

while of some clinical interest, aren't particularly relevant to the sorts of philosophical and legal issues under discussion here. Being entirely non-conscious, cases of somnambulism and the like sit at an extreme on the spectrum between nonconscious and conscious action.

However, the sorts of nonconscious processes we're interested in—those examined in much of the social psychology literature and upon which the situationist challenge (e.g., Doris, 2002) is based—are sophisticated processes that are operative only when the individual is conscious of *something*. The question, therefore, is not whether consciousness in the sense of awareness of *anything at all* is needed for agency/responsibility; as Levy's psychiatric examples bring out, it surely is. Rather, the issue is whether conscious *deliberation*—the conscious reflection and reasoning emphasized on traditional philosophical accounts—is necessary for agency/control. It is on this point that we part ways with the traditional view and, potentially, with Levy. We believe, on grounds of the sophisticated, integrative capacities of nonconscious processes (see Suhler & Churchland, 2009, for extended discussion) that conscious deliberation and reasoning are not a necessary condition of control and agency.

Where the question of responsibility is particularly momentous is, of course, in the context of the criminal law. The law is remarkably wise and sophisticated on many of the issues regarding the mental status of the defendant, being the long-haul product of much experience and thoughtful reflection and deliberation. A study of cases reveals just how the law currently takes into account the mental state of the defendant. (See, e.g., the clear and insightful book by Bonnie, Jeffries, & Low, 1986.) New important debates are now emerging concerning whether certain kinds of evidence based on findings in neuroscience should be admitted into evidence either in the liability phase of a capital case, or in the sentencing phase, or neither. (See, e.g., Baum, 2011.)

## 9 Evolutionary Insights into the Nature of Choice: Evidence from Nonhuman Primates

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When faced with a decision, say, whether or not to donate money to a charity, we generally feel as if we are free to decide in a way that satisfies our own plans and preferences. If we believe in the mission of the charity, we may choose to support it, but if we have other plans for our money (i.e., a vacation or a new car), we may not. However, a growing body of empirical research suggests that both our choices and our preferences are remarkably easily manipulated. Indeed, our choices can be unconsciously swayed by a variety of factors as irrelevant as the phrasing of the request (e.g., Tversky & Kahneman, 1981), whether we are in a group or alone (e.g., Darley & Latané, 1968), and even whether we are holding a hot cappuccino or an iced latte (e.g., Williams & Bargh, 2008). In addition, empirical work in social psychology suggests that our preferences are not as stable as we often assume; whether we prefer a particular charity, for example, can depend on whether we have recently been forced to work for that charity (e.g., Festinger & Carlsmith, 1959) or whether we've been incidentally exposed to its name in Internet ads (Zajonc, 1968). Amazingly, even though these seemingly irrelevant factors have profound effects on our preferences and decisions, we are generally unaware of their power; we would never naturally explain our donation to a particular charity by the temperature of our coffee or presence of a stranger.

The fact that such apparently irrelevant situational factors have a firm grip on both our decisions and preferences poses a few serious problems for the nature of human freedom and responsibility (see discussions in Doris, 2002; Nahmias, 2007; Harman, 1999). For example, how can we assume that people are free to act on their preferences if our decisions are deeply bound to irrelevant situational factors outside of both our awareness and control (see discussion in Nahmias, 2007)? Similarly, if we grant that decisions of moral importance are strongly bound by situational influences, how does this affect our notions of moral responsibility and