

## Evolutionary Psychology

www.epjournal.net – 2008. 6(1): 190-203

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### Book Review

#### Strange Bedfellows or Assortative Mates?

A review of Mark Schaller, Jeffrey A. Simpson, and Douglas T. Kenrick (Eds.), *Evolution and Social Psychology*. Psychology Press: New York, 2006, US\$65.00, 390 pp., ISBN-13: 978-1-84169-417-7 (hardback)

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#### Overview

The growing symbiosis between social and evolutionary psychology is now readily apparent. As the edited volume *Evolution and Social Psychology* attests, evolutionary theory is permeating nearly every research area in social psychology. Editors Mark Schaller, Jeff Simpson, and Doug Kenrick have chosen to represent a variety of new frontiers in evolutionary social psychology, including the self, relationships, group dynamics, aggression and altruism, stereotyping and prejudice, and judgment and decision-making. Overall, the volume makes a strong case for the adoption of an evolutionary perspective in social psychology.

In many ways, *Evolution and Social Psychology* successfully builds on an earlier book, *Evolutionary Social Psychology*, also edited by Simpson and Kenrick (1997). Over the past decade, evolutionary perspectives have made great strides in influencing social science research. For example, empirical studies have shown that evolutionary theory's influence in psychology in general (Cornwell, Palmer, Guinther, and Davis, 2005) and social psychology in particular (Webster, 2007a) has increased over the past several years. An evolutionary perspective in social psychology can not only help researchers generate novel hypotheses about human social behavior, it can also help organize a disparate collection of social psychological micro-theories under the common framework of evolutionary theory. We will briefly summarize and critique each chapter in this volume below and end with an overall summary and critique of the book, suggesting some future directions for research in evolutionary social psychology.

*Chapter 1: “Evolution is the New Cognition” by Kenrick, Schaller, and Simpson*

In the opening chapter, Kenrick, Schaller, and Simpson argue that the evolutionary psychology of today faces many of the same challenges and criticisms that social cognition faced three decades ago. Both approaches have faced problems with verifiability and necessity. First, social cognition was initially criticized because of its lack of verifiability; it relied on the “black box” processes of internal thoughts that are inaccessible to direct observation. Similar criticisms are leveled against the “black box” of adaptive processes that shaped human psychological mechanisms over the course of human evolution. Second, both cognitive and evolutionary approaches have been criticized on their necessity: Simple models of human social behavior may be intuitively appealing, but more comprehensive ones that offer insights into cognitive or adaptive processes and mechanisms might provide a more complete picture of a given phenomenon. Evolutionary psychology thus appears to be following a historical trajectory not unlike social cognition: both were greeted with initial skepticism, but evolutionary psychology, like social cognition, has been gaining in empiricism (Webster, 2007c) and acceptance over time (Gangestad, 2008; Webster, 2007a, 2007b, 2007d).

But why is evolution so important to social psychology, and is it indeed the new cognition? Kenrick and colleagues argue that evolutionary theory may become increasingly indispensable to social psychologists for at least three reasons. First, an evolutionary perspective provides tools for theory building. Historically, social psychology has been comprised of a plethora of micro-theories, which predict specific behaviors under specific conditions, but often fall short in relating to other social psychological theories. In contrast, evolutionary theory provides a common, biologically-based, meta-theoretical structure for the generation and integration of mid- and micro-level social psychological theories. Evolutionary theory as an over-arching framework could help organize social psychological theory and bring it in line with the biological sciences. Second, competing evolutionary hypotheses are both possible and plausible. Psychologists should be encouraged to abandon simplistic nature-versus-nurture arguments and instead focus on differences in underlying processes and mechanisms (e.g., Is the evolution of altruism due to inclusive fitness [Hamilton, 1964], reciprocity [Trivers, 1971], both, or some other process?). Third, social psychologists would benefit from acknowledging that situations and characteristics that are relevant to reproductive fitness (e.g., social dominance, physical attraction) are often absolutely central to human psychology. In other words, psychology follows function; or, as the authors aptly put it, “[T]hinking (and feeling) is for doing” (p. 7).

Although evolutionary psychology appears to be on a similar path to acceptance as social cognition was 30 years ago, it may be a long and winding road. For example, the authors fail to acknowledge that the rise of social cognition may have simply helped fill a vacuum created by the decline of radical behaviorism. It is also noteworthy that many had once thought that E. O. Wilson’s (1975) sociobiology perspective might revolutionize the human sciences 30 years ago; although it did not, it did help pave the way for evolutionary psychology. Interestingly, evolutionary psychology is now growing faster than sociobiology in the scientific literature (Webster, 2007d). Nevertheless, we agree with the authors that evolutionary theory is finally impacting social psychology. Given that social psychology has recently adopted an increasingly biological perspective in both its theories

and methods, we expect that evolutionary theory will continue to exert its influence on social psychology for the foreseeable future.

*Chapter 2: “The Evolution of Accuracy and Bias in Social Judgment” by Haselton and Funder*

Whereas the traditional psychological literature on human social judgment has focused on its deficits, an evolutionary approach highlights the adaptive flexibility of human social judgment. Historically, social psychological approaches to human social judgment have taken a heuristics-and-biases approach—where illusions, fallacies, and errors in human judgment are investigated (e.g., fundamental attribution error, false consensus effect, confirmation bias, hindsight bias, planning fallacy, external agency illusion, transparency illusion, etc.). Haselton and Funder instead argue that when errors are present in human judgment, it is likely that the error may lead to more adaptive decisions under the right conditions. Evolutionary approaches to biases in human social judgment focus on the adaptive significance of the bias in question. Many of these so-called biases may actually represent a suite of adaptive heuristics: cognitive shortcuts that work well most of the time, but fail dramatically when removed from their adaptive contexts (as in artificial laboratory settings). An excellent example of an evolutionary approach to human social judgment is Haselton and Buss’s (2000) Error Management Theory, which posits that less costly errors will be favored over more costly ones, to the extent that such errors recurrently impacted reproductive fitness.

Haselton and Funder also argue that the social psychology of person perception and personality judgment could benefit from an evolutionary perspective, because deciding with whom to mate, with whom to affiliate, or whom to avoid have clear adaptive consequences. Unfortunately, relatively little theoretical or empirical research has been undertaken to date that attempts to disentangle whether an error or bias would have been adaptive or not. Nevertheless, Haselton and Funder’s central tenet that human cognition is designed for survival and reproduction—not necessarily accurate judgments—will go a long way toward establishing an evolutionary psychology of social judgment in the future.

*Chapter 3: “Modular Minds, Multiple Motives” by Kurzban and Aktipis*

In Chapter 3, Kurzban and Aktipis utilize the familiar phenomenon of cognitive dissonance as evidence of the modularity of the mind. Cognitive dissonance, possessing two contradictory thoughts or beliefs simultaneously, represents a sort of puzzle for those who view humans as possessing a ‘self’ that is constantly omniscient of one’s thoughts and feelings. The authors, like those of the previous chapter, note that cognitive mechanisms must be adaptive, not necessarily truthful and accurate. Psychological mechanisms would be favored by selection to the extent that their output led to increased reproductive success, not necessarily because they provided the most realistic representations of the world. Viewing mechanisms in this way, and using the computational model of a modular mind, makes it easy to see how contradictory information could be encapsulated within separate modules without conflict, as long as the modules do not require consistency with one another to function properly. To support this claim, the authors present evidence of people who apparently possess multiple inconsistent beliefs simultaneously with no negative feelings or dissonance: patients with physically separated brain halves, patients with Dissociative Identity Disorder, as well as healthy people who continue to experience

illusions even after explicitly learning that their perceptual experience is false. The chapter culminates with the authors' conclusion that there is no 'self' *per se*, only a constellation of underlying evolved psychological mechanisms which are encapsulated from one another but which work in concert in adaptive ways to satisfy multiple motivations of accuracy, consistency and self-enhancement.

*Chapter 4: "Why did the Human Self Evolve?" by Sedikides, Skowronski, and Dunbar*

In their chapter, Sedikides, Skowronski, and Dunbar provide an additional attempt to unravel the mystery of the self by placing it in an evolutionary context. Sedikides et al. examine the self from three perspectives: (a) the *symbolic self*—the self as an object of one's own reflection, (b) the *executive self*—which regulates the self in the social and physical environment, and (c) *reflexivity*—which is the ability to depict oneself in one's ongoing relationship with other environments. Sedikides et al. also speculate on the evolutionary timeline of the self and some of its possible adaptive milestones. For example, they discuss how phenomena such as self-reflection, theory of mind, affective forecasting, and awareness of self-regulatory ability may have been instrumental in the evolution of the self. They also stress that it is the immersion of the self in an inherently social structure—where complex alliances, cheating, and cheater-detection are possible—that may have spurred the development of the self. In an environment of social complexity, the ability to successfully navigate dynamic social relationships may have provided a reproductive advantage. Nevertheless, it remains unclear whether the evolution of the self was a cause, consequence, or artifact of human social relationships.

Sedikides et al. also discuss how the self may be an adaptation designed to promote individuals' self-esteem, their ability to engage in social interactions, and their standing in social groups. Despite theoretical advancement, our understanding of precisely how and why the human self evolved remains largely a mystery to social and evolutionary psychologists alike. Although a great deal of empirical research remains to be done to further understand the function of the self—and some preliminary research has already been undertaken (Hill and Buss, 2006; Kirkpatrick and Ellis, 2001, 2006; Kirkpatrick, Waugh, Valencia, and Webster, 2002; Webster and Kirkpatrick, 2006)—we concur that an evolutionary theory of the self can augment current social psychological perspectives.

*Chapter 5: "The Ecological Approach to Person Perception: Evolutionary Roots and Contemporary Offshoots" by Zebrowitz and Montepare*

In Chapter 5, the authors begin by introducing the tenets of ecological theory (ET) of person perception. The first is *perceiving is for doing*, which includes focusing on behavior as the key component of a perceiver and adaptive function based on a broader view. This addition of a broader view unfortunately includes an outdated notion of "survival of the species" and an emphasis on individual experiences as "designing" person perception mechanisms in the same way that natural selection does. The second tenet is that the *stimulus is central*, which emphasizes the importance of considering the environmental input into perception mechanisms. The third tenet is an emphasis on *social affordances*, which are inherent properties of the individual or object being perceived which may occur via natural selection or represent cultural differences. The fourth tenet is *attunements guide perceptions*: the sensitivity that individuals possess to specific affordances will guide their perceptions in an interaction of innate attunements as well as learned attunements.

The remainder of the chapter details past research supporting these four tenets as well as a proposed research agenda for ET. Most of the research presented is likely familiar to evolutionary and social psychologists alike. The authors have some knowledge of evolutionary theory but make common mischaracterizations throughout the chapter. For example, there is a lack of explicit consideration of conditional mechanisms as universal even if their output is not universal: The authors dismiss the idea that differences in preferences for extreme health signals such as tattoos cannot possibly be the result of a universal (context-dependent) psychological mechanism. They may also unintentionally confuse readers in their research agenda section in which they propose that studies of “adaptively relevant affordances should ... differentiate between those that bear on inclusive fitness from those that bear only on contemporary adaptive success.” This is an odd dichotomy, from an evolutionary perspective, because inclusive fitness effects and adaptations that influence current reproductive success are not mutually exclusive concepts, and do not fully represent the range of phenomena studied by an adaptationist program. Though its description of evolutionary psychology principles leaves room for improvement, this chapter provides an important introduction to ET and a thorough review of the psychological literature that supports it.

*Chapter 6: “Social Functionalism and the Evolution of Emotions” by Keltner, Haidt, and Shiota*

The authors of Chapter 6 argue that social emotions increase one’s reproductive success by enabling long-term beneficial social commitments. They present four non-exclusive levels at which an emotion may function: *individual* – informative about environment, *dyad* – understand theory of mind of another person, *group* – allow for group goal-directed cooperation, and *culture* – instill norms and practices in children of a society. The difference between the group and culture levels, however, is not well-defined and appears to be a distinction more in degree than in definition. For instance, would not teaching children of a society the applicable rules and norms reflect one strategy for facilitating cooperative performance at a group level? The separation of group and culture levels thus adds unnecessary detail and perhaps confusion. The authors later explore individual differences in emotion, showing that differences in personality can uncover information about differences in emotionality. While we agree completely that individual differences can reveal the functionality of emotions, it is important to present a theoretical rationale for why individual differences exist at all levels, not just what might be considered the most adaptive extreme. Are the other levels the result of mutation or are they adaptive in certain situations or environments? The essence of this section does provide a very promising field of future study in adaptive individual differences.

Cultural differences also represent productive ways in which hypotheses can be tested about the specific functions of various social emotions. The authors argue that most cross-cultural differences in emotion will occur at the group or cultural levels of analysis. This is because cooperative behavior within groups is determined by the economic and environmental factors in which the group is immersed. Following this logic, some emotions may provide more important information in certain societies than in others, and will therefore be given greater weight. Individual and dyadic level emotion functionality, however, will not vary as much by culture since the inputs to these mechanisms do not tend to differ depending on societal structure. Though we desired greater elaboration in places,

the chapter provides what we believe to be promising directions for future research into greater specificity of emotional mechanisms.

*Chapter 7: “An Evolutionary Perspective on Social Identity: Revisiting Groups” by Brewer and Caporael*

Chapter 7 presents theoretical rationale for multilevel selection theory (MST) as it applies to human psychology. The same arguments for MST are presented here as in previous expositions (Sober and D. S. Wilson, 1998; D. S. Wilson and Sober, 1994), but these arguments are still not theoretically clear in explaining why humans would be a species in which we would expect to see important group-selected adaptations. Certainly MST is a theoretical possibility, but showing that group-level selection has had a substantial impact on human evolved psychological mechanisms requires more evidence. Currently there is no evidence for any exclusively group-selected psychological adaptations that cannot be explained by genetic selection. Our goal here, however, is not to critique MST itself but to review this chapter on a specific topic area.

Most of the chapter focuses on adaptations to group living from an MST perspective. Little attention is given to the idea that lower-order selection should be invoked first unless it cannot explain a phenomenon, only then should higher-order levels of selection be postulated. They build an argument about optimal group size constrained by simultaneous desires to specialize within a smaller group to become irreplaceable and to join a large group in order to reap greater collective benefits. They present four levels of group size including dyads, task groups, demes (bands), and macrodemes (macrobands) that they propose operate in qualitatively different ways and can make separate predictions for social identity in humans. These various group sizes would require incorporating different numbers of individuals into one's social identity, thus resulting in either personalized or depersonalized social identities for smaller or larger groups, respectively. They then transition into ingroup and outgroup mechanisms, presenting data about early human population patterns, coming to the surprising conclusion that intergroup conflict likely had little or no influence on human evolved psychology. The chapter ends by proposing that evolutionary psychology should not attempt to study evolved mental adaptations, as they are difficult to identify, and should instead focus on causality over much shorter time spans like single lifetimes or multiple generations. We disagree with this characterization of evolutionary psychology and instead offer that numerous evolved psychological mechanisms have already received resounding support from multiple avenues of research (cf. Tooby and Cosmides, 2005) and we hope that the adaptationist program continues to flourish.

*Chapter 8: “Evolutionary Bases of Prejudices” by Neuberg and Cottrell*

Neuberg and Cottrell provide a refreshing look at the functional bases of stereotypes and prejudices. Most research in social psychology has traditionally focused on the proximal mechanisms behind stereotyping and prejudice (e.g., implicit and explicit attitudes) while ignoring their possible functions (e.g., evolved tendencies to be initially skeptical of outgroup members). The main point of this chapter is that “contemporary prejudices may be products of adaptations engineered by natural selection to manage the threats posed to ancestral humans by their social environments” (p. 164). Ultrasociality—our ability to live and solve adaptive problems collectively—may be the impetus of

evolved group-based psychology. Group living confers both substantial costs (intra- and inter-group violence, contagious diseases, free-riding) and benefits (shared food, protection; see also Neuberg and Cottrell, 2008).

Due to the risks and rewards of social living, people are discriminating in whom they pursue for friendships, colleagues, and mates. In addition to age and sex, people tend to process ingroup or outgroup membership automatically. This is because outgroups likely represented grave threats to resources and survival throughout our evolutionary past. But why do humans tend to harbor specific prejudices toward specific outgroups? Neuberg and Cottrell argue quite convincingly that there exist multiple qualitatively distinct sets of expectations and reactions associated with specific outgroups that function to minimize costs associated with sociality, which they term “prejudice syndromes.” Specific outgroups themselves do not elicit prejudicial attitudes and behaviors *per se*; instead, specific stereotypes common to an outgroup’s members are further associated with a specific emotion, which in turn may be associated with a complementary prejudiced reaction that served an adaptive function in our evolutionary past. Or, as Neuberg and Cottrell succinctly put it, “people may not be prejudiced against particular groups of people *per se*, but rather may be prejudiced against specific constellations of threats apparently posed against those groups” (p. 172).

Stereotyping and prejudice research is one of the fastest-growing areas in contemporary social psychology (Webster, 2007a); theoretically however, this area is microcosm of social psychology itself—it has produced a wealth of excellent micro-theories, but no lasting, over-arching meta-theory. We feel this chapter provides an excellent, comprehensive roadmap for organizing disparate social psychological theories on stereotyping and prejudice within the common framework of evolutionary theory.

*Chapter 9: “Accuracy and Bias in Romantic Relationships: An Evolutionary and Social Psychological Analysis” by Fletcher, Simpson, and Boyes*

How is it that “love is blind” yet we seem to know our partners more accurately than most other people? The authors of Chapter 9 address this paradox by showing that accuracy and bias can coexist in the mind simultaneously in the form of two separate and independent motivations: truth-seeking and positivity-seeking. The evidence they present reveals that people in happier, more stable relationships tend to idealize their mates. Other evidence reveals that individuals are generally realistic and reliable when it comes to estimating how well a given relationship will turn out or when inferring their partners’ thoughts and feelings. It would be adaptive to maintain positivity about one’s partner in that it allows for long-term commitment and child-rearing, but it would have been simultaneously adaptive to track the true state of the relationship so as not to incur unnecessary costs while maintaining positivity.

The authors then present detailed predictions of this model based on environmental contingencies, relationship type, sex differences, and individual differences. For instance, they predict that the stage of a long-term relationship can influence the functioning of these tendencies: At the start of a relationship, truth-seeking motivation should be more important because one still may have other options and has not invested much yet, but as relationship length and investment increase, positivity biases should become more important in maintaining the relationship one has already carefully determined is worth such investment. Sex differences may also determine the relative importance placed on

positivity as compared to accuracy when evaluating specific traits in long-term mates. For example, women are predicted to judge kindness more accurately than men, whereas men are predicted to judge attractiveness more accurately than women. The important point here is that each trait must be identified, placed within the context of the type of relationship, and further specified by individual differences to fully understand whether a given individual will tend toward positivity or accuracy when evaluating the trait. This emphasis on increased specificity of mechanism provides material for multiple areas of research on ultimate-level motivations of mate evaluation.

*Chapter 10: "Evolution, Relationships, and Health: The Social Shaping Hypothesis" by Taylor and Gonzaga*

The Social Shaping Hypothesis (SSH) proposes that "social relationships modulate an individual's psychological, biological, social and behavioral responses to stressful events and circumstances" (p. 212). This influence presumably occurs during three phases: *calibration*, in which early life experiences shape later response patterns; *regulation*, in which current relationships influence the magnitude of stress experienced; and *information*, which consists of communication by relationship partners about environmental threats. The authors first present evidence of physical instantiation of these mechanisms within the sympathetic nervous system. The rest of the chapter is divided into three different types of relationships and their impact on coping and health, followed by a short description of why humans provide social support to others.

The authors propose that maternal nurturing serves as a signal to offspring determining the long-term development and activation of stress responses. Much evidence is cited for the health benefits and stress-inoculation qualities resultant from high levels of early maternal nurturance. The implication, however, is that low or inconsistent levels of nurturance lower the long-term threshold for stress experiences and that both situations represent adaptive and contingent responses to the early input. The authors do not, however, provide evidence that low levels of nurturance lead to adaptive stress responses in those children later in life, given the environment that caused the lack of nurturing. Pair-bonding and same-sex ties comprise two important areas of social relationships that influence stress responses at the *calibration* and *information* stages. Pair-bonding appears to be more important in mediating men's stress responses, whereas same-sex ties appear to be more important in mediating women's stress responses. Men tend to gain more health benefits and experience decreased subjective stress in the context of a pair-bond, whereas women experience similar effects in the context of same-sex ties, though there was little evidence presented for the effects of these relationships on women's health.

The authors propose that the reason we provide social support to others via these outlets is that giving support is not usually very costly. We can typically provide such benefits to others at little cost to ourselves while simultaneously obtaining benefits either via inclusive fitness effects or in reciprocal exchange benefits. They conclude the chapter by detailing two main branches of stress response patterns: a slow-acting lowered stress response, or a high-strung long-lasting stress response. Here they claim that both response patterns can be adaptive in different environmental circumstances, but the chapter would have benefited from greater explanation of how the more intense stress response can be adaptive. As it stands, though, the investigation of individual differences in developmental

trajectories and lifelong relationship effects can fruitfully combine developmental psychology, social psychology, and evolutionary psychology.

*Chapter 11: “The Altruism Puzzle: Psychological Adaptations for Prosocial Behavior” by Van Vugt and Van Lange*

Altruism was a puzzling phenomenon for many early proponents of evolutionary theory. How could self-sacrificial behavior evolve when it was obviously detrimental to the survival and reproduction of the altruist? Both inclusive fitness theory (Hamilton, 1964) and reciprocal altruism theory (Trivers, 1971) proposed possible solutions to this problem. Social exchange theory further suggests that relationships built on both reciprocity and reputation are important in explaining cooperative behavior in humans. Specifically, social exchange theory is built largely on the foundation of reciprocal altruism, and posits that if reciprocal exchanges are recurrent over time, trust and reputations may develop. Exchange partners who are fair are maintained, those who are exploitable are often exploited, and those who do the exploiting are promptly shunned. In their chapter, Van Vugt and Van Lange propose an ambitious and well-grounded evolutionary social psychology of altruism and prosocial behavior. They suggest that trust, commitment, loyalty, and forgiveness may be evolved psychological mechanisms designed to facilitate and maintain social exchange with a beneficial partner. They also suggest that humans’ propensity to attend to, encode, and retrieve negative information more than positive information may be adaptively functional in that it keeps one from being continually exploited in social exchange relationships. Further, some social emotions such as empathy, guilt, anger, contempt, and envy may have evolved to help regulate cheating and cheating detection in social exchange relationships.

Overall, the authors provide a convincing argument of why social exchange in humans may be the hallmark of our altruistic and prosocial tendencies. Nevertheless, there is still a dearth of empirical studies to support this theoretical viewpoint, and it remains unclear whether social exchange behavior is an emergent process among interdependent agents, a product of natural selection, or an artifact or byproduct of it. Despite these limitations, we agree with the authors that the time is ripe for research on the evolutionary social psychology of altruism and prosocial behavior.

*Chapter 12: “The Evolution of Aggression” by Buss and Duntley*

Historically, biological approaches to the psychology of aggression have been downplayed due to the dominance of radical behaviorism, learning theories, and misconceptions about genetic determinism. Buss and Duntley, however, believe social psychologists should consider viewing aggression as an evolved solution to specific adaptive problems. Buss and colleagues (e.g., Buss and Shackelford, 1997) have proposed nine adaptive problems within three domains of acquisition for which aggression may serve as a solution: (a) *resource acquisition* (e.g., appropriation of others’ resources, reduction of resources expended on other children), (b) *dominance acquisition* (e.g., defense against attack, deterrence of rivals’ future aggression, ascent of dominance hierarchies), and (c) *mating acquisition* (e.g., infliction of costs to same-sex rivals, dissuasion of mates from infidelity, reacquisition of former mates, acquiring sexual access to otherwise inaccessible mates). Buss and Duntley also stress that aggression is a sex- and context-contingent strategy, whereby men and women may employ different types of aggression, given the

different adaptive challenges they sometimes face. For example, men who are competing over women are far more likely to use physical aggression to resolve intrasexual competition than are women. In contrast, women who are competing to attract attention from men are far more likely to use covert or indirect forms of verbal aggression to resolve intrasexual competition than are men.

But do humans necessarily have an evolved adaptation for homicide? Buss and Duntley believe that their *homicide adaptation theory*—specific evolved psychological mechanisms for the murder of conspecifics under certain conditions (e.g., warfare, sexual rivalry, spousal infidelity, coalition defection)—provides a framework for viewing homicide as a means to an adaptive end. They cite evidence that people—and particularly men—are capable of devoting much thought to planning and fantasizing about killing others (e.g., estimating the formidability of victims, weighing the likely consequences of murder; see also Buss and Duntley, 2008). Buss and Duntley also acknowledge that an alternative theory called *the byproduct hypothesis*—murder as the result of evolved psychological tendencies for violence as a means of social control—holds some merit, but lacks extensive empirical support. The authors also suggest that future research should pit these two evolutionary theories against one another in a series of studies.

Although Buss and Duntley did an excellent job of covering most of the evolutionary perspectives on aggression, they did little to integrate their evolutionary approach with recent theoretical advances in the social psychology of aggression (e.g., the general aggression model [GAM], Anderson and Bushman, 2002; see also the kinship, acceptance, and rejection model of altruism and aggression [KARMAA], Webster, 2008). Nevertheless, we agree with Buss and Duntley’s assessment that a social psychology of aggression is incomplete without considering the adaptive motivations that often underlie human violence.

*Chapter 13: “Evolutionary Social Influence” by Sundie, Cialdini, Griskevicius, and Kenrick*

In their chapter, Sundie, Cialdini, Griskevicius, and Kenrick propose an evolutionary psychology of social influence, which posits that specific domains of social influence function to help people attain specific goals or to solve problems within specific relationships. For example, an individual would likely pursue different social influence goals depending on whether the person to be influenced was a parent, friend, mate, ingroup member, or outgroup member. The authors also note how Cialdini’s (2001) six principles of social influence—reciprocity, liking, scarcity, social proof, authority, and commitment and consistency—are each compatible with evolutionary theory. For example, in a mating context, scarcity tactics may be used while flirting with a potential mate by saying, “I’m one of a kind” or “I’ll be leaving town tomorrow.”

Sundie et al. argue that people are swayed by social influence tactics in part because many of them follow patterns of heuristic thinking—cognitive shortcuts that enable us to navigate a complex world efficiently. Instead of thinking critically about, say, a celebrity endorsement (i.e., authority), people are more likely to think, “I like that celebrity, therefore I like the product,” because it is a computationally efficient way to process the information. In this sense, many social influence techniques take advantage of people’s “fast and frugal” information processing abilities (cf. Gigerenzer, Todd, and the ABC Research Group, 1999). Sundie et al. close their chapter highlighting ways in which we can

be cheated by social influence. For example, mimicry is a tactic used to falsely signal group membership in order to secure information or resources. Like other authors reviewed here, they believe that humans' remarkable ability to engage in such dynamic social influence tactics may be the result of a cognitive arms race between cheaters and cheater-detectors over evolutionary time. A psychology of social influence that is informed by evolutionary theory is long overdue. In their chapter, Sundie et al. make a compelling case for not only the possible adaptive processes underlying social influence tactics, but also for the integration of social psychological and evolutionary theory to help explain them.

*Chapter 14: "Groups as Adaptive Devices: Human Docility and Group Aggregation Mechanisms in Evolutionary Context" by Kameda and Tindale*

Group problem-solving is one of the hallmarks of human nature. Although social and organizational psychologists have studied groups for decades, only recently has evolutionary theory inspired new perspectives on the advantages and limitations of group problem-solving and decision-making. In their chapter, Kameda and Tindale critically review several aspects of group performance from an evolutionary perspective. Although groups are good at solving some problems, they often fail to exceed the baseline of the problem-solving ability of the "best" individual in the group (i.e., two [or more] heads aren't always better than one). The authors argue that these shortcomings have their roots in group-process losses such as coordination problems (i.e., inefficiency in organizing group members' skills or resources) and motivation problems (i.e., diffusion of responsibility, loss of motivation in a group setting). Group coordination includes a variety of specific adaptive problems such as jockeying for status in hierarchies, meta-knowledge (knowing who knows what information in a group), and gossip (which serves a social-bonding function). Group coordination is also hampered by conformity bias (e.g., "herd mentality" in economic markets) and social sharedness in groups (i.e., when information is known by or shared by multiple group members, that information is more likely to influence group decisions). Some of the motivational problems faced in group problem-solving include social loafing (i.e., laziness) and social compensation (i.e., working hard to compensate for others' laziness). Because of these problems, groups sometimes perform worse than individuals in problem-solving tasks.

Overall, as social psychology has moved toward social cognition, it has simultaneously moved away from its strong tradition in behavioral research with real groups. Not only would evolutionary theory provide a bold new perspective from which to study group problem-solving and decision-making, it would also bring group psychology back into the forefront of theoretically-driven scientific research. We hope that researchers of group psychology will be inspired by Kameda and Tindale's theoretical approach and allow evolutionary theory to inform group research.

*Chapter 15: "Evolution and Culture" by Norenzayan, Schaller, and Heine*

Chapter 15 discusses the evolution of culture, and specifically how universals should be defined and investigated from an evolutionary perspective. The authors spend the first half of the chapter articulating their view of culture and discussing the emergent cultural result of shared evolved psychological mechanisms. They subscribe to the view that culture has been selected for via reproductive benefits accrued by individual participants: Culture may be socially constructed but its construction follows predictably

from the specifications of the evolved psychological mechanisms of its constructors. The second half of the chapter proposes and describes four degrees of universality for characterizing evolved psychological mechanisms based on underlying architecture, functionality, and accessibility. Non-universals are simply mechanisms that are not shared cross-culturally. Existential universals include mechanisms with universal instantiation but different functions. Functional universals refer to mechanisms with universal instantiation, universal functionality, but different levels of accessibility. Accessibility universals are mechanisms with universal instantiation, universal functionality and universal accessibility. These distinctions are necessary, according to the authors, to properly identify and study human psychological universals in the midst of cultural diversity.

The authors point out, and we agree, that the best place to look for cross-culturally universal psychological mechanisms is likely to be within the predicted specificity of the output of conditional mechanisms rather than by searching for domain-general mechanisms. The authors also correctly note that the universality of a given trait or behavior could be the result of repeated invention or cultural propagation and that evolutionary psychologists should make a point to explain when these methods of achieving universality are less likely than selection itself. Cultural variability in a trait or mechanism can likewise be attributed to more than merely random social construction: mechanisms might show varied output via differential distribution of instruction or imitation, differential distribution of gene frequencies associated with the mechanism, or different predictable outputs of the mechanism based on culturally varied inputs. We disagree with the implication that higher levels of universality are better than lower levels of universality, as in their word choice of “demoted” when referring to moving one’s focus from a more universal level to a less universal one (p. 356). This implication could prove deceptive to readers unfamiliar with evolutionary theory as they may assume that completely universal mechanisms are most well-adapted. Clearly such a claim is not necessarily always correct; for example in negative frequency-dependent selection, the success of a given phenotype actually depends upon it being uncommon within the population. The chapter presented valuable insights for evolutionary psychologists, and psychologists in general, who search for and label psychological mechanisms they study cross-culturally.

## **Conclusion**

Overall, Schaller, Simpson, and Kenrick’s edited volume, *Evolution and Social Psychology*, provides insightful chapters on topics of interest to both evolutionary and social psychologists ranging from the self to aggression to culture. In terms of the organization and topic choice, we believe that a chapter reviewing methodology used by social and evolutionary psychologists would have made an informative supplement to the impressive set of theoretical and applied psychology contributions and could have provided common ground with which both social and evolutionary psychologists would be comfortable. The book as a whole is accessible to scholars interested in both evolutionary and social psychology, though the hope is that as we move forward, more readers will be integrated evolutionary social psychologists, able to incorporate the theories and findings presented by both fields into their own work. This volume is another promising step in that

direction, by providing a collection of chapters presenting articulated theories and exciting future directions.

**Acknowledgements:** Both authors contributed equally to this book review and are listed alphabetically. Correspondence with either author or both authors via email is encouraged.

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