

Adaptive Individual Differences Revisited

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ABSTRACT Humans possess a complex array of evolved psychological mechanisms, only a subset of which is activated at any particular time. Attempts to reduce human sexual strategies to a single, rigid, invariant strategy, and to label departures from a single strategy as maladjusted, fail to accord with a large body of empirical evidence. Personality psychology cannot afford to ignore the rich repertoire of individual differences, some of which are adaptively patterned.

The primary goal of our target article, “Adaptive Individual Differences,” was to offer a taxonomy of models of adaptive and nonadaptive individual differences (Buss & Greiling, this issue). We also provided conceptual standards and empirical procedures by which importantly different forms of individual differences could be distinguished. The goal was explicitly *not* to provide a detailed evaluation of the plausibility of the specific hypotheses about individual differences, but rather to outline the entire array for further scrutiny.

In an eloquent and engaging commentary, Kirkpatrick (this issue) explores one of these conceptions in depth—the issue of whether individual differences in attachment styles and mating strategies represent adaptive individual differences (this falls under the heading of “early environmental calibration” in the target article) or, conversely, whether departures from secure attachment and long-term mating represent maladaptive deviations produced by evolutionarily novel environmental conditions. After reviewing the arguments and evidence, Kirkpatrick

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concludes that indeed “humans possess both long- and short-term strategies in their mating repertoires” (p. 253), precisely as outlined by Sexual Strategies Theory (Buss & Schmitt, 1993).

The evidence Kirkpatrick marshals to support this conclusion are several: (1) there are adaptive advantages to short-term nonmonogamous mating under certain conditions; (2) these benefits are sex differentiated, such that men’s short-term mating will represent a larger component of the strategic repertoire than women’s; (3) men’s testes size relative to body weight suggests a human evolutionary history marked by some degree of multiple-partner mating; (4) sexual dimorphism for size and stature suggests a human evolutionary history of some polygyny; and (5) evidence on sexual jealousy and mate-guarding suggests a long evolutionary history in which the nonmonogamy of a partner was a recurrent adaptive problem (e.g., Buss & Shackelford, 1997).

These data are compelling in support of Kirkpatrick’s conclusion, but there are other sources of evidence that also support Sexual Strategies Theory. These include: (6) behavioral data on the cross-cultural pervasiveness of extramarital affairs (Buss, 1994); (7) evidence on the nature of sexual fantasies (Ellis & Symons, 1990); (8) behavioral evidence on men’s willingness to have casual sex with attractive strangers (Clark & Hatfield, 1989); (9) physiological evidence on sperm insemination and retention (Baker & Bellis, 1995); (10) physiological evidence on the existence of sperm morphs designed to solve the adaptive problem of alien insemination (Baker & Bellis, 1995); (11) expressed desires for a number of sex partners (Buss & Schmitt, 1993); and (12) the fact that attitudes toward casual sex show large sex differences in meta-analyses of sex differences in sexuality (Oliver & Hyde, 1993). Given this voluminous evidence from so many different sources, it would seem that the burden of empirical proof must shift to those who continue to insist that humans have but a single, monolithic, uniform, long-term sexual strategy (see Buss, 1998, for a more extensive review of the evidence).

Distinguishing Adaptive from Maladaptive Individual Differences

At a more general level, Kirkpatrick’s commentary raises the issue of conceptual and evidentiary standards for distinguishing adaptive from maladaptive individual differences (Buss, Haselton, Shackelford, Bleske, & Wakefield, 1998). He argues that the high incidence of

overweight individuals in modern populations, ranging from 33% to 50% in various American samples, represents a maladaptation, and that the high incidence does not lead one to question whether it is an adaptation. The target article was explicit about the standards for maladaptation:

The hypothesis that something is *maladaptive* . . . implies a perturbation or malfunctioning of the evolved mechanism, analogous to the malfunctioning of a car engine. If the component parts fail to do what they were “designed” to do (e.g., spark plug fails to fire), or if they fail to coordinate with the other component parts (e.g., the timing of the firing is wrong and hence fails to mesh with the input of combustible fuel), or if they are activated in contexts in which they were not designed to be activated (e.g., backfires), then these are all signs of maladaptation (the term *malfunction* might be more appropriate). Maladaptation is defined by the *failure* of a mechanism to function in the manner and in the contexts in which it was designed to function, and does *not* correspond with human intuitions about “good” or “appropriate” or “adjusted” or “causing well-being.” (Buss & Greiling, this issue, p. 236)

According to this definition, most instances of overweightness would *not* be considered maladaptations. Compared to the modern environment, human ancestors evolved in fat-scarce environments, as Kirkpatrick points out. Those who stored fat likely had an advantage over those who did not store fat during long winters and lean times when food was hard to get. The fact that the modern abundance of food causes a lot of people to gain weight does not imply that human food preferences and metabolic mechanisms are “maladaptive” in the sense defined above—indeed, taste preferences and metabolic mechanisms appear to be functioning precisely as they were designed to function. The fact that people in American culture currently view overweightness as bad or undesirable also is not evidence that being overweight is maladaptive in an evolutionary sense.

It is of course possible that selection pressures have changed, and that overeating in modern environments does currently lead to a decrease in fitness in an evolutionary sense. But documenting such a pattern would be evidence for current selection pressures, *not* evidence that the evolved mechanism is malfunctioning—that is, not doing what it was designed to do. As pointed out in the target article, “specifying the adaptive function of an evolved mechanism does *not* imply that the mechanism is

currently adaptive or currently leads to reproductive success . . . Thus, it is critical to distinguish between a mechanism that is functioning as it was designed to function but is no longer adaptive (i.e., no longer leads to reproductive success) and a mechanism that is malfunctioning (i.e., not doing what it was designed to do)" (Buss & Greiling, this issue, pp. 236–237).

When this distinction is applied to the enactment of short-term and long-term sexual strategies, it is indeed possible that the prevalence of short-term mating, like the prevalence of overeating, is higher now than it was over the past few million years. The conditions of modern living can lead to a greater abundance of available casual sex partners as well as greater anonymity in which short-term liaisons can be carried out. It is reasonable to speculate that evolved decision rules about engaging in short-term mating will be sensitive to factors such as relative availability of sex partners and likelihood of conducting sexual liaisons in secrecy (Buss, 1994). But the pervasiveness of short-term *and* long-term mating strategies in every tribal and traditional society that has been studied suggests that modern urban living is not a necessary condition for both strategies to be manifest (e.g., Chagnon, 1983; Hart & Pilling, 1960; Hill & Hurtado, 1996). Short-term and long-term sexual strategies appear to be part of the evolved menu of human sexual strategies, and if true, it would be incorrect to label short-term mating as a maladaptation. Whether the short-term mating strategy currently leads to fitness in the modern environment is an empirical issue—one that bears on the issue of current selection pressure, not on the issue of whether it is an adaptation or maladaptation.

On Human Psychological Complexity

Psychology in this century has been marked by a long series of assertions about the simplicity of human psychology. Sometimes this has taken the form of proposals that just a few highly domain-general mechanisms are sufficient to account for all human behavior. The extremely general operant and classical laws of learning, with the pernicious assumption of equipotentiality, held sway for decades. More recently, these views have been replaced by similarly broad conceptions of humans as domain-general information processors (see Tooby & Cosmides, 1992). At other times, these proposals have taken the form of assertions that humans have only a single sexual strategy (e.g., monogamous pair-bonding). With

some notable exceptions, evolutionary psychology too has been guilty of ignoring the vast and important array of individual differences that characterize our species.

Evolved strategies often create new niches for alternative strategies. Given the explosion of the human population into virtually every ecological niche, it would be astonishing if humans were characterized by a single, invariant species-typical strategy. Individual differences in life history strategies can be linked to both environmental and genetic sources of variation (MacDonald, 1997). The search for complex adaptive individual differences will likely yield a great bounty to the field of personality psychology.

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