

Evolutionary Psychology

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Book Review

The Implications of Automaticity for Evolutionary Forensic Psychology

A review of Wray Herbert, *On Second Thought: Outsmarting Your Mind's Hard-Wired Habits*. Crown Publishers: New York, NY, 2010, 304 pp., US\$25.00, ISBN # 978-0307461636 (hardcover).

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Mike Knight (1999) noted that Charles Peirce's concept of abduction, or the "guessing instinct," was relevant to how evolutionary psychologists reverse engineer behaviors and test hypotheses. Indeed, abduction is important to this process. But guiding this process are abductive leaps made at the level of the individual, based on hard-wired cognitive processes that have been shaped by natural selection. One of the most important areas of research on these cognitive processes centers on our more automatic processes, or social automaticity (Mather and Romo, 2007).

Mather (2007) proposed the Integrative Social Paradigm (ISP) to develop multiple perspectives from which to view multiple levels of a phenomenon. For example, a phenomenon can be studied at the level of an individual's personality traits, or at a more complex level of group processes. The four conceptual levels of social psychology (personality variables, intra-psychic processes, interpersonal processes, and group processes) are interrelated, examining different facets of human behavior. The main postulate of the ISP is that humans are social organisms, thus all psychological processes serve to facilitate group interaction. That is, behaviors are maladaptive when they put an individual consistently at odds with the interests of the group but do not advance individual interests (which ultimately involve the group, even if it is accruing more individual resources to maximize mating potential and status—both of which involve the consideration of other people).

Thus, all automatic cognitive processes are directly relevant to evolutionary psychology, as they are linked to the selection of adaptive behaviors. Bargh and Morsella (2008) suggested that most of our cognition is unconscious, as conscious thought is a recent evolutionary development. In Wray Herbert's book *On Second Thought*, the science of these processes and their influence on decision making is explored.

In *On Second Thought*, Herbert introduces 20 heuristics and organizes the discussion of them into three sections according to the purposes they serve. Heuristics are shortcuts to thinking that free up our cognitive resources so that we are better able to direct our cognitive efforts elsewhere, where the use of our full cognitive abilities may be more vital. Throughout our evolutionary history, humans have developed these rules of thumb to aid in our ability to survive and thrive in various environmental situations.

In the first section of his book, Herbert discusses heuristics that have to do with the way our bodies interact with the world around us. The visceral heuristic is an example of this type and is one that evolved because of the human need to reproduce, survive, and maintain close relationships. Reproduction is the focus of a great deal of research in evolutionary psychology and is central to Herbert's discussion of the visceral heuristic. In order to ensure that our offspring are viable and will be able to advance the species, humans make unconscious assessments of potential mates and favor those who appear to be the most likely to reproduce (Buss, 2005). One aspect of an individual that could signify fertility is youthfulness, and researchers (Huang and Bargh, 2008) have hypothesized that people will make automatic evaluations of people and objects and find those that appear to be in their sexual prime to be most appealing. Huang and Bargh demonstrated this human proclivity through a set of experiments that suggested that indeed, when primed for mating, people showed a preference for an individual at their sexual prime. Surprisingly, not only did people prefer humans at their prime, but they also found objects, such as cars, flowers, and bananas, more appealing when they were at their peak.

Some heuristics have developed to assist humans in making automatic mental calculations from information provided by stimuli in our environment. These heuristics are the focus of the second section of the book, and the scarcity heuristic serves as a good example. The scarcity heuristic is one that works off of the human belief that if something is scarce, it must be valuable. Researchers (Myrseth, Fishbach, and Trope, 2009) examined this heuristic through experiments that indicated that when a product becomes readily available, individuals will consider it less valuable, and therefore will desire it less. However, when that same product appears to be hard to come by, people will then rate it as more valuable and desirable. Many people may experience this heuristic at work when dieting; a person may not crave a particular food normally, but once that food becomes prohibited, even if it is through a self-imposed prohibition, that food oftentimes becomes much more desirable. Perhaps this heuristic developed out of the evolutionary need to hoard those things that were not always readily available, but were essential to survival.

The last section of the book concerns heuristics that help humans make the world a more meaningful place. Herbert introduces the caricature heuristic as an example of one of the ways humans attempt to fulfill this goal. This cognitive shortcut involves the stereotypes that we use to categorize and make evaluations about individuals we encounter in our lives. We all have stereotypes that we have acquired over time, and though these stereotypes may be inaccurate in many cases, we unconsciously rely on them as a way to quickly make decisions about people. Further, when we experience cognitive fatigue, we are especially inclined to fall back on them. Bodenhausen (1990, 2005) illustrated this propensity in a series of experiments that indicated that people tend to employ the use of stereotypes in making judgments about people when they are not at their peak cognitive

performance. Indeed, Bodenhausen's research showed that, when people were put in a mock jury situation and asked to make a decision concerning one's guilt at a time of day that they were least focused, they were more apt to turn to their stereotypes when determining guilt and were less likely to maintain objectivity in their decision-making.

The understanding of automatic cognition has many potential applications, including within the realm of subliminal persuasion (for a review, see Randolph-Seng and Mather, 2009). One very interesting application of such research is in the area of forensic psychology. Forensic psychology is an eclectic field of research that relates to legal issues: corrections, eyewitness testimonies, violent crimes, behavioral profiling, etc. The application of basic psychological research to solve forensic problems is the essence of forensic psychology. Herbert's book is informative to such an audience. A growing body of research in the area of forensic psychology is informed by evolutionary theory (Duntley and Shackelford, 2008). One example of this is the cognitive adaptations of victims of crimes, psychological mechanisms that were selected to inform a potential victim of potential perpetrators and to help the individual avoid becoming exploited in some way. Research on the hard-wired processes of the brain, which are adaptive, and the most current results of natural selection, is best informed by evolutionary theory and can contribute to forensic applications. Herbert's book is a useful link in this abductive chain of logic.

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