

The two critical dependent variables were “How much blame does she deserve for *calling* Baite?” and “How much blame does she deserve for initially *intending* to call Baite?” (both 0–7 scales, labeled “a little” between the digits 1 and 2 and “a lot” between the digits 6 and 7). Whereas Edmond’s action was blamed far more strongly when performed intentionally ( $M = 5.7$ ) than when performed accidentally ( $M = 1.5$ ),  $F(1, 70) = 118.0$ ,  $p < 0.001$ ,  $\eta^2 = 63\%$ , Edmond’s intention was blamed barely more when followed by an intentional action ( $M = 5.3$ ) or an accidental action ( $M = 4.9$ ),  $F < 1$ . Put differently, people blame a malevolent intention for what it is, but they radically discount their blame if the intention is not executed and the desired outcome occurs accidentally—because they can counterfactually imagine that the person might have changed her intention or because evaluating actions is fundamentally different from evaluating intentions.

The distinction between intention and intentionality should be reflected in the legal language of *mens rea*, but it does not appear to be. In the law, it is common to

<sup>3</sup>This study was conducted in collaboration with Ruth Bennett.



speak of *intent*, which is used both to refer to the mental state of intention and to the intentionality of the performed action. In fact, one is often defined by the other. For example, “the general intent required to be proved as an element of the crime is inferred from defendant’s voluntary commission of the act forbidden by law (or his omission of the duty required by law)” (La Buy, *Manual on Jury Instructions in Federal Criminal Cases*; as cited in *Ninth Circuit manual*, 1997, p. 82). General intent is thus reduced to a judgment of intentionality for the act in question. (A bizarre complication is that one can hardly determine that an act was voluntary, i.e., intentional, without inferring first that some intention was underlying it.) In the following example, too, intention and intentionality are equated: “‘Intentionally’ or ‘with intent,’ when used with respect to a result or to conduct described by a statute defining an offense, means that a person acts with a conscious objective to cause the result or to engage in the conduct so described” (Oregon Revised Statutes, 1997, 161.085).

Especially in cases where the agent’s intention differs from the action that ended up being performed, a more precise vocabulary would seem appropriate. But quite the opposite is achieved with the relatively new concept of *transferred intent*: “If you find that [Name of Defendant] deliberately intended to kill [Name of Intended Victim], and by mistake or accident killed [Name of actual Victim], the element of malice aforethought is satisfied even though [Name of Defendant] did not intend to kill [Name of Actual Victim]. In such a case, the law regards the intent as transferred from the original intended victim to the actual victim” (Oklahoma State Courts, 2000, 4–62). There may be moral and legal support to sentence guilty defendants in such cases the same way they would have been sentenced had they executed their actual intention, but what needlessly violates ordinary intuitions is that the concept of “transferred intent” carries the weight here, even though intentions cannot be transferred and the facts of the case are clearly described as an intended or attempted murder of person A along with an accidental killing of person B. Charging the defendant with each of these crimes separately, and adding the individual sentences, would both uphold ordinary intuitions and still allow a harsh sentence, if the law is expected to deliver one.

### Intention Versus Desire

The second point worth discussing is that people distinguish between desire and intention. It is one thing to want something but quite another to intend to act. Based on conceptual analysis and empirical studies, Malle and Knobe (2001) proposed three characteristics that social perceivers use to differentiate the mental states of intention and desire. First, they track the content of the agent’s mental state: Intentions have as their content the agent’s own action, whereas desires can have any content (e.g., someone else’s action, an object, or an outcome). Second, social perceivers examine the degree to which the mental state grew out of reasoning. Intentions are based on reasoning (combining desires and beliefs), whereas desires are typically not. Third, social perceivers assess the degree to which the agent is committed to the represented action. Intentions involve signs of commitment, whereas desires do not. Thus, the most prototypical case of an intention is a mental state that represents an action, is based on reasoning, and involves commitment,

whereas the most prototypical case of a desire is a mental state that represents some outcome, is not based on reasoning, and does not come with commitment.

The two concepts are confounded in many legal definitions and instructions. For example, a person is said to act intentionally, “when it is his conscious object (desire) to engage in [that] conduct” (LaFave & Scott, 1986, p. 306). Another source of confounding lies in variants of the word *intention*. Much philosophy has been written about the expression *doing A with the intention of doing B*. In some cases, the *intention of doing B* is truly an intention, characterized by action content, reasoning, and commitment (such as when a person buys a plane ticket with the intention of flying to London); but in many cases, the phrase refers to a desire (such as when a person buys stock with the intention of getting rich; cf. Harman, 1986; Malle & Knobe, 2001; Mele, 1992).

A more serious problem emerges when the adjective *intended* is used to refer to outcomes, as in the phrase *(un)intended consequences*. Because such consequences are by definition consequences of action and thereby outcomes, they violate the feature of action content and are therefore the content of desires. Of course, an agent may have reasoned about certain consequences and may be committed to *bringing them about*. But that means that the agent intends to perform particular actions in order to fulfil her desire for these consequences. Legal discussions often hinge on the question of whether consequences were intended or not, and such discussions are frequently cited as complications of the intention concept (see, e.g., Lacey, 1993). But complications arise primarily because the law speaks of “intending results.” *Black’s law dictionary* (1979), for example, documents that “a person who contemplates any result, as not unlikely to follow from a deliberate act of his own, may be said to intend that result” (p. 728). Allowing the content of an intention to be something other than an action is not only linguistically unusual (Malle & Knobe, 2001) but also cognitively misleading, because it glosses over important folk-conceptual differences.

A more careful analysis reveals at least three possibilities for the relation between an agent and consequences of his or her actions. The agent may have *desired* the consequences and taken steps to bring them about—that is, selected a relevant action *in order to* bring those consequences about. That would be the strongest relation between agent and consequences and likely most blameworthy. If not desired, the agent may have *anticipated* the consequences, and some amount of blame can accrue to the failure of avoiding them (see, next section). Finally, if the agent did not even anticipate the consequences, she may *welcome* them or not—but that fact should have to be irrelevant to the evaluation of her action, only perhaps relevant to an evaluation of her character.

### Intention versus Belief

The third noteworthy folk distinction is that between belief and intention. If taken seriously, the distinction directly contradicts the oft-discussed equation of forethought and intention (see, e.g., Aulisio, 1995; Duff, 1990; Hart, 1968; Kenny, 1973a; Williams, 1965). In the words of English judge Lord Lane,

Where a man realises that it is for all practical purposes inevitable that his actions will result in death or serious harm, the inference may be irresistible that he intended that result, however little he may have desired or wished it to happen (*Reg. v. Nedrick*, 1986, p. 4).

More common is a subjectivized version of this position, as in Australian law, where a result or circumstance is intended even when a person is only “aware that it will occur in the ordinary course of events” or “believes that it exists or will exist” (Australian Criminal Code [Cwlth] s5.2). Most people would be uncomfortable ascribing to an agent the *intention* to achieve a consequence merely because the agent *believes* that his planned act has that consequence (consider the dentist who knows that her patient will feel pain as a result of her intervention). To describe such mental states of knowing a consequence but not directly desiring it, some scholars use Jeremy Bentham’s term *oblique intention*. This term, however, is an unfortunate misnomer—a confusing extension of the intention concept beyond the boundaries of its core meaning. According to the folk conception, for an intention to hold the agent must have a desire for the relevant consequence (besides the belief that the intended action will lead to that consequence); but such a desire is not present in the case of oblique “intentions.” All we can say is that the consequences were anticipated. There may well be an important legal concept at issue here—that anticipating grave consequences and failing to prevent them can be highly blameworthy. (When properly defined, this is the legal concept of *recklessness*.) However, to call this mental state an “intention” needlessly violates the folk concept of intention, and it does so both by applying the intention concept to consequences (as discussed above) and by collapsing belief and intention.

The meaning of intention used here is quite extreme: An agent intends consequences that are, objectively considered, natural and probable consequences of his acts (see *DPP v. Smith*, 1961). This notion has also found its way into the U.S. *Manual on jury instructions in federal criminal cases*: “In determining defendant’s intention the law assumes that every person intends the natural consequences of his voluntary acts” (as cited in *Ninth Circuit manual*, 1997, p. 82). Such a formulation even permits ascribing an intention to an agent who did not herself anticipate such a “natural consequence.”

A famous case of English law, *Hyam v. DPP* (1975), illustrates this point. Mrs. Hyam poured gasoline into Mrs. Booth’s letter box, ignited it, and thus caused a fire that burned down the house and killed Mrs. Booth’s two daughters. Mrs. Hyam claimed that she had only intended to frighten Mrs. Booth into leaving town but never thought that she could kill someone. Applying the folk concept of intentionality to this case, we would have to conclude that Mrs. Hyam did not intentionally kill the two daughters. She neither desired nor intended to kill the two children. This is also what 16 out of 20 groups of undergraduate students concluded who read a version of *Hyam*, discussed the case, and then jointly arrived at an intentionality judgment and a verdict (Laurita, unpublished honors thesis). Granted, one may define murder to encompass Mrs. Hyam’s reckless action, as Australian law does (see Leader-Elliott, 2001); and juries may indeed agree that Mrs. Hyam’s action was highly blameworthy. But one cannot argue that, by ordinary standards, the act was blameworthy because she *intended* to kill the two children. Justification for a murder sentence will have to go beyond the concept of intention, else we equate Hyam’s *mens rea* with that of a cold-blooded murderer who enters a house and shoots two children.

There are trends both in English Law and in American Law to sharpen once more the distinction between intention and belief (see, e.g., LaFare & Scott, 1986; *Reg. v. Woollin*, 1999), but as long as such trends merely reflect scholarly or political

fashions, the legal language of intention and intentionality will remain at odds with folk use and therefore carry serious potential for confusion, mistaken decisions, and even injustice.

## UNANSWERED QUESTIONS AND LIMITS OF THE FOLK-CONCEPTUAL APPROACH

Our results and analyses suggest that people share a folk concept of intentionality that is both consistent and systematic. It is consistent in that large numbers of people agree in their judgments of intentionality, and it is systematic in that the judgments are predictable from five core components—belief, desire, intention, awareness, and skill. None of these advantages accrue to the corresponding legal concepts of *intent*, *intended*, *knowingly*, *willfully*, etc., which have been described as “obscure” (LaFave & Scott, 1986), “esoteric” (*U.S. v. Bailey*, 1980), and “confusing” (Devitt et al., 1992). In fact, Monahan and Walker (1995) point out that a study by the U. S. National Commission for Reform of Federal Criminal Laws identified 78 different mental states referred to in federal statutes.

Despite the positive evidence of consistency and systematicity of the folk concept of intentionality, especially compared to legal concepts, we need to acknowledge several limitations of these results and of the folk-conceptual approach as a whole. None of the limitations appears damning to us; but together they demarcate what can and cannot be expected from a set of consistent and systematic folk concepts.

The first limitation is that empirical models of intentionality have not been compared cross-culturally. We can safely assume that all cultures have a concept of intentionality (without which, for example, communication would be impossible; Sperber & Wilson, 1986), and we can assume that people agree, within a culture, on the intentionality of behaviors. However, there may be differences across cultures on where the “cut-off” for intentional behaviors lies. Unpublished data by Ames (manuscript in preparation), for example, suggest that Chinese respondents rank prosocial and socially agreeable acts as less intentional (more “automatic,” not requiring a decision) than American respondents. In addition, cultures may differ in the importance they assign to each of the core components of intentionality. Perhaps in some cultures awareness is not particularly important, and in others skill is not, though we cannot easily make out *a priori* reasons why that should be the case. All this is speculation, of course, and we have to ask what consequences such cross-cultural differences would have for the legal dealings with *mens rea*. From our viewpoint, very few. What would be required is within-culture studies of the folk concept of intentionality in order to adjust legal language to the culture’s folk understanding or clearly distinguish it from such understanding.

The second limitation stems from the difference between people’s consistent reasoning according to a concept and their arriving at converging judgments. As mentioned earlier, a consistent concept is a prerequisite but not a guarantee for reliable (and accurate) judgments. Following the concept of intentionality means combining its five components into a judgment, but assessing whether each of the components is present or absent can be an epistemic challenge for perceivers. Ambiguous behaviors will present such a challenge by clouding the evidence for individual components (e.g., Did a certain behavior count as a preparatory step that

shows intention?). In such cases, perceivers who agree on what it takes for a behavior to be intentional do not necessarily converge in their judgments of a given behavior because their judgments are formed under uncertainty.

We can illustrate this limitation on convergence in the intentionality judgments of the 20 stimulus behaviors reported earlier (Malle & Knobe, 1997, Study 1). The high agreement we found should not be interpreted as demonstrating that intentionality judgments are easy or that people always arrive at a converging judgment. What the high correlations among intentionality ratings show is that people collectively see certain behaviors as intentional (high ratings), others as unintentional (low ratings), and yet others as ambiguous (mid-range ratings). Obviously, ambiguous behaviors are difficult to judge, and a rating in the middle of the scale of intentionality offers a compromise that a forced choice (“Is this behavior intentional or not?”) would not allow. In fact, follow-up data on the same 20 behaviors showed that 13 of them yielded strong agreement in forced-choice judgments (fewer than 10% or more than 80% said it was intentional), whereas 7 of them yielded a fair amount of disagreement (between 27% and 63% said it was intentional). The rating data indicate that people agree in their identification of these behaviors as ambiguous, but, because of the behaviors’ ambiguity, people do not agree on a forced-choice intentionality classification for them. Thus, people who share the same concept need not arrive at the same judgment for every given object. All that a folk concept provides is a rule of how to put the evidence together once it is clear what the evidence is. It is the task of legal proceedings to provide the best possible evidence that would make the judgments straightforward.

A third limitation is the power of extraneous factors that can bias judgments. This is of course not peculiar to judgments of intentionality but rather a general fact about human judgment. Time pressure, tiredness, distraction, and many other cognitive limitations can lower the reliability and accuracy of judgments. One particularly interesting source of influence on intentionality judgments lies in the relation between intentionality and social evaluation, particularly blame. Because intentional behaviors elicit more blame than unintentional behaviors, negative affect toward the agent can easily bias judgments of intentionality, because characterizing a behavior as intentional warrants more blame, anger, and perhaps aggression (Knobe, 2003a,b). When a couple fights, for example, the intense negative affect that emerges will bias each person into believing that everything the other does is intentional and motivated by malevolence. Similarly, the vengefulness toward a person who is accused of having committed a crime will all but rule out considerations that the person may have committed the act in question unintentionally.

The particular mechanisms that mediate this influence of blame on intentionality judgments have yet to be studied, but a possible candidate is the activation of default assumptions about the presence of certain intentionality components, such as a malevolent desire, the skill to accomplish harmful actions, and persistent awareness. Interestingly, appraisal theories of emotion posit that every emotion (such as fear or anger) comes with a set of implicit beliefs (“appraisals”) about oneself, the other person, or the situation, and anger is described as implying the appraisal of the other person’s intentional agency (see, e.g., Weiner, 2001). That opens the possibility that anger that was induced in a different context would bias people’s intentionality judgments in a new context, merely because of the lingering effects of an agency appraisal (Tiedens, 2001).

This tight connection between intentionality on the one hand and negative affect, blame, and social evaluation on the other is highlighted in legal contexts where intentionality judgments are key mediators of culpability and punishment. If such an evaluative context biases intentionality judgments, however, is not the legal role of intentionality doomed to failure? We believe not. What is needed for judgment reliability (and hence possible accuracy) is a degree of dissociation between intentionality judgments and culpability judgments, as discussed next.

## DISSOCIATING INTENTIONALITY FROM CULPABILITY

In most legal conceptions of mental states, intentionality and culpability are confounded. For example, as the type of crime becomes more severe, the definition of intention often becomes less stringent. To illustrate, the law has traditionally distinguished between “specific intent” and the less stringent “general intent” (*Ninth Circuit manual*, 1997). Specific intent requires that the agent intended his or her action but also intended to violate the law, and this criterion defines crimes such as fraud and extortion. General intent requires only that the agent acted voluntarily, and this criterion defines more serious crimes such as assault or murder (though first-degree murder often requires deliberation, a form of specific intent). Even more evidently, the legal concept of “transferred intent” confounds intention and responsibility in an attempt to hold the defendant responsible for the severity of an outcome. In this case, if an agent intends to strike or kill one person but strikes or kills another by accident, the law speaks of the intent as “transferred” from the intended target to the actual target (Black, 1979). As argued earlier, the defendant in such a case may very well be *culpable* for the death of the actual target (and perhaps also for an attempted act on the intended target), but to speak of the agent’s *intention* of killing that target confuses the two concepts.

And so it is sometimes claimed that, “in criminal law, attributions of *mens rea* simply *are* (at least provisional) attributions of culpability” (Lacey, 1993, p. 625). But they need not be. In fact, they should not be (see, e.g., Kaplan, 1995; Mele & Sverdlik, 1996). To the extent that judgments of intentionality have important implications for verdicts and sentencing and do not just foreshadow them, every effort should be made to dissociate intentionality judgments from evaluative feelings or culpability assignments. In a sense, we suggest separating *mens* from *rea*.

How can such separation be achieved? One option is to ask perceivers (jurors) to make intentionality judgments while exhorting them to leave their evaluative feelings aside. From all we know about human judgment faculties, this option promises only partial success, but empirical studies will have to explore whether there is at least some value to the procedure.

Another option is to let people fully express their anger or outrage first (to get them out of cognition’s way, so to speak) and then ask them, clearly marked as a separate question, about the defendant’s intentions or the intentionality of her actions. The logic here is that once these evaluative feelings are expressed, perceivers are less likely to use intentionality judgments to express them again; but if intentionality judgments are the only way for them to express evaluative feelings, those judgments will likely be biased (Mele, 2001).

A third option is to have people judge either intentionality or blame, but not both. In the United States, some murder trials in fact employ two juries—one that determines intent, another that decides about the death penalty (Office of the Circuit Executive, 2000). This method can be further improved by providing juries with comparison cases that anchor their judgments. The logic here is that people have difficulties making absolute judgments but are good at making relative judgments (i.e., discriminations). We tested this option in a small pilot sample ( $N=14$ ), adapting material proposed by Mele (2001, p. 39). We compared four cases of a person who fires a gun at a target to gain \$100, hits the first time but then misses badly the next 200 times. In two of the cases, the person first hits the target dead center; in the other two cases, the person first hits the target only after the bullet ricochets off a rock. Crossed with this luck factor was a second factor that was designed to manipulate blame: In half of the cases, the target is a bull's eye, and in the other half, the target is a horse chained to a post in the field. We asked seven people to make intentionality ratings for all four cases and seven more people to make blame ratings (both on eight-point scales ranging from 0 to 7). The blame ratings showed the expected difference between bull's eye ( $M=1.6$ ) and horse ( $M=4.4$ ),  $F(1, 12) = 15.8$ ,  $p < 0.005$ ,  $\eta^2 = 57\%$ , but the intentionality ratings did not vary with the blame factor ( $M=2.3$  and  $2.4$ ),  $F < 1$ . Instead, they showed a small but nonsignificant effect of the luck factor in the expected direction—slightly more intentionality for the dead-center hit ( $M=2.6$ ) relative to the ricochet hit ( $M=2.1$ ),  $\eta^2 = 6\%$ . These results should only be taken to illustrate a methodology, but one that seems worthy of further exploration.

An interesting variant of our proposal to dissociate intentionality judgments from evaluative feelings was recently offered by Leader-Elliott (2001). He proposed to use not intention judgments but behavior explanations as the basis for moral evaluation and legal sentencing. His proposal is contextualized in Australian criminal law, which strongly endorses the collapse of intention and forethought and in which murder only requires a proof of recklessness. In such a context, the significance of intentionality judgments is weakened, and Leader-Elliott therefore suggests that any excusing, justifying, or mitigating statements (by the defendant or the defense lawyer) will come as explanations of the behavior in question, not as judgments of intentionality (or lack thereof). This proposal is not at odds with our approach, because exculpatory statements, too, will have to be formulated in common language, and just as talk about intention and intentionality is grounded in the folk concept of intentionality, explanations are grounded in the folk framework of behavior explanation (Malle, 1999, 2001; Malle, Knobe, O'Laughlin, Pearce, & Nelson, 2000).

## CONCLUSIONS

In this article we have documented the systematic and consistent nature of folk concepts of the mind and contrasted them with the often inconsistent, confusing, and ambiguous legal concepts of *mens rea*. This contrast is not only of academic interest but has direct implications for the quality of legal proceedings. Jury instructions are often misunderstood, and jurors' miscomprehension is related to

the penalty they support (Weiner, Pritchard, & Weston, 1995). We would argue that one essential reason for such misunderstandings is that jurors' folk concepts clash with the legal concepts that they are expected to apply. More important, experiments suggest that jurors fail to eschew their folk concepts when instructed about the legal version of the corresponding concept (Smith, 1993). As a result, standard legal proceedings that do not explicitly consider people's folk concepts of mind are seriously flawed, because the interference between folk concepts and legal concepts undermines rational decision making, strains perceptions of justice, and distances legal institutions from the society that it is expected to serve.

The remedy that we suggest for this problematic situation consists of three steps. The first is to recognize and document the systematic and consistent nature of folk concepts of the mind that people apply in ordinary life. The second is to select those folk concepts that are important for the law (such as the components of intentionality) and use them in their original meaning when formulating laws as well as jury instructions. Technical concepts may be introduced as well, but their labels must be sufficiently distinct from folk concepts to avert interference and confusion. Finally, if the selected concepts of mind are to serve a distinct function in the law, they must be separated from notions of culpability and punishment. Similarly, jurors' judgments of intention and other mental states must be dissociated from evaluative feelings of anger, outrage, and vengeance. When these steps have been taken, legal proceedings will profit from the added differentiation that mental concepts provide, the added fairness that these differentiations afford, and the reconciliation of the legal and societal view of human behavior.

#### REFERENCES

- Amsterdam, A. G., & Bruner, J. (2000). *Minding the law*. Cambridge, MA: Harvard University Press.
- Aristotle. (1955). *The Nicomachean ethics* (J. A. K. Thomson, Trans.). London: Penguin. (Original work published 330 B.C.)
- Aulisio, M. P. (1995). In defense of the intention/foresight distinction. *American Philosophical Quarterly*, 32, 341–354.
- Bailis, D. S., Darley, J. M., Waxman, T. L., & Robinson, P. H. (1995). Community standards of criminal liability and the insanity defense. *Law and Human Behavior*, 19, 425–446.
- Baron-Cohen, S. (1999). The evolution of a theory of mind. In M. C. Corballis, & S. E. G. Lea (Eds.), *The descent of mind: Psychological perspectives on hominid evolution* (pp. 261–277). New York: Oxford University Press.
- Black, H. C. (1979). *Black's law dictionary*. St. Paul, MN: West.
- Brand, M. (1984). *Intending and acting: Toward a naturalized action theory*. Cambridge, MA: MIT Press.
- Bratman, M. E. (1987). *Intention, plans, and practical reason*. Cambridge, MA: Harvard University Press.
- Davidson, D. (1963). Actions, reasons and causes. *Journal of Philosophy*, 60, 685–700.
- Devitt, E. J., Blackmar, C. B., Wolff, M. A., & O'Malley, K. F. (1992). *Federal jury practice and instructions: Civil and criminal* (4th Ed.). St. Paul, MN: West.
- DPP v. Smith, AC 290 (1961).
- Duff, R. A. (1990). *Intention, agency and criminal liability*. Oxford: Blackwell.
- Fiske, S. T. (1989). Examining the role of intent: Toward understanding its role in stereotyping and prejudice. In J. S. Uleman, & J. A. Bargh (Eds.), *Unintended thought: Limits of awareness, intention, and control* (pp. 253–283). New York: Guilford.
- Gopnik, A., & Meltzoff, A. N. (1997). *Words, thoughts, and theories*. Cambridge, MA: MIT Press.
- Grice, H. P. (1975). Logic and conversation. In P. Cole, & J. L. Morgan (Eds.), *Syntax and semantics 3: Speech acts* (pp. 41–58). New York: Academic.
- Harman, G. (1986). *Change in view*. Cambridge, MA: MIT Press.
- Hart, H. L. A. (1968). Intention and punishment. In H. L. A. Hart (Ed.), *Punishment and responsibility* (pp. 113–135). Oxford: Oxford University Press.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.



- Hume, D. (1998). *Enquiry concerning the principles of morals*. Oxford: Clarendon. (Original work published 1751)
- Hyam v. DPP, AC 55 (1975).
- Ickes, W. (1993). Empathic accuracy. *Journal of Personality*, 61, 587–610.
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 371–388). Hillsdale, NJ: Erlbaum.
- Kaplan, L. V. (1995). The attenuation of evil, the unfairness of justice. In L. Rosen (Ed.), *Other intentions, cultural contexts and the attribution of inner states* (pp. 119–140). Santa Fe: School of American Research Press.
- Kenny, A. (1973a). Intention and *mens rea* in murder. In P. M. S. Hacker, & J. Raz (Eds.), *Law, morality, and society: Essays in honour of H. L. A. Hart* (pp. 161–174). Oxford: Clarendon.
- Kenny, A. (1973b). The history of intention in ethics. In A. Kenny (Ed.), *The anatomy of the soul: Historical essays in the philosophy of mind* (pp. 129–146). Oxford: Blackwell.
- Knobe, J. (2003a). Intentional action and side effects in ordinary language. *Analysis*, 63, 190–194.
- Knobe, J. (2003b). Intentional action in folk psychology: An experimental investigation. *Philosophical Psychology*, 16, 309–324.
- Lacey, N. (1993). A clear concept of intention: Elusive or illusory? *The Modern Law Review*, 56, 621–642.
- LaFave, W. R., & Scott, A. W. (1986). *Substantive criminal law*. St. Paul, MN: West.
- Leader-Elliott, I. (2001). Negotiating intentions in trials of guilt and punishment. In N. Naffine, R. Owens, & J. Williams (Eds.), *Intention in Law and Philosophy* (pp. 73–106). Aldershot: Ashgate.
- Malle, B. F. (1999). How people explain behavior: A new theoretical framework. *Personality and Social Psychology Review*, 3, 23–48.
- Malle, B. F. (2001). Folk explanations of intentional action. In B. F. Malle, L. J. Moses, & D. A. Baldwin (Eds.), *Intentions and intentionality: Foundations of social cognition* (pp. 265–286). Cambridge, MA: MIT Press.
- Malle, B. F. (2002). The relation between language and theory of mind in development and evolution. In T. Givon, & B. F. Malle (Eds.), *The evolution of language out of pre-language* (pp. 265–284). Amsterdam: Benjamins.
- Malle, B. F. (in press). Folk theory of mind: Conceptual foundations social cognition. In R. Hassin, J. Uleman, & J. Bargh (Eds.), *The new unconscious*. New York: Oxford University Press.
- Malle, B. F., & Knobe, J. (1997). The folk concept of intentionality. *Journal of Experimental Social Psychology*, 33, 101–121.
- Malle, B. F., & Knobe, J. (2001). The distinction between desire and intention: A folk-conceptual analysis. In B. F. Malle, L. J. Moses, & D. A. Baldwin (Eds.), *Intentions and intentionality: Foundations of social cognition* (pp. 45–67). Cambridge, MA: MIT Press.
- Malle, B. F., Knobe, J., O’Laughlin, M., Pearce, G. E., & Nelson, S. E. (2000). Conceptual structure and social functions of behavior explanations: Beyond person–situation attributions. *Journal of Personality and Social Psychology*, 79, 309–326.
- Markman, E. M. (1991). The whole-object, taxonomic, and mutual exclusivity assumptions as initial constraints on word meanings. In S. A. Gelman, & J. P. Byrnes (Eds.), *Perspectives on language and thought: Interrelations in development* (pp. 72–106). New York: Cambridge University Press.
- Marshall, J. (1968). *Intention in law and society*. New York: Funk and Wagnall.
- Maselli, M. D., & Altrocchi, J. (1969). Attribution of intent. *Psychological Bulletin*, 71, 445–454.
- Mele, A. R. (1992). *Springs of action: Understanding intentional behavior*. New York: Oxford University Press.
- Mele, A. R. (2001). Acting intentionally: Probing folk notions. In B. F. Malle, L. J. Moses, & D. A. Baldwin (Eds.), *Intentions and intentionality: Foundations of social cognition* (pp. 27–43). Cambridge, MA: MIT Press.
- Mele, A. R., & Moser, P. K. (1994). Intentional action. *Nous*, 28, 39–68.
- Mele, A., & Sverdlik, S. (1996). Intention, intentional action, and moral responsibility. *Philosophical Studies*, 82, 265–287.
- Monahan, J., & Walker, L. (1995). *Social science in law: Cases and materials*. Mineola, NY: Foundation.
- Ninth Circuit manual of model jury instructions: Criminal*, 5.5. (1997). St. Paul, MN: West.
- Office of the Circuit Executive. (2002). *Ninth Circuit capital punishment handbook*. Retrieved August 18, 2003, from [www.ce9.uscourts.gov](http://www.ce9.uscourts.gov)
- Oklahoma State Courts (2000). *Oklahoma Uniform Jury Instructions–Criminal* (Chapter 4, C.1, 4–62). Retrieved August 19, 2003, from [www.oscn.net/applications/oscn/index.asp?ftdb=STOKJUCR&level=1](http://www.oscn.net/applications/oscn/index.asp?ftdb=STOKJUCR&level=1).
- Oregon Revised Statutes, § 161 (1997).
- Ossorio, P. G., & Davis, K. E. (1968). The self, intentionality, and reactions to evaluations of the self. In C. Gordon, & K. J. Gergen (Eds.), *The self in social interaction* (pp. 355–369). New York: Wiley.
- Perner, J. (1991). *Understanding the representational mind*. Cambridge, MA: MIT Press.

- Povinelli, D. J. (2001). On the possibilities of detecting intentions prior to understanding them. In B. F. Malle, L. J. Moses, & D. A. Baldwin (Eds.), *Intentions and intentionality: Foundations of social cognition* (pp. 225–248). Cambridge, MA: MIT Press.
- Povinelli, D. J., & Godfrey, L. R. (1993). The chimpanzee's mind: How noble in reason? How absent of ethics? In M. H. Nitecki, & D. V. Nitecki (Eds.), *Evolutionary ethics* (pp. 277–324). Albany, NY: SUNY Press.
- Reg. v. Nedrick, 1 W.L.R. 1025 (1986).
- Reg. v. Woollin, 3 WLR 382 (1999).
- Searle, J. R. (1983). *Intentionality: An essay in the philosophy of mind*. Cambridge: Cambridge University Press.
- Shaver, K. G. (1985). *The attribution of blame*. New York: Springer.
- Smith, A. (1976). *The theory of moral sentiments* (D. D. Raphael & A. L. Macfie, Eds.). Oxford: Clarendon. (Original work published 1759)
- Smith, V. L. (1993). When prior knowledge and law collide. *Law and Human Behavior*, 17, 507–536.
- Sperber, D., & Wilson, D. (1986). *Relevance: Communication and cognition*. Cambridge, MA: Harvard University Press.
- Tiedens, L. Z. (2001). Judgment under emotional certainty and uncertainty: The effects of specific emotions on information processing. *Journal of Personality and Social Psychology*, 81, 973–988.
- Tomasello, M. (1996). The cultural roots of language. In B. M. Velichkovsky, & D. M. Rumbaugh (Eds.), *Communicating meaning: The evolution and development of language* (pp. 275–307). Mahwah, NJ: Erlbaum.
- United States Code, 18 § 1111. (1999). Washington, DC: Office of the Law Revision Counsel.
- United States v. Bailey, 444 US 394. (1980).
- Weiner, B. (2001). Responsibility for social transgressions: An attributional analysis. In B. F. Malle, L. J. Moses, & D. A. Baldwin (Eds.), *Intentions and intentionality: Foundations of social cognition* (pp. 331–344). Cambridge, MA: MIT Press.
- Wellman, H. (1990). *The child's theory of mind*. Cambridge, MA: MIT Press.
- Whiten, A. (1999). The evolution of deep social mind in humans. In M. C. Corballis, & S. E. G. Lea (Eds.), *The descent of mind: Psychological perspectives on hominid evolution* (pp. 173–193). New York: Oxford University Press.
- Wiener, R. L., Pritchard, C. C., & Weston, M. (1995). Comprehensibility of approved jury instructions in capital murder cases. *Journal of Applied Psychology*, 80, 455–467.
- Williams, B. (1993). Recognizing responsibility. In B. Williams (Ed.), *Shame and necessity* (pp. 50–74). Berkeley, CA: University of California Press.
- Williams, G. (1965). *The mental element in crime*. Jerusalem: Magnes.