
How Can an Understanding of Evolutionary Psychology Contribute to Social Psychology?

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There has been conflict and tension between social psychology and evolutionary psychology over the past few decades. This is understandable given that it is difficult to avoid conflict between different scientific approaches, with the emergence of string theory in physics being one recent example (e.g., Kuhn 1962). It is easy for scholars to become so focused on their own approaches and the sorts of questions that they care about that they fail to appreciate the value of other perspectives. As an illustration of the tension between social psychology and evolutionary psychology, we recently heard an evolutionary psychologist publicly discount the entire field of social psychology during a presentation at a conference as a “cabinet of curiosities” that has limited value because there is no overarching theory that connects the disparate pieces. He suggested that an evolutionary framework would be the best way to correct what he perceived as deep flaws in the approach that social psychologists have taken to understanding human behavior during the past century. Social psychologists, in turn, have charged evolutionary psychologists

with telling “just so stories” that can never be tested empirically.

This tension between social psychology and evolutionary psychology is similar in many respects to the turmoil that surrounded the emergence of social cognition within social psychology in the 1980s. The focus on social cognition transformed some areas of research in social psychology over a remarkably brief period of time (e.g., attitudes, stereotyping). In fact, advocates of the “social cognitive approach” believed that social cognition should be applied far more broadly with some especially enthusiastic supporters—such as Ostrom (1984)—arguing that social cognition should have sovereignty over the entire field of social psychology. These sorts of claims concerning the sovereign status of social cognition—and the not-so-subtle implication that other approaches were inadequate—sparked controversy and led to a great deal of resistance from social psychologists who were less enthusiastic about the idea that all social psychologists should be forced to adopt a social cognitive perspective. The social cognition enthusiasts were adamant that their perspective would revolutionize the field, which led to them being perceived by other social psychologists as having an almost evangelical zeal (e.g., Carlston 2010). There were a wide variety of conflicts that emerged over the years concerning various issues, such as the topics of conferences, editorial positions at journals, and funding priorities for federal agencies. The tension between the social cognition enthusiasts and the rest of the field eventually dissipated,

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however, and social cognition has been integrated into the broader field of social psychology. In fact, social cognition has become such a fundamental part of modern social psychology that younger scholars are likely unaware of the fact that this conflict existed. It is likely that something similar will occur with regard to evolutionary reasoning becoming a fundamental aspect of social psychology such that young scholars 20 years from now will be unaware that there was any tension about the integration of an evolutionary perspective.

It has been clear since the time of Charles Darwin that evolutionary processes have shaped the physical characteristics of humans, including our opposable thumbs, relatively large brain, and upright body posture. However, it was not until the 1970s that researchers began to seriously consider the possibility that the same evolutionary processes that led to the physical characteristics possessed by humans may have also engineered our mental processes (e.g., Wilson 1975). The application of an evolutionary framework to psychological phenomena was initially controversial because most explanations for behavior and mental processes at that time focused on a form of unconstrained learning. That is, it was often assumed that individuals were born as relatively "blank slates" that were molded by their social environments. The possibility that our thoughts, feelings, and behaviors were enabled by biological processes over the course of human evolution was a radical departure from this *tabula rasa* view of the human mind. During the intervening decades, the application of an evolutionary perspective to our understanding of psychological phenomena has become common and has offered insights that have deepened our understanding of human psychology and behavior. Despite this integration, there is still an uneasy tension that exists between evolutionary psychology and social psychology.

Evolutionary psychology is a metatheoretical perspective that influences how researchers approach questions about psychological phenomena (Buss 1999). The most basic assumptions of evolutionary psychology (e.g., biological processes play a role in the thoughts, feelings, and

behaviors of individuals and these biological processes have acted over evolution) are widely accepted and supported by research from various fields. Evolutionary psychology is most often concerned with mid-level theories or models derived from an evolutionary framework, such as life history theory (e.g., Ellis et al. 2009) or parasite-stress theory (Fincher and Thornhill 2012). These mid-level theories and models have already been used to enhance our understanding of social psychological phenomena and an evolutionary perspective has the potential to make additional contributions to social psychology.

The purpose of this volume is to continue the dialogue between social psychologists and evolutionary psychologists initiated in other forums (e.g., Cosmides et al. 1992; Forgas et al. 2007; Kenrick et al. 2005; Schaller et al. 2006; Simpson and Kenrick 1997). This is an important exchange of ideas because social psychologists may be able to learn valuable lessons and gain important insights from those who have adopted an evolutionary perspective that may further strengthen the field of social psychology. We are not advocating that an evolutionary perspective must have sovereignty over the field of social psychology. Rather, we are suggesting that social psychology would benefit from more often incorporating an evolutionary perspective when considering social psychological phenomena. Both social psychology and evolutionary psychology have made important contributions to our understanding of human psychology and behavior, and we expect that both areas will continue to do so in the future. However, neither of these approaches is perfect or able to offer complete explanations for all psychological phenomena at the present time.

At the most basic level, the adoption of an evolutionary framework acknowledges that many thoughts, feelings, and behaviors are due, at least in part, to psychological adaptations built by natural selection acting over the course of human evolution. An evolutionary perspective may be able to offer insights and facilitate understanding of an array of topics included within social psychology, such as romantic relationships, stereotyping and prejudice, aggression, prosocial behavior, and social influence. Kenrick et al.

(2005) suggested that social psychologists may be able to benefit from learning the following lessons from evolutionary psychologists: (1) focus less on proximate triggers of behavior and devote more effort to understanding ultimate causes of behavior, (2) pay more attention to domain-specific processes rather than focusing exclusively on domain-general processes, and (3) reconsider the current conceptualization of culture by explicitly recognizing that it has coevolved with humanity. The points suggested by Kenrick et al. could be helpful for broadening and improving the field of social psychology. For example, culture clearly plays a role in shaping behavior, but culture does not develop arbitrarily. Rather, culture has coevolved with biological processes (i.e., gene-culture coevolution) and both exert influence over how humans think, feel, and behave (see Kenrick et al. 2003 or Mesoudi 2009, for extended discussions).

There are already many psychologists pursuing research at the intersection of social psychology and evolutionary psychology or who are applying some of the ideas and approaches from evolutionary psychology to their work in social psychology. For example, studies have found that pathogen exposure is associated with political orientations (Fincher et al. 2008), ovulating women prefer the scent of symmetrical men (Thornhill and Gangestad 1999), and humans are more easily conditioned to fear snakes or spiders than guns (see Öhman and Mineka 2001, for a review). However, there is still the potential for greater integration of an evolutionary perspective into the field of social psychology. The goal of the present volume is to facilitate this integration by (1) offering current evolutionary perspectives on some of the most widely researched topics in social psychology, (2) collecting discussions of prominent programs of research that bridge social psychology and evolutionary psychology, and (3) identifying areas for which evolutionary psychology may offer novel insights into phenomena at the core of social psychology. We also hope that the present volume will serve as a reference for researchers interested in perusing research at the intersection of social psychology and evolutionary psychology. Toward these ends,

this volume brings together chapters written by influential scholars who consider the application of an evolutionary perspective to social psychological phenomena. It is our hope that readers will come away from this volume with an appreciation for other perspectives that can be adopted when considering familiar topics. We hope that this volume will demonstrate to readers the importance of continuing to integrate an evolutionary perspective into social psychology.

Overview of the Volume

This volume consists of parts that address specific areas of research within the field of social psychology. Part 1 (Chaps. 2–7) considers social cognition, with chapters addressing issues such as modularity, religiosity, and comparative views of social cognition across species. Part 2 (Chaps. 8–13) examines processes related to the self, with chapters concerning topics such as self-esteem, self-deception, and self-presentation in social media. Part 3 (Chaps. 14–17) examines attitudes and attitude change, with chapters covering issues such as conformity, feminism, and the role of culture in shaping behavior. Part 4 (Chaps. 18–24) considers interpersonal processes, with chapters dealing with issues such as prosocial behavior, cooperation, coalitions, and the use of stereotypes. Part 5 (Chaps. 25–28) examines mating and relationships, with chapters on topics such as romantic attraction, familial relationships, and androphilia. Part 6 (Chaps. 29–31) addresses violence and aggression, with chapters concerning bullying, war, and terrorism. Part 7 (Chaps. 32 and 33) considers health and psychological adjustment, with chapters that address the behavioral immune system and subjective well-being. Finally, Part 8 (Chaps. 34–36) examines individual differences, with chapters concerning personality features and evolutionary game theory.

Part 1: Social Cognition

Part 1 (Chaps. 2–7) examines social cognition, which refers to cognitive processes that enable

individuals to understand and interact with others in their social environment (Adolphs 1999; Frith 2007; Olson and Dweck 2008). The term “social cognition” is used in a few different ways in the literature (e.g., a set of cognitive abilities, a subarea within social psychology, a general approach to understanding social psychological phenomena), which has sometimes led to confusion (see Macrae and Miles 2012, for an extended discussion). Regardless of how the term is used, the common thread that binds those who are interested in social cognition is an interest in the social consequences of cognitive processes (e.g., attributions, stereotyping). The authors in this part of the volume present their views concerning how an evolutionary perspective can deepen our understanding of social cognition.

Fiddick (Chap. 2) argues that social psychology has adopted an intentional stance as its primary mode for explaining behavior. He suggests that social psychology should adopt a design stance because this would lead to more integration with other cognitive disciplines. The author argues that this transition would not necessitate an abandonment of social behavior because social psychologists could focus on mental faculties that have evolved to solve social problems.

Machluf and Bjorklund (Chap. 3) focus on the role that social cognitive development has played in the evolution of the human mind. Humans are an extremely social species, and social cognition may have served as a driving force in the evolution of human intelligence. Machluf and Bjorklund review work showing that humans have a strong preference for social stimuli from the earliest days of life. They also review work showcasing the developmental changes that occur in the social cognitive capacities of individuals as they mature. The development of human social cognition during the earliest years of life is compared and contrasted with the social cognitive abilities of chimpanzees (*Pan troglodytes*) because these are the closest living relatives of humans.

Barrett (Chap. 4) reviews the contentious idea that the human mind consists of modules. He adopts a biological view of modularity and argues that this perspective is indispensable for

considering the structure and function of the human brain. The author explains how a hierarchical view of brain modularity may lead to a reconsideration of the traditional view of modules as being autonomous and independently shaped.

Ketelaar (Chap. 5) considers the evolutionary functions of emotion. He provides an historical review of evolutionary approaches to understanding human emotions that includes early theories proposed by Charles Darwin and William James as well as contemporary ideas by scholars such as Robert Trivers and Randy Nesse. The author argues that emotions serve as strategic commitment devices that are capable of influencing decisions and behaviors in various areas of life (e.g., economic decisions, social behaviors).

Kirkpatrick (Chap. 6) reviews the application of an evolutionary perspective to religiosity. He argues that an evolutionary approach is essential for considering questions that deal with whether religiosity is driven by basic needs or motives. This chapter considers explanations for religiosity that stem both from the individual and from broader social influences.

Vonk, McGuire, and Johnson-Ulrich (Chap. 7) discuss the role that comparative psychology may play in improving our understanding of social cognitive abilities. They review hypotheses and research concerning the evolution of a set of foundational social cognitive skills. The authors suggest that researchers make more of an effort to appreciate the social cognitive skills of other species rather than searching for evidence of humanlike traits in nonhuman research subjects.

Part 2: Self

Part 2 (Chaps. 8–13) examines processes related to the self. The self is an essential part of the interface between our physical bodies and the social environment (Baumeister 2010). According to Baumeister (1998), there are three sets of phenomena that serve as the basis of the self. The first set of phenomena concerns *self-knowledge*, which captures issues such as self-awareness (i.e., the extent to which individuals reflect on who they are), self-concept (i.e., the information

that individuals actually hold regarding who they are), and self-esteem (i.e., the value that individuals place on their mental representations of themselves). The second set of phenomena concerns the *interpersonal self*, which captures self-presentation (i.e., how individuals portray themselves to others) and self-concept change (i.e., the consequences that interpersonal contexts have for how individuals think about themselves). The third set of phenomena deal with the *executive function of the self*, which refers to the ability of individuals to alter their own behavior (i.e., self-regulation) and behave in accordance with their own desires (i.e., self-determination). The authors in this part of the volume present their views concerning how to apply an evolutionary perspective to the scientific study of the self.

Neubauer (Chap. 8) considers the link between large relative brain size and the ability to deal with the challenges of a changing environment through learning and behavioral flexibility. He considers the cognitive abilities and behaviors of a small number of species that have relatively large brains and long life spans (e.g., chimpanzees, African elephants). These species are similar to humans with regard to their delayed maturation and extended period of brain development.

Park and van Leeuwen (Chap. 9) consider the evolution of psychological mechanisms concerning social identification processes. Their chapter predominantly focuses on coalitional social identity (e.g., nationality, ethnicity, religious affiliation). The authors suggest that this form of social identity may constitute a set of loyalty-signaling characteristics that indicate membership in the coalition and the intention to behave in a cooperative fashion.

Kavanagh and Scrutton (Chap. 10) consider the evolutionary function of self-esteem. They focus primarily on the sociometer model, which argues that self-esteem reflects the extent to which an individual believes that he or she is valued as a relational partner. Empirical support for the sociometer model is reviewed and areas that require further investigation are identified (e.g., the number of sociometers that exist, domain-specific versus domain-general nature of these sociometers).

Stinson, Cameron, and Huang (Chap. 11) argue that self-esteem has evolved to assist individuals with the formation and maintenance of interpersonal relationships. In addition to reflecting the extent to which individuals are valued by their social environments, these authors suggest that self-esteem may also influence how individuals are perceived by others. Stinson et al. suggest that the self-esteem system helps humans to successfully navigate their social worlds.

Von Hippel (Chap. 12) reviews the evolution of self-deception. He argues that self-deception evolved to allow individuals to facilitate the deception of others and avoid the cognitive costs associated with deceit. This chapter also provides a review of recent studies concerning self-deception and the role that self-deception plays in deceiving others.

Piazza and Ingram (Chap. 13) consider the application of an evolutionary perspective to cyberpsychology. The chapter focuses on six areas that have been a traditional focus of evolutionary psychology: mating, intrasexual competition, parenting and kinship, friendship, personal information management, and trust and social exchange. The authors are particularly attentive to research concerning Internet-based social networking.

Part 3: Attitudes and Attitudinal Change

Part 3 (Chap. 14–17) examines attitudes, which refer to the relatively general and enduring evaluation of an object (i.e., the extent to which we judge something as being “good” or “bad”). There are few topics that have been as influential to the field of social psychology as the study of attitudes and attitude change. The reason that attitudes have generated so much interest is the potential they have for predicting the future behavior of individuals. However, the connections between attitudes and behaviors are complex and impacted by issues such as the accessibility, strength, and stability of the attitude (reviewed in Fabrigar and Wegener 2010; Petty and Briñol 2010). The chapters in this part of the volume concern the advantages of applying an evolutionary framework to attitudes and attitudinal change.

Lord, Hill, Holland, Yoke, and Lu (Chap. 14) consider construal models of attitudes, which suggest that individuals construct their evaluative responses online. When considered from this perspective, attitudes are able to serve evolutionary functions because they can be influenced by the temporary salience of evolutionary motives. This chapter reviews past research in which the experimental manipulation of motives such as disease avoidance, self-protection, and mate acquisition have led to changes in the attitudes adopted by individuals.

Coultas and van Leeuwen (Chap. 15) present an evolutionary perspective on conformity. The authors outline gene–culture coevolutionary models and review research on nonhuman animals that may shed light on conformity processes in humans. They suggest that accounting for the prior behavior of individuals in gene–culture models may improve their ability to predict and explain conformity.

Nicolas and Welling (Chap. 16) attempt to integrate evolutionary psychology and feminism. They argue that the reservations that many feminists have concerning evolutionary psychology may be based on misconceptions concerning the science behind evolutionary theory (e.g., the mistaken belief that evolutionary psychologists are arguing that human behavior is driven exclusively by genes). This chapter outlines the contributions that evolutionary psychology and feminism have made to women's issues and offers suggestions for reconciling these disciplines.

Morgan, Cross, and Rendell (Chap. 17) describe the field of cultural evolution, which treats culture as a shared body of knowledge that evolves in a manner that can be independent of genes. This process allows for gene–culture coevolution. The authors argue that there is potential for ideas concerning cultural evolution to influence social psychology (e.g., biases to copy the behavior of others when uncertain about how to behave).

Part 4: Interpersonal Processes

Part 4 (Chaps. 18–24) examines interpersonal processes. Social behavior can often be con-

ceptualized as group behavior. Individuals go about their lives trying to satisfy their personal goals (e.g., finding a mate, raising their children, earning more money) while also being bound to members of social collectives (e.g., sharing a racial/ethnic background, working for the same corporation, living in the same community). The authors in this part of the volume consider how an evolutionary framework can provide a richer understanding of interpersonal processes.

Krebs (Chap. 18) suggests that the views of prosocial behavior adopted by social psychologists can be improved by considering an evolutionary framework. An evolutionary perspective suggests that prosocial behaviors are produced by cognitive mechanisms that allowed early humans to solve adaptive problems. The chapter considers the possibility that prosocial behavior may have emerged due to sexual selection, kin selection, group selection, or as a by-product of other adaptations.

Kameda, Van Vugt, and Tindale (Chap. 19) present an evolutionary perspective on group behavior. They argue that group behavior is a fundamental aspect of human evolution and that humans have evolved adaptations to deal with the challenges associated with living in complex groups. The authors apply an evolutionary framework to a range of group tasks, including coordination, social exchange, status, and group cohesion.

Hruschka, Hackman, and Macfarlan (Chap. 20) consider how an evolutionary perspective may be applied to our understanding of friendship. The authors pay special attention to evolutionary explanations for the helping and sharing behaviors often found among close friends. Evolutionary hypotheses concerning friendship are evaluated using existing evidence from psychology, anthropology, and biology.

Prentice and Sheldon (Chap. 21) review the application of an evolutionary framework to our understanding of human cooperation. They blend evolutionary ideas with observations from social psychology to gain a better understanding of the ubiquitous nature of cooperation. This is accomplished by focusing on the conflict between the interests of the individual and those of the broader social environment.

Scott-Philips (Chap. 22) applies an evolutionary framework to social cognition and other proximate mechanisms in human language and communication. He is particularly attentive to the idea that human communication is a form of mutually assisted mind reading and mental manipulation. The author also considers proximate mechanisms associated with language structure and explanations for the stability of human communication.

Hutchison and Martin (Chap. 23) examine stereotypes from an evolutionary perspective. The authors suggest that stereotypes are produced by cognitive adaptations that allow humans to deal more effectively with their social environments. They also consider the possibility that cultural evolution may provide unique insights into the origins and nature of stereotypes.

Mazur (Chap. 24) applies an evolutionary framework to human status hierarchies. An important aspect of this chapter is the consideration of the similarities and differences between human status hierarchies and those found among the other African apes. The author considers how individuals of various species signal their status to other members of the group and the ways in which groups resolve disagreements concerning the status of particular members.

Part 5: Mating and Relationships

Part 5 (Chaps. 25–28) examines mating and relationships. Intimate relationships—whether they are romantic relationships, platonic friendships, or familial relationships—involve a sense of interdependence. As a result, a considerable amount of human life revolves around forming and maintaining our relationships with others (e.g., finding a romantic partner, reconnecting with old friends, fulfilling familial obligations). The authors in this part outline how an evolutionary perspective may contribute to our understanding of these relationships.

Little (Chap. 25) outlines an evolutionary perspective for the consideration of attractiveness in humans. He argues that attractiveness is vital to the human social world for a variety of reasons, including our interest in mating with partners

who will impart benefits to us and our shared hypothetical offspring. The author reviews research that has demonstrated the importance of attractiveness, considers several characteristics that have been found to impact attractiveness, and discusses variability in personal preferences concerning attractive features.

Vasey and VanderLaan (Chap. 26) consider evolutionary explanations for male androphilia (i.e., men who have a predominant sexual attraction to other men). Male androphilia presents an interesting evolutionary conundrum because it appears to have a genetic component even though it compromises reproduction. The authors consider the cross-cultural expression of male androphilia and review evidence concerning the kin selection hypothesis as a possible explanation for its persistence.

Salmon (Chap. 27) applies an evolutionary framework to familial relationships. The author argues that the understanding of family dynamics can be improved by considering humans as nepotistic strategists. This approach provides insights into a range of behaviors, including the extent to which parents invest in offspring, parent–offspring conflict over the allocation of investments, and sibling conflict and cooperation.

Figueredo, Patch, and Ceballos (Chap. 28) propose a model of multilevel selection to explain the ways in which life history influences social evolution and development. This model describes a cascade of consequences in which selective pressures at one level (e.g., natural selection) generate selective pressures at other levels (e.g., social selection). The authors argue that this sort of multilevel model can improve our understanding of the pressures that drive both life history evolution and development.

Part 6: Violence and Aggression

Part 6 (Chaps. 29–31) examines violence and aggression. Given the seemingly ubiquitous violence taking place in the world around us (e.g., armed conflict in the Middle East, the threat of terrorist attacks), it is easy to lose sight of the fact that the world is a far less violent place today than it has been at any point in human history

(e.g., Gurr 1981; Pinker 2012). For example, the murder rate in England dropped from 24 per 100,000 in the fourteenth century to less than 1 per 100,000 in the twentieth century. However, these general trends offer little comfort to the victims of violence or their families. Research concerning aggression and violence is generally concerned with understanding the potential causes, correlates, and consequences of these behaviors. The authors in this part of the volume argue that an evolutionary framework can shed light on the nature of violence and aggression.

Friend and Thayer (Chap. 29) argue that war and aggression are produced by cognitive adaptations. As a result, the authors contend that an evolutionary framework has the potential to provide key insights into intergroup conflict and competition. They consider a range of issues, including the fact that aggression is often sensitive to context, the neurobiology of aggression, and the role that xenophobia plays in intergroup conflict.

Volk, Cioppa, Earle, and Farrell (Chap. 30) apply evolutionary explanations to bullying. They argue that it is important to consider how individual differences and social influences interact to contribute to bullying behavior. An important aspect of the chapter is the consideration of an expanding ring of social influences that may impact bullying behavior, which range from the immediate environment (e.g., joining friends in the bullying of a classmate) to the broader culture (e.g., the depiction of bullying in popular media).

Atran and Sheikh (Chap. 31) review recent studies related to violent extremism. The authors suggest that many violent extremists are devoted actors who are motivated by “sacred values” that render them highly resistant to material trade-offs, normative social influence, or exit strategies. Evolutionary explanations are considered for the willingness of individuals to make costly sacrifices (e.g., die as a suicide bomber) to provide benefits for the larger social group.

Part 7: Health and Psychological Adjustment

Part 7 (Chaps. 32 and 33) examines health and psychological adjustment. Health can be defined

as the “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (World Health Organization 1948, p. 100). There have been tremendous changes in the nature of health in the USA and other prosperous nations during the past century such that the major causes of morbidity and mortality have shifted from acute disorders and infectious diseases (e.g., tuberculosis, pneumonia) to chronic illnesses (e.g., heart disease, diabetes). That is, individuals who live in developed countries have experienced a rapid shift from a situation in which infectious agents were the biggest threat to their health to one in which behavioral regulation is increasingly important (e.g., eating a balanced diet, getting adequate exercise, managing stress). The authors in this part highlight how an evolutionary framework can deepen our understanding of behavior surrounding health and psychological adjustment.

Thornhill and Fincher (Chap. 32) outline the parasite-stress theory of sociality. A central aspect of this theory is the behavioral immune system, which includes psychological features and behaviors for avoiding contact with infectious disease and managing the negative effects of infectious diseases. The authors argue that this framework has implications for understanding a broad array of behaviors, including mate selection, interactions with pets, culinary behaviors, and political beliefs.

Grinde (Chap. 33) applies an evolutionary framework to our understanding of happiness. The author presents a model of happiness based on the idea that affective states have evolved as part of a system of rewards and punishments used for evaluating behavioral options. He reviews recent studies which suggest that affective states are associated with shared neural circuits involved in generating mood.

Part 8: Individual Differences

Part 8 (Chaps. 34–36) examines individual differences, with considerable attention devoted to personality features. An understanding of personality is important to social psychology because these internal qualities often have implications

for how individuals interact with others in their social environment. That is, it does not appear that there are any important human behaviors that are due exclusively to situational causes, because behavior appears to always be influenced by psychological processes such as personality features (e.g., Buss 1991). The authors in this part of the volume apply an evolutionary perspective to our understanding of personality.

Van den Berg and Weissing (Chap. 34) discuss the connections between evolutionary game theory and personality research. Recent studies concerning evolutionary game theory have suggested that differences in personality features may have adaptive explanations. The authors consider the evolutionary causes and consequences of personality differences using evolutionary game theory.

Sefcek, Black, and Wolf (Chap. 35) apply evolutionary principles to the understanding of personality features. The authors review contemporary evolutionary models of personality traits. An important feature of the chapter is the consideration of the function of personality differences within populations as well as the evolutionary mechanisms that produce this variability.

Holtzman and Donnellan (Chap. 36) provide an overview of the possible evolutionary origins of narcissism. The authors focus on the idea that narcissism is related to numerous genes that have been subjected to selection pressures over the course of human evolutionary history. They suggest that narcissism is the result of selection for attributes that promote short-term mating and social dominance.

Conclusion

Despite the sometimes uneasy relationship that exists between social psychology and evolutionary psychology, these two areas have a tremendous amount to offer each other. For example, evolutionary psychologists are able to draw upon a diverse set of theories that have been generated using an evolutionary perspective. It is not our intention to suggest that social psychologists are unable to draw upon their own set of theories. Rather, we suggest that social psychologists

may benefit from drawing on an evolutionary perspective more frequently when considering their own work. To illustrate this point, studies have revealed various patterns of behavior that are difficult—or even impossible—to adequately explain using conventional theories from social psychology, even though these findings are readily explained using an evolutionary framework (e.g., women in long-term relationships being more likely to cheat on their partner when they are ovulating, people being more easily conditioned to fear snakes than guns; Maner and Kenrick 2010). We hope that this volume will serve as another step toward more fully integrating an evolutionary perspective into the field of social psychology.

References

- Adolphs, R. (1999). Social cognition and the human brain. *Trends in Cognitive Sciences*, 3, 469–479.
- Baumeister, R. F. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 680–740). New York: McGraw-Hill.
- Baumeister, R. F. (2010). The self. In R. F. Baumeister & E. J. Finkel (Eds.), *Advanced social psychology: The state of the science* (pp. 139–175). New York: Oxford University Press.
- Buss, D. M. (1991). Evolutionary personality psychology. *Annual Review of Psychology*, 42, 459–491.
- Buss, D. M. (1999). Evolutionary psychology: A new paradigm for psychological science. In D. H. Rosen & M. C. Luebbert (Eds.), *Evolution of the psyche: Human evolution, behavior, and intelligence* (pp. 1–33). Westport: Praeger.
- Carlston, D. (2010). Social cognition. In R. F. Baumeister & E. J. Finkel (Eds.), *Advanced social psychology: The state of the science* (pp. 63–99). New York: Oxford University Press.
- Cosmides, L., Tooby, J., & Barkow, J. (1992). Evolutionary psychology and conceptual integration. In J. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture*. New York: Oxford University Press.
- Ellis, B. J., Figueredo, A. J., Brumbach, B. H., & Schlomer, G. L. (2009). Fundamental dimensions of environmental risk: The impact of harsh versus unpredictable environments on the evolution and development of life history strategies. *Human Nature*, 20, 204–268.
- Fabrigar, L. R., & Wegener, D. T. (2010). Attitude structure. In R. F. Baumeister & E. J. Finkel (Eds.), *Advanced social psychology: The state of the science* (pp. 177–216). New York: Oxford University Press.

- Fincher, C. L., & Thornhill, R. (2012). The parasite-stress theory may be a general theory of culture and sociality. *Behavioral and Brain Sciences*, 35, 99–119.
- Fincher, C. L., Thornhill, R., Murray, D. R., & Schaller, M. (2008). Pathogen prevalence predicts human cross-cultural variability in individualism/collectivism. *Proceedings of the Royal Society of London Biological Sciences*, 275, 1279–1285.
- Forgas, J. P., Haselton, M. G., & von Hippel, W. (2007). *Evolution and the social mind: Evolutionary psychology and social cognition*. New York: Psychology Press.
- Frith, C. D. (2007). *The social brain? Philosophical Transactions of the Royal Society B: Biological Sciences*, 362, 671–678.
- Gurr, T. R. (1981). Historical trends in violent crime: A critical review of the evidence. *Crime and Justice*, 3, 295–353.
- Kenrick, D. T., Becker, D. V., Butner, J., Li, N. P., & Maner, J. K. (2003). Evolutionary cognitive science: Adding what and why to how the mind works. In J. Fitness & K. Sterelny (Eds.), *From mating to mentality: Evaluating evolutionary psychology* (pp. 13–38). New York: Psychology Press.
- Kenrick, D. T., Maner, J. K., & Li, N. P. (2005). Evolutionary social psychology. In D. Buss (Ed.), *The handbook of evolutionary psychology*. Hoboken: Wiley.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Macrae, N., & Miles, L. (2012). Revisiting the sovereignty of social cognition: Finally some action. In S. Fiske & N. Macrae (Eds.), *The SAGE handbook of social cognition* (pp. 1–11). Thousand Oaks: Sage.
- Maner, J. K., & Kenrick, D. T. (2010). Evolutionary social psychology. In R. F. Baumeister & E. J. Finkel (Eds.), *Advanced social psychology: The state of the science* (pp. 613–653). New York: Oxford University Press.
- Mesoudi, A. (2009). How cultural evolutionary theory can inform social psychology and vice versa. *Psychological Review*, 116, 929–952.
- Öhman, A., & Mineka, S. (2001). Fears, phobias, and preparedness: Toward an evolved module of fear and fear learning. *Psychological Review*, 108, 483–522.
- Olson, K. R., & Dweck, C. S. (2008). A blueprint for social cognitive development. *Perspectives on Psychological Science*, 3, 193–202.
- Ostrom, T. M. (1984). The sovereignty of social cognition. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (Vol. 1, pp. 1–38). Hillsdale: Erlbaum.
- Petty, R. E., & Briñol, P. (2010). Attitude change. In R. F. Baumeister & E. J. Finkel (Eds.), *Advanced social psychology: The state of the science* (pp. 217–259). New York: Oxford University Press.
- Pinker, S. (2012). *The better angels of our nature: Why violence has declined*. New York: Penguin Press.
- Schaller, M., Simpson, J. A., & Kenrick, D. T. (2006). *Evolution and social psychology*. New York: Psychology Press.
- Simpson, J. A., & Kenrick, D. T. (1997). *Evolutionary social psychology*. Mahwah: Erlbaum.
- Thornhill, R., & Gangestad, S. W. (1999). The scent of symmetry: A human sex pheromone that signals fitness? *Evolution and Human Behavior*, 20, 175–201.
- Wilson, E. O. (1975). *Sociobiology: The new synthesis*. Cambridge: Harvard University Press.
- World Health Organization. (1948). *Constitution of the World Health Organization*. Geneva: World Health Organization Basic Documents.