

- Kenrick, D. T., & Simpson, J. A. (1997). Why social psychology and evolutionary psychology need one another. In J. A. Simpson & D. T. Kenrick (Eds.), *Evolutionary social psychology* (pp. 1–20). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Schaller, M., & Crandall, C. S. (1998). On the purpose served by psychological research and its critics. *Theory and Psychology, 8*, 205–212.
- Schaller, M., Crandall, C. S., Stangor, C., & Neuberg, S. L. (1995). "What kinds of social psychology experiments are of value to perform?" Comment on Wallach and Wallach (1994). *Journal of Personality and Social Psychology, 69*, 611–618.
- Scher, S. J. (1999). Are adaptations necessarily genetic? *American Psychologist, 54*, 436–437.
- Stebbins, G. L. (1977). In defense of evolution: Tautology or theory? *American Naturalist, 111*, 386–390.

## A Call to Recognize the Breadth of Evolutionary Perspectives: Sociocultural Theories and Evolutionary Psychology

**Wendy Wood**

*Department of Psychology  
Texas A&M University*

**Alice H. Eagly**

*Department of Psychology  
Northwestern University*

Ketelaar and Ellis (this issue) defended the evolutionary psychology perspective against the criticism that it is scientifically unfalsifiable. They argued that, as for other scientific approaches, the basic principles of the evolutionary metaperspective generally are not subject to direct empirical test. Scientists assume the basic principles are correct and apply them to develop potentially competing middle-level theories that are consistent with the general assumptions of the broader perspective.

We agree with Keletaar and Ellis's description of scientific reasoning, but we think that this model of science is inappropriately applied to the domain of evolutionary psychology. Like many contemporary psychologists, Ketelaar and Ellis appear to equate evolutionary reasoning with the specific approach of evolutionary psychology, as represented by the writing of psychologists such as Buss and Kenrick (1998) and Tooby and Cosmides (1992). However, evolutionary psychology actually represents one variant within the broader family of evolutionary theories. Many of the basic assumptions of evolutionary psychology are not accepted in the scientific community, but are regarded as interesting, speculative hypotheses (e.g., Foley, 1996). Therefore, it is inappropriate to draw a protective intellectual circle around them, as if they were free from challenge.

We believe that greater progress toward understanding human behavior would result if the hypotheses and predictions of evolutionary psychology were tested against theoretical alternatives outside of this specific approach. By failing to proceed in this manner, practitioners of evolutionary psychology miss the richness and variability of theorizing that lies within the broader domain of evolutionary thinking. Moreover,

the theoretical insights of societal and cultural theories of human behavior are either ignored or represented in an overly simplified form, as exemplified in Tooby and Cosmides's (1989) standard social science model and Buss's (1996) structural powerlessness principle. These characterizations have bolstered the mistaken conclusion that societally based theories are incompatible with an evolutionary perspective. As a result, psychology has been polarized into camps of those who favor evolutionary perspectives and those who favor societal and cultural explanations.

### Redefining Evolutionary Perspectives

The link between general evolutionary assumptions and models of human behavior is not a single route signposted with the constructs of evolutionary psychology. Instead, evolutionary reasoning about humans is diverse (Boone & Smith, 1998; Smith, in press) and is widely acknowledged to include, in addition to evolutionary psychology, models of the relation between biology and culture (Janicki & Krebs, 1998) and human behavioral ecology approaches that emphasize behavioral variability in response to socioecological conditions (Cronk, 1991).

The general evolutionary metaperspective also encompasses social and cultural theories of human behavior. As Eagly and Wood (1999) argued, theories emphasizing social structural determinants of behavior suggest that humans evolved in response to evolutionary pressures that yielded a variety of dispositions such as the capacity for group living and for culture. In this view, human behavior changes across societies and historical periods as social organization changes in response to technological, ecological, and other transfor-

mations. Such an approach, which gives a causal role to social and cultural phenomena, can be contrasted with the evolutionary psychology position that “cultural diversity provide phenomena that require explanation, but do not by themselves constitute an autonomous level of explanation, independent of evolved psychological mechanisms on which these phenomena are founded” (Buss & Kenrick, 1998, p. 1017). In this view, the survival and reproductive pressures that impinged on the human species as it was evolving produced specific dispositions (e.g., for women to seek resources in a mate) that also serve as organizing principles of contemporary human behavior.

In contrast to this position taken by evolutionary psychologists, the most influential evolutionary theorists did not assume that social norms and culture are necessarily causally subordinate to evolved dispositions in their influence on human behavior. Consider sexual selection theory, one of the middle-level theories that Ketelaar and Ellis treat as a variant of evolutionary psychology. This theory explains how selection processes emerge through a species’ mating and reproductive behavior. The key assumption is that a consistent tendency to select mates with certain attributes conferred a fitness advantage on those who possessed the favored attributes. Although Darwin (1871) proposed these ideas, he was skeptical about their adequacy for explaining human behavior. He argued that the causal factors identified by his theory of sexual selection were an important force among early humans, who were guided by instinctive passions, but not among contemporary members of society. According to Darwin, contemporary humans show foresight and reason in mating behavior—in other words, select mates according to the utilities that they perceive in their contemporaneous social context. Darwin thus reasoned, for example, that his male contemporaries selected mates for qualities such as wealth, social status, and intelligence. Trivers (1972), in his subsequent development of sexual selection processes, gave little consideration to human behavior beyond the recognition of its complexity. He noted that selection processes vary across societies and that they have sufficient “plasticity” in humans to allow people to tailor their behavior to local conditions and their personal attributes. Darwin and Trivers thus adopted positions that could lead to cooperative collaboration with sociocultural theorists in developing a sophisticated understanding of human behavior.

#### **Competitive Testing of Social Structural Theory and Evolutionary Psychology**

To illustrate the fruitfulness of placing evolutionary psychology in competition with theories that entail different core assumptions about causality, we note that

sociocultural theories provide an alternative to the evolutionary psychology explanation of sex differences (Eagly & Wood, 1999). From a social structural perspective, sex differences are accommodations to the differing restrictions and opportunities that a society maintains for its men and women. Yet, social structuralists recognize the impact of evolutionary pressures by taking into account the physical differences between the sexes, particularly men’s greater size and strength and women’s childbearing and lactation. In this view, such genetically mediated sex differences interact with shared cultural beliefs, social organization, and the demands of the economy to influence the role assignments of men and women within a society.

From Eagly and Wood’s (1999) perspective, a society’s division of labor between the sexes and the patriarchal hierarchy that sometimes accompanies it provide the engine of sex-differentiated behavior. They trigger social and psychological processes by which men and women seek somewhat different experiences to maximize their outcomes within the constraints that societies establish for people of their sex (Eagly, Wood, & Diekmann, in press). Specifically, men’s accommodation to roles with greater power and status produces dominant behavior, and women’s accommodation to roles with lesser power and status produces subordinate behavior. Furthermore, within the typical division of labor between the sexes, women’s accommodation to the domestic role and to female-dominated occupations favors interpersonally facilitative, communal behaviors, whereas men’s accommodation to the employment role, especially to male-dominated occupations, favors assertive, independent, agentic behaviors.

Eagly and Wood (1999) illustrated the comparative testing of social structural theories against evolutionary psychology in relation to sex differences in mate preferences. They proceeded by conducting a reanalysis of Buss’s (1989) study of sex differences in the attributes valued in potential mates in 37 cultures. In the past, these findings have been interpreted as providing support for evolutionary psychology. In this framework, women’s preferences for mates with resources and for older mates reflect an evolved tendency to seek mates with attributes that can support women’s parenting efforts. Men’s preferences for physically attractive mates and for younger mates reflect an evolved tendency to seek mates with reproductive capacity. Furthermore, the tendency for these sex differences to hold across cultures has been taken as evidence of sex-differentiated evolved mechanisms that reflect an innate, universal human nature (Tooby & Cosmides, 1989).

Sex differences in the qualities people seek in mates are also consistent with social structural analyses in which such preferences reflect the social roles of women and men within societies. Eagly and

Wood's (1999) reanalysis of the 37 cultures' data provided evidence for two key features of the social structural approach. First, sex-differentiated aspects of mate preferences are reciprocal within societies because they reflect the extent of its sexual division of labor and patriarchal relationships between the sexes. In many societies in Buss's 37 cultures sample, women contribute primarily domestic skills to their marriage and family and men contribute primarily productive resources. People living in societies characterized by this homemaker-provider division of labor maximize their own utilities by basing their mate preferences on this division of labor. Men seek female domestic skills and the younger age that enables a male-dominant relationship, and women seek provider skills and the older age that, for many men, is associated with increased resources. Indeed, Eagly and Wood found evidence of this reciprocity: To the extent that the women of a society preferred mates who were older and good breadwinners, the men of the society preferred mates who were younger and good domestic workers. Thus, the social structural analysis explains men's preference for partners with domestic skills, a sex-differentiated tendency that was not addressed by evolutionary psychologists, and accounts for the reciprocity between the characteristics preferred by men and women in a society.

The second important pattern to emerge in Eagly and Wood's (1999) reanalysis is that the sex differences in mate preferences eroded in societies in which the sex-typed division of labor was less marked and men and women held more similar roles in the social structure. The level of gender equality in each society was estimated from indicators provided by United Nations researchers. To the extent that societies had more egalitarian relationships between men and women, smaller sex differences were found in mate preferences. Furthermore, as would be expected, sex differences in mate preferences did not completely disappear in the most egalitarian societies. Even in postindustrial economies such as the United States, some gender inequality and some aspects of the sex-typed division of labor still remain. Therefore, sex differences in mate preferences are still present, although at a reduced level. Eagly and Wood's reanalysis thus offers a radically different understanding of the data of the 37 cultures study and illustrates the fruitfulness of placing the basic assumptions of evolutionary psychology in competition with an alternative scientific theory.

### Conclusion

Ketelaar and Ellis make an important point when they differentiate the specific predictions and hypotheses of middle-level theories from the general assumptions of a broader scientific metaperspective. Yet their

application of this logic to evolutionary reasoning fails to recognize the true breadth of the evolutionary metaperspective and fails to acknowledge that evolutionary psychology is only one possible framework for incorporating evolutionary reasoning into models of human behavior. Ketelaar and Ellis fail to acknowledge the several theories that can be put in competition with evolutionary psychology to determine whether its assumptions can prevail against the challenge of alternative explanations. In contrast to Ketelaar and Ellis, we do not believe that evolutionary perspectives will progress very far in psychology merely through the design of comparative tests of hypotheses and predictions within the protective belt that currently isolates it from its competitors. Instead, we believe that far greater scientific progress will result from placing evolutionary psychology in competition with the wide variety of evolutionary theories of human behavior and with sociocultural theories that are compatible with the broader evolutionary metaperspective.

### Note

Wendy Wood, Department of Psychology, Texas A & M University, College Station, TX 77843. E-mail: wlw@psyc.tamu.edu

### References

- Boone, J. L., & Smith, E. A. (1998). Is it evolution yet? A critique of evolutionary archaeology. *Current Anthropology*, 39(Suppl.), 41-173.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12, 1-14.
- Buss, D. M. (1996). The evolutionary psychology of human social strategies. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 3-38). New York: Guilford.
- Buss, D. M., & Kenrick, D. (1998). Evolutionary social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 982-1026). Boston: McGraw-Hill.
- Cronk, L. (1991). Human behavioral ecology. *Annual Review of Anthropology*, 20, 25-53.
- Darwin, C. (1871). *The descent of man and selection in relation to sex*. London: Murray.
- Eagly, A. H., & Wood, W. (1999). The origins of sex differences in human behavior: Evolved dispositions versus social roles. *American Psychologist*, 54, 408-423.
- Eagly, A. H., Wood, W., & Diekmann, A. (in press). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Foley, R. (1996). The adaptive legacy of human evolution: A search for the environment of evolutionary adaptedness. *Evolutionary Anthropology*, 4, 194-203.
- Janicki, M. G., & Krebs, D. L. (1998). Evolutionary approaches to culture. In C. Crawford & D. L. Krebs (Eds.), *Handbook of evolutionary psychology: Ideas, issues and applications* (pp. 163-207). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

#### COMMENTARIES

- Smith, E. A. (in press). Three styles in the evolutionary study of human behavior. In L. Cronk, W. Irons, & N. Chagnon (Eds.), *Adaptation and human behavior: An anthropological perspective*. Hawthorne, NY: deGruyter.
- Tooby, J., & Cosmides, L. (1989). The innate versus the manifest: How universal does universal have to be? *Behavioral and Brain Sciences*, 12, 36–37.
- Tooby, J., & Cosmides, L. T. (1992). The psychological foundations of culture. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 19–136). New York: Oxford University Press.
- Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man: 1871–1971* (pp. 136–179). Chicago: Aldine.