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An Evolutionary Psychological Perspective on Infidelity

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Introduction: The Evolutionary Psychological Perspective

Evolutionary psychologists attempt to make sense of current human thought, emotion, and behavior by careful consideration of human evolutionary history. Over this period of time, humans faced many adaptive problems that needed to be solved to survive and reproduce. Generation after generation, over millions of years, natural selection gradually shaped the human brain, favoring circuitry that was good at solving these adaptive problems of our ancestors. The study of psychological adaptations (or evolved psychological mechanisms) is central to evolutionary psychology.

An evolved psychological mechanism is an information-processing module that was selected throughout a species' evolutionary history because it reliably produced behavior that solved a particular adaptive problem (Tooby & Cosmides, 1992). Evolved psychological mechanisms are understood in terms of their specific input, decision rules, and output (Buss, 1995). Each psychological mechanism evolved to take in a narrow range of information—information specific to a particular adaptive problem. The information (or input) that the organism receives signals the adaptive problem that is being confronted. The input, either internal or external, is then transformed into output (i.e., behavior, physiological activity, or input relayed to another psychological mechanism) via a decision rule—an "if…then" procedure. An example of the input, decision rules, and output of a psychological mechanism is appropriate.

Fruit can either be ripe or unripe. Because ripe fruit is more nutritious (i.e., calorically dense) than immature fruit, humans have evolved a preference for ripe fruit. The decision rule regarding the selection of fruit might proceed as follows: "If the fruit tastes sweet, then eat it." If all fruit was maximally saturated with sugar all of the time, then that particular decision rule

would not exist. The output associated with this mechanism might be to eat the ripe fruit or to discard the unripe fruit. This example illustrates the fact that psychological mechanisms can operate without any conscious awareness or formal learning, and that we are often blind to their underlying logic. Do you enjoy calorically dense fruit because it provides nutrition needed to carry out activities related to survival and reproduction? Or do you simply enjoy sweet fruit?

Some psychologists seem to be hostile to the idea of applying evolutionary theories to human behavior. One cause of this unwarranted hostility is the misconception that evolutionary analyses are incompatible with (or less important than) non-evolutionary (e.g., sociological or cultural) analyses. Such critics fail to recognize that evolutionary and non-evolutionary approaches operate at different levels of analysis (Tinbergen, 1963). Evolutionary scientists are typically interested in causation at the ultimate (or distal) level. An ultimate explanation refers to the evolved function of a trait, behavior, or mechanism. This is in contrast to proximate explanations. Although, of course, the mechanisms by which proximate causes are effected have, themselves, evolved, proximate explanations refer to the immediate, non-evolutionary causes of a trait, behavior, or mechanism (e.g., the genetic or cellular causes). In our example of the input, decision rules, and output of a psychological mechanism associated with ripe fruit, one could correctly note that humans prefer ripe fruit because it is perceived to be sweet (proximate cause) and because it provides needed calories to perform duties related to survival and reproduction (ultimate cause). Although the explanations are fundamentally different, they are compatible and equally important.

The level of physical aggression or violence in society offers an additional example of a phenomenon where there exists a misconceived perception that there exists a conflict between evolutionary and non-evolutionary explanations. Non-evolutionary accounts argue that levels of

violence are increased by depictions of it in the media causing individuals to imitate what they see. Thus, more media depictions of physical aggression lead to more imitations and thus more violence in society. While evolutionary psychologists do not disagree with this non-evolutionary account, they aver that such an account fails to explain *why* greater levels of media violence lead to imitation and, thus, to greater levels of actual violence. This can only be answered, argue evolutionary psychologists, by considering the adaptive value of violence.

Consequently, evolutionary psychologists contend that aggression evolved as a means for attaining reproductive goals, such as securing resources or mates. If individuals who are not prepared to use violence pre-emptively or in response to violence committed by other individuals, are in an environment where there exists a significant proportion of individuals who readily use violence, the former individuals will be at a reproductive disadvantage. Evolutionary psychologists posit, therefore, that individuals have evolved a psychological mechanism that makes them sensitive to the level of violence in their environment, causing them to be relatively more ready to commit violence when they perceive there to be relatively high levels of violence around them. As a result, media depictions of violence activate this psychological mechanism in the individuals viewing them, causing the individuals to be more ready to commit violence themselves, even when levels of violence in their actual environment are relatively low (Daly, & Wilson, 1988).

This example regarding violence illustrates that while non-evolutionary and evolutionary accounts of phenomena are frequently not incompatible, an evolutionary perspective is likely to provide a more complete understanding of the psychological processes underlying human behavior. Notwithstanding this, it is possible, and not uncommon, to have competing

explanations at the same level of analysis (e.g., competing evolutionary psychological hypotheses); such debate is a healthy feature of science.

The modern application of evolutionary principles to the study of human psychology and behavior has opened up numerous new areas of research concerning infidelity. In the rest of this chapter, we discuss two of these areas. First we outline how romantic jealousy is hypothesized to have evolved to facilitate individuals in reducing the likelihood that their partners commit an infidelity and discuss why there are expected to have evolved sex differences in jealousy. We then discuss mate poaching, in which people are aware that the individuals with whom they are attempting to have sexual relations are currently in nominally exclusive relationships with others. Specifically, we outline findings regarding the frequency of poaching, and why people choose to poach or avoid engaging in it.

The Evolution of Romantic Jealousy

Individuals who commit an infidelity are attempting to increase their own reproductive success at the expense of that of their partners. Evolutionary psychological meta-theory, therefore, predicts that infidelity will have produced evolutionary selection pressures for individuals to evolve adaptations by which to reduce the likelihood of their partners committing an infidelity. Romantic jealousy is hypothesized to be such an adaptation. Thus, in response to a partner's suspected or actual infidelity, individuals' psychological mechanism for jealousy is expected to be activated, causing them to be motivated to enact behaviors that either restrict their mate's interactions with individuals of the opposite-sex or avoid the reproductive costs they might suffer as a result of an infidelity.

Due to a sex difference in parental investment, however, there is, expected to be a sex difference in romantic jealousy. Among humans, women's obligatory parental investment is far

greater than that of men. Once impregnated, women must gestate the child for nine months and, in the environment of evolutionary adaptedness or EEA (the period during which modern humans were evolving), were obliged to lactate for several years after giving birth (Howell, 1979). In contrast, the physiological investment, namely, a single ejaculate, that men must make to produce a viable child is relatively tiny.

The relatively great obligatory physiological parental investment of women, in comparison to men, means that a woman's primary reproductive concern is expected to be ensuring that her child reaches reproductive age, so that she avoids wasting this investment. Accordingly, women are expected to be especially desirous to secure a long-term mate who is both able and willing to invest economically in the raising of her children. Perhaps the greatest threat to the reproductive success of a woman, therefore, is her physiological investment in a child going to waste if the child dies as a result of her long-term mate's withdrawal of his economic investment and his re-directing of it towards another woman. This leads to the expectation that, as a high level of emotional commitment from a mate is a reliable indicator of a willingness to continually provide resources, women will have evolved a psychology that causes them to prefer as long-term mates, men who indicate that they are emotionally committed to them and so who are unlikely to be emotionally unfaithful.

In contrast, perhaps the greatest threat to the reproductive success of a man is being cuckolded or unknowingly directing his economic investment towards children to whom he is not genetically related because they are the result of his long-term mate being impregnated by another man. Men run the risk of being cuckolded for, as women are internally fertilized, they can never be entirely sure that the child to which their long-term mate gives birth is their own. A cuckolded man not only directly furthers the reproductive success of his same-sex rivals, but also

has fewer resources to invest in children to whom he *is* genetically related and with which to attract both long-term and short-term mates. This leads to the expectation that men will have evolved a psychology that causes them to prefer as long-term mates, women who indicate that they will not be sexually unfaithful to them.

Since men and women differ in whether romantic or sexual infidelity poses the greater threat to their respective reproductive successes, it is expected that there will be divergent sexual selection pressures across the sexes regarding the evolution of psychological traits to prevent romantic infidelity. As a mate's sexual infidelity poses the greater threat to the reproductive success of a man, men are expected to have evolved a psychology that makes them especially motivated to prevent their partners from being sexually unfaithful. Accordingly, men are hypothesized to be especially likely to experience sexual jealousy, such that they become especially distressed by signs, or actual instances, of their long-term mate being sexually unfaithful to them. In contrast, as a mate's emotional infidelity poses the greater threat to the reproductive success of a woman, women are expected to have evolved a psychology that makes them especially motivated to prevent their partners from being emotionally unfaithful. Thus, women are hypothesized to be especially likely to experience emotional jealousy, in which they feel especially distressed by signs, or actual instances, of their long-term partner forming an emotional attachment to another woman.

This hypothesized sex difference in romantic jealousy has received empirical support from numerous studies. Thus, Buss, Larsen, Westen, & Semmelroth (1992) found that among a sample of American college students, 83 percent of women but only 40 percent of men reported that they would find a long-term partner becoming emotionally involved with someone else more distressing than the individual having sexual intercourse with someone else. In contrast, 60

percent of men but only 17 percent of women reported that they would find a partner's sexual infidelity more upsetting. These self-report findings were paralleled in measures of both physiological arousal and brow muscle contraction. Thus, when asked to imagine the two types of infidelities, greater responses in terms of pulse rate, skin conductance and frowning were reliably displayed by men to the scenario involving a sexual infidelity, and by women to the scenario involving an emotional infidelity. These sex differences in the level of distress felt in response to a sexual and an emotional infidelity have found empirical support from numerous other studies, across a broad range of cultures (e.g. Buss, Shackelford, Kirkpatrick, Chloe, Hasegawa et al., 1999; Sagarin, Becker, Guadagno, Nicastle, & Millevoi, 2003; Buunk, Angleitner, Obaid, & Buss, 1996).

One way by which a man can reduce his risk of incurring the reproductive costs associated with being cuckolded due to his partner's sexual infidelity, is to reduce the likelihood of his partner's lover fertilizing her egg. This can be achieved by placing his sperm in competition to fertilize the egg with that of his partner's lover (Birkhead, & Parker, 1997). Accordingly, it is expected that men will have evolved a psychology that motivates them to create sperm competition for this purpose. In accordance with this Shackelford, LeBlanc, Weekes-Shackelford, Bleske-Rechek, Euler, et al. (2002) found that the greater the likelihood that a man's partner had been sexually unfaithful, as indicated by the amount of time that the couple had spent apart, then the more attractive he found her and the more eager he was to copulate with her. The fact that this finding was independent of the amount of time since the couple's last copulation, indicates that men have a psychology that motivates them to place their sperm in competition with that of a possible lover of their partner, as soon as possible after the partner's suspected sexual infidelity.

For people to experience romantic jealousy, they have, of course, to believe that there exist individuals who are seeking to have romantic relations with their partners. Some of these individuals who attempt to have romantic relations with individuals who are already in nominally exclusive relationships may be unaware of the targeted individuals' current relationship status. Other individuals, however, are likely to be aware that the people whom they are pursuing are already in romantic relationships. In the rest of this chapter, we discuss findings regarding these latter individuals or mate poachers.

Human Mate Poaching

Just as it takes two to tango, it takes two to commit a sexual infidelity; the cheater and his or her lover. Nevertheless, although research investigating the psychology of individuals in exclusive relationships who cheat on their partners has been ongoing for several decades (for a review, see Thompson, 1983), it was not until 1988 that even the idea of conducting research into the psychology of those individuals with whom cheaters commit a sexual infidelity was first suggested in a published work. This was made by Buss (1988) in an article investigating mate retention tactics (i.e., the ways that individuals attempt to prevent their partners from being unfaithful), in which he stated, "Several further research directions are indicated. The occurrence of mate retention tactics implies the presence of poachers" (Buss, 1988, p. 315). Over a decade would pass, however, before the first studies investigating the psychology of these *poachers*, who solicit individuals in exclusive romantic relationships to commit a sexual infidelity with them, were published. These studies were carried out in 2001 by Schmitt and Buss (2001). Schmitt and Buss formally defined mate poaching as, "behavior intended to attract someone who is already in a romantic relationship" (p. 894). In addition, they provided the label *poached* to

those, “taken away from their established relationships” (p. 895), and the label *poachees to*, “those whose partners are taken away from them” (p. 895).

Schmitt and Buss (2001) used the principles of evolutionary psychology to offer the following delineation as to how the psychology of mate poaching may have evolved. At any one time during the evolution of human psychology, there likely will have been individuals who had mates and individuals who did not have mates. It follows that individuals who had *only* psychological mechanisms that motivated desire for and successful mating with unmated individuals may have been at a relative reproductive disadvantage. This is because they would have been out-competed in the arena of reproduction by any men and women who, in addition, possessed psychological mechanisms that motivated the desire to mate with already-mated individuals (under certain conditions) and the behavioral output that enabled successful mating with them. Accordingly, the latter individuals possessing both types of mechanisms would have been selected for, whereas the former individuals would have been selected against.

In the following we discuss some of the findings of Schmitt and Buss (2001), as well as those of other studies that have extended the understanding of mate poaching. First we outline findings regarding the frequency of poaching. We then discuss findings regarding factors that either motivate people to poach or deter them from doing so.

The Frequency of Mate Poaching

One of the goals Schmitt and Buss (2001) was to determine the frequency of mate poaching. Results from a sample of American undergraduates, with an average age of 20 years and a standard deviation of 2.5 years, indicated that poaching is a prevalent phenomenon. For instance, 64% of men and 49% of women reported having, at some time, attempted to poach someone as a short-term mate, 83% of men and 81% of women reported that, at some time,

someone had attempted to poach them as a long-term mate and 43% of men and 49% of women reported that, at some time, someone had successfully poached them as a long-term mate. Similar results were found among a sample of mature individuals, who ranged from 30 to 65 years, and had an average age of 41years and a standard deviation of 8.7 years. For instance, 60% of men and 38% of women reported having, at some time, attempted to poach someone as a short-term mate, 93% of men and 82% of women reported that, at some time, someone had attempted to poach them as a long-term mate and 53% of men and 41% of women reported that, at some time, someone had successfully poached a partner of theirs as a long-term mate.

Employing the same formal definition of poaching as used by Schmitt and Buss (2001), Schmitt, Alcalay, Allik, Angleitner, Ault, Austers, et al. (2004) generalized the findings of Schmitt and Buss regarding the frequency of poaching to non-college-based individuals outside of the United States. Thus, in a cross-cultural investigation consisting of community-based, as well as college-based, individuals from 53 nations spanning five continents, Schmitt et al. found levels of poaching that broadly paralleled those found by Schmitt and Buss. For instance, Schmitt et al. found that, in North American samples from Canada, Mexico, and the United States, 62% of men and 40% of women reported having, at some time, attempted to poach someone as a short-term mate and 63% of men and 52% of women reported having, at some time, attempted to poach someone as a long-term mate. In addition, 70% of men and 38% of women in samples from South America (including, Argentina, Bolivia, Brazil, Chile, and Peru) reported having, at some time, attempted to poach someone as a short-term mate and 63% of men and 29% of women in samples from Africa (including, Botswana, Ethiopia, and Zimbabwe) reported having, at some time, attempted to poach someone as a long-term mate.

Davies, Shackelford and Hass (2006a) investigated whether significant percentages of individuals would still report having experience with poaching if they were presented with a survey whose devising was informed by a definition of poaching that more clearly demarcated poaching from general romantic attraction (i.e. the attracting of unattached individuals), than that which informed the devising of the surveys presented to participants in the two earlier studies. Thus, unlike the earlier definition, that formulated by Davies et al. made it explicit that to be considered a poacher, the pursuing individual must be aware that the targeted individual is already in a romantic relationship and that this relationship must be considered by all parties (poacher, poached, and poachee) to be exclusive or monogamous, such that any sexual relations outside of this relationship are viewed as violating it. The definition formulated by Davies et al. was, "Mate poaching occurs when an individual has, or attempts to have, sexual relations with a person that the former individual knows is already in an exclusive relationship with someone else" (p. 9).

As expected, out of a possible 10 comparisons (five categories across two temporal contexts of poaching,), nine of the percentages of men in Davies et al. (2006a) who reported some experience with poaching were lower than the corresponding percentages in Schmitt and Buss (2001) ($p < .05$ by the binomial sign test). Four of these differences were significant ($z > 1.96$). For instance, 70% of men in Davies et al., as compared to 95% of men in Schmitt and Buss, reported that, at some time, someone had attempted to poach them as a short-term mate, 19% of men in Davies et al., as compared to 43% of men in Schmitt and Buss, reported that, at some time, someone had successfully poached them as a long-term mate. Further, seven of the 10 percentages of women in Davies et al. were lower than the corresponding percentages in Schmitt and Buss. Three of these differences were significant ($z > 1.96$). For instance, 27% of

women in Davies et al., as compared to 63% of women in Schmitt and Buss, reported having, at some time, attempted to poach someone as a long-term mate and 64% of women in Davies et al., as compared to 79% of women in Schmitt and Buss, reported that, at some time, someone had attempted to poach their partner as a long-term mate.

In addition, each of the six percentages for men in Davies et al. (2006a) was lower than the corresponding percentages in Schmitt et al. (2004) ($p < .05$ by the binomial sign test). Four of these differences were significant ($z > 1.96$). For instance, 50% of men in Davies et al., as compared to 63% of men in Schmitt et al., reported having, at some time, attempted to poach someone as a long-term mate, and 19% of men in Davies et al., as compared to 52% of men in Schmitt et al., reported that, at some time, someone had successfully poached them as a long-term mate. Five of the six percentages for women in Davies et al. were lower than the corresponding percentages in Schmitt et al.. Two of these differences were significant ($z > 1.96$). 27% of women in Davies et al., as compared to 52% of women in Schmitt et al., reported having, at some time, attempted to poach someone as a long-term mate; and 19% of women in Davies et al., as compared to 48% of women in Schmitt et al., reported that, at some time, someone had successfully poached them as a long-term mate.

These comparisons indicated that, as expected by Davies et al. (2006a), the stricter definition of poaching caused fewer general romantic attractions to be reported as poaches. Davies et al. stated, “We conclude that the percentages of participants in the current study who reported some experience with poaching may be more representative of the actual percentages of people who have experienced poaching” (p. 13). Nevertheless, the percentages of participants in Davies et al. who reported having some experience with poaching were sizable for all categories of poaching and across all temporal contexts.

Schmitt and Buss (2001), Schmitt et al. (2004) and Davies et al. (2006a) are all limited by their reliance on self-reports to secure data (Grimm & Church, 1999). Establishing the veridicality of the estimates provided by these studies would, as Schmitt and Buss (2001) noted, "be an extraordinarily difficult task, given that mate poaching is often conducted clandestinely, rendering observational studies all but impossible to conduct" (p. 912). Nevertheless, although imperfect, self-report may be the best way to secure estimates of the frequency of poaching experiences from large numbers of individuals. Further, as in the aforementioned studies, the collection of data through surveys in which participants are assured of the complete anonymity of their responses may better facilitate individuals in providing veridical accounts than might face-to-face interviews with counselors.

In sum, the findings of Schmitt and Buss (2001), Schmitt et al. (2004) and, in particular, Davies et al. (2006a), indicate that a significant proportion of individuals *actively* set out to steal other people's mates and that many of these individuals are successful in this endeavor. Thus, while counselors are well aware of the prevalence of infidelity, these three studies provide them with robust evidence that infidelity is frequently engaged in deliberately, not incidentally. In the following section, we consider a recent study whose findings may provide counselors with novel insights into the circumstances in which individuals are likely to engage in or avoid poaching.

When do People Poach?: *The Hierarchy of Mating Strategies Hypothesis*

Although the aforementioned studies indicated that poaching is a highly prevalent method by which to secure mates, it also appears that many people never engage in poaching. Davies et al. (2006b), attempted to determine if there were any factors peculiar to poaching that either motivated individuals to poach or deterred them from doing so. Specifically, they asked participants to rate the extent to which benefits associated with poaching would motivate them

personally to attempt to attract an attached individual instead of an unattached individual, and the extent to which costs associated with poaching would motivate them personally to attempt to attract an unattached individual instead of an attached individual. The benefits and costs considered in the study are listed in Table 1.

In addition, Davies et al. (2006b) framed each question such that participants were equally attracted to the attached and the unattached potential mates. This was done in order to control all variables extraneous to the relationship status of the targeted individuals and the particular benefit or cost of poaching considered in a particular question. The aim of this methodology was to ensure that participants' ratings of each benefit and cost would be based solely on whether the targeted individuals were attached or unattached. As such, Davies et al. expected to gain insight into the influence that each benefit and cost associated with poaching would be likely to have on the decision-making process of individuals contemplating whether or not to poach.

Further, it was hoped that phrasing the questions such that participants were "equally attracted" to the potential mates, as opposed to stating that the potential mates were "equally attractive", might better allow each participant to imply his or her own criteria of attractiveness, including, not only physical attractiveness, but also such attributes as ambition, social status, wealth, health, kindness, and generosity. It was argued that this was important because several studies have found there to be sex differences and temporal context effects in preferences along attributes of mates (e.g., Buss, 1989; Buss and Schmitt, 1993).

To gain insight into motivations that are specific to poaching, Davies et al. (2006b) mostly considered only benefits and costs that are exclusive to poaching—that is, those that do not pertain to general romantic attraction or attracting unattached individuals. Davies et al. also

considered both a benefit and a cost that may also apply to general romantic attraction but which are especially likely to be encountered in the context of poaching. This benefit was, “Less likely to have to help raise or financially support the child.” A question considering this benefit was presented to male participants only, as, argued Davies et al., it does not seem reasonable that poaching, in comparison to attracting an unattached individual, would provide women with a greater opportunity to avoid economically investing in any children thus produced. Accordingly, asking female participants to rate this benefit would be unlikely to provide insight that would be specific to poaching. Davies et al. used the following evolutionary reasoning to account for the sex-specific nature of the question regarding this benefit.

First, throughout the evolutionary history of humans, men could never have been certain that any child was their own. Second, due to their relatively small physiological investment in producing viable offspring, men could have increased their reproductive success in proportion to the number of mates that they would have been able to attain, and, displaying resources would have been important in facilitating attaining such mates (Buss, 1989; Buss & Dedden, 1990; Schmitt, & Buss, 1996). Accordingly, men are expected to have an evolved psychology that motivates them to welcome opportunities which might enable them to avoid depleting their own resources through having other men unknowingly invest in their offspring – especially likely when poaching, as a poached woman already has a long-term partner. An awareness of modern DNA-testing for paternity is unlikely to influence this motivation, for, as such testing did not exist during the period when humans were evolving, it could not have produced evolutionary selection pressures. Accordingly, as with other evolutionary-novel phenomena, DNA-testing is not a stimulus that human psychology is expected to have evolved to be sensitive to during the process of motivating behavior.

The latter cost was, “Greater risk of raising baby on your own.” A question considering this cost was presented to female participants only, for Davies et al. (2006b) contended that it does not seem reasonable that poaching a woman, as opposed to attracting an unattached woman, would increase this risk for a man. Accordingly, asking male participants to rate this benefit would be unlikely to provide insight that would be specific to poaching. Davies et al. (2006b) used the following evolutionary reasoning to account for the sex-specific nature of the question regarding this cost. Women’s relatively great physiological investment to producing viable offspringis expected to have caused them to evolve a psychology that motivates them to be especially wary of mating with men who may not economically invest in their children (Buss & Schmitt, 1993; Buunk, Angleitner, Obaid, & Buss, 1996) – especially likely when poaching, as a poached man already has a long-term partner.

The foregoing aspects of Davies et al.’s (2006b) study are illustrated in *Question 1* from the survey presented to participants:

“Suppose that there are two individuals to whom you are equally sexually attracted, and you know that one of them is in an exclusive relationship and the other is single. Would the suggested benefit ‘freedom from the need to fully commit yourself to the poached’ motivate *you personally* to attempt to attract the *attached* individual, instead of attempting to attract the *unattached* individual?” (italics in original)

As mating strategies have been shown to be sensitive to temporal context or relationship length for which the poacher pursues the poached (Barash & Lipton, 2001; Buss & Schmitt, 1993; Schmitt & Buss, 1996), where appropriate, Davies et al. (2006b) investigated participants’ ratings of benefits and costs across three temporal contexts of poaching. These were poachings

for a short-term sexual partner or affair, a long-term sexual partner or affair, and a new exclusive relationship, in which the poached permanently abandons his or her initial relationship.

Methods

Participants in Davies et al. (2006b) were 215 undergraduates at a public university in the southeastern United States (125 men, *M* age = 19.9 years, *SD* = 3.2; 90 women, *M* = 19.8, *SD* = 4.2). Participants completed a survey that asked them to rate the likelihood that several benefits and costs exclusive to poaching would, respectively, motivate them to poach or deter them from poaching. Participants provided ratings on a 10-point scale, with 0 = *Definitely No*, 4 = *Probably No,* 5 = *Probably Yes*, and 9 = *Definitely Yes*. A rating of "5" or greater for a benefit was interpreted as indicating that the benefit would motivate the participant to attempt to attract the attached individual instead of the unattached individual (i.e., the benefit would motivate the participant to poach). A rating of "5" or greater for a cost was interpreted as indicating that the cost would motivate the participant to attempt to attract the unattached individual instead of the attached individual (i.e., the cost would deter the participant from poaching).

Results

We first consider the mean ratings provided by men and women in Davies et al. (2006b) for the benefits and costs of poaching. Next, we present additional findings regarding sex differences relating to ratings of benefits and costs. Table 1 presents mean ratings and standard deviations by sex for all benefits and costs. The results of all statistical tests were evaluated at $\alpha = .05$ (two-tailed).

Mean Ratings for Benefits and Costs Specific to Poaching

Both men and women gave all benefits associated with poaching a mean rating of less than 5.0, indicating that none of the benefits would motivate them to poach. The mean ratings

provided by both men and women for the majority of the benefits were between 2.0 and 3.0. In contrast, the mean ratings given by both men and women for the majority (13 of 19) of the costs associated with poaching were above 5.0, indicating that these costs would deter them from poaching. Men gave a mean rating below 5.0 for five of the costs. Women gave a mean rating below 5.0 for three of the costs.

These results suggest that both sexes perceive the costs exclusively associated with poaching as outweighing the benefits exclusively associated with poaching. Davies et al. (2006b), therefore, argued that, ceteris paribus, when given the choice, both men and women will reliably choose to mate with unattached, as opposed to attached, individuals. As such, the results indicate that people will avoid poaching if there is a sufficiently attractive unattached individual available or attainable. In other words, for men and women to be motivated to poach, argued Davies et al., either any available attached individual must be perceived as being more attractive than any available unattached individual or there must be no unattached individual attainable.

These findings led Davies et al. (2006b) to suggest that, in some instances, poaching may be similar as a mating strategy (although not as morally reprehensible) to rape as depicted by Thornhill and Thornhill (1983) in their *mate deprivation hypothesis*. This hypothesis holds that rape is an evolved conditional mating strategy of men, engaged in when mates cannot be secured through non-aggressive strategies. Davies et al., therefore, argued that, in some instances, poaching may be an evolved conditional strategy by which individuals who are unable to secure unattached mates of acceptable attractiveness, can avoid being left out of the mating game, without resorting to rape, in the case of men, or to aggressive seduction, in the case of women. This lead Davies et al. to hypothesize that men and women may pursue a hierarchy of conditional mating strategies. First, they try to attract an unattached individual of sufficient

attractiveness. If none of acceptable attractiveness is available or attainable, some men and women may then try to poach a sufficiently attractive attached individual. If none is available, some men and women may then resort to coercive mating strategies.

Davies et al. (2006b) stated that this *hierarchy of mating strategies hypothesis* is in accordance with the relative degree of opprobrium associated with these mating strategies. Thus, due to the fact that the costs incurred in terms of social standing increase as one moves down this hierarchy from attracting unattached individuals, through poaching, to coercion, individuals may do so only when the immediately higher strategy appears to be closed to them.

For several benefits and costs associated with poaching, Davies et al. (2006b) found sex differences. We outline these in the section that follows.

Sex Differences in Ratings for Benefits and Costs

Davies et al. (2006b) found several sex differences regarding participants' perceptions of benefits and costs exclusively associated with poaching. In discussing these sex differences, Davies et al. illustrated how evolutionary psychological reasoning can be used to account for human motivations.

Women rated the "danger of being physically harmed by the partner of the poached" a greater disincentive to poaching than did men, across all three temporal contexts: for a short-term sexual partner [t (212) = -2.14, $p < .05$]; for a long-term sexual partner [t (212) = -2.17, $p < .05$]; for a new monogamous relationship [t (212) = -3.05, $p < .05$]. Throughout human evolutionary history, physical violence has been a central feature of intra-male competition for mates, and is the primary reason why men have evolved to, typically, have a greater body mass than women (Geary, 1998). Any men who displayed a fear of being physically harmed in intra-male competition would have given their same-sex rivals a psychological advantage in such contests

and, consequently, are likely to have had a relatively low reproductive success. Accordingly, men are expected to have evolved a psychology that causes them to be less likely to experience fear in response to threats of violence or more likely to self-deceive or to bluff about their fear. Hence, the lower ratings given by men.

Men gave a higher rating than women for the benefit, "challenge of trying to attract someone away from their partner," as a short-term sexual partner [t (213) = 3.33, $p < .05$] and for a long-term sexual affair [t (213) = 2.00, $p < .05$]. Men also gave a higher rating than women for the benefit of gaining an "ego boost" from successfully poaching someone as a short-term sexual partner [t (213) = 2.74, $p < .05$]. These findings might have been predicted through the following evolutionary reasoning.

Women's obligatory parental investment is far greater than that of men. Whereas men must solely contribute a single ejaculate, once impregnated, women must gestate the child for nine months and, throughout much of human evolutionary history were obliged to lactate for several years after giving birth (Howell, 1979). During this period of gestation and lactation, evolving women would have remained infertile. In addition, in comparison to that of men, women's fertility exhibits greater variability over the lifespan, falling at a relatively fast rate from their mid-late twenties until ending after menopause. This means that at any particular time during human evolution, the pool of fertile women will have been significantly smaller than the pool of fertile men. This will have been exacerbated by the fact that evolving humans, like humans today, were effectively polygynous (Alexander, Hoodland, Howard, Noonan, & Sherman, 1979), resulting in some men monopolizing sexual access to more than one woman. Consequently, a relatively large number of fertile men will have been competing for sexual access to a relatively small number of fertile women. In addition, the relatively small

physiological constraint on the reproductive success of men means that once a man has impregnated one woman, he can, in theory, quickly move on to impregnate another. Thus, the incremental increase in reproductive success relative to same-sex rivals gained from each additional mate secured is far greater for men than it is for women.

The foregoing means that, in comparison to women, men are subject to a relatively great intensity of intrasexual competition for mates. It follows that, relative to women, men may have evolved a psychology that motivates them to be more willing to undertake the challenges and risks associated with attracting mates for non-exclusive relationships (i.e. for short-term sex or long-term sexual affairs) and to gain more of a thrill from doing so (Wilson & Daly, 1985). The reproductive benefits that men, in comparison to women, can secure from having multiple mates also may account for the finding that men gave a higher rating than women for the benefit of gaining an "ego boost" from successfully poaching someone as a short-term sexual partner.

Women gave a higher rating than men for the cost "suffer shame and gain a bad reputation" if one becomes known to have poached someone, across all temporal contexts: for a short-term sexual partner [t (209) = -3.22, $p < .05$]; for a long-term sexual affair[t (208) = -3.49, $p < .05$]; for a monogamous long-term relationship[t (207) = -3.64, $p < .05$]. Evolutionary psychological meta-theory predicts that, due to paternity uncertainty, men will have an evolved psychology that motivates them to avoid long-term commitments with women who have a reputation for being sexually promiscuous (Buss, 1989). Accordingly, it might be predicted that women will have, in turn, evolved a psychology that motivates them to avoid gaining such a reputation. This may account for the relatively high rating given by women to the cost associated with gaining a reputation for poaching individuals for relationships other than those that are both long-term and monogamous. This argument does not, however, account for why women wish to

avoid a reputation for having poached someone for a monogamous, long-term relationship. Future research might query individuals about their views on forming an exclusive long-term relationship with someone who has a reputation for being a poacher. If men indicate that they would be unwilling to form a long-term relationship with women who have a reputation for poaching individuals for such a relationship, this would be consistent with women's unwillingness to gain a reputation for doing so.

Davies et al. (2006b) found it interesting that the only significant sex differences identified in their study were that men reported that certain benefits would be more likely to motivate them to poach and that women reported that certain costs would be more likely to deter them from poaching. They stated that, although it is important to keep in mind that men gave all of the benefits a rating of less than 5.0—indicating that none of the benefits would be likely to motivate them to poach—, these sex differences suggest that, in comparison to women, for men to be motivated to poach, the attached individual need not be so much more attractive than the unattached individual. This lead Davies et al. to predict that men may be more ready than women to move down the aforementioned hierarchy of mating strategies from general romantic attraction to poaching. This prediction is supported by findings that, across numerous world regions, men report engaging in more poaching attempts than do women (Schmitt & Buss, 2001; Schmitt et al. 2004; Davies et al., 2006a).

Davies et al. (2006b) discussed several aspects in which their study might be limited. In the next section, we consider these limitations and outline how Davies et al. suggested that they might be addressed in future research.

Limitations and Future Directions

As none of the benefits but most of the costs exclusively associated with poaching received a rating above 5.0, Davies et al. concluded that their results indicate that men and women will choose to poach only when the attached individual is sufficiently more attractive than the unattached individual. They suggested that it might be argued, however, that they simply failed to identify any of the benefits exclusively associated with poaching that would motivate individuals to poach. Davies et al. believed this to be unlikely. This is due to the fact that they presented participants with all benefits exclusively associated with poaching that they identified from a review of the poaching literature, as well as additional potential benefits that they derived from evolutionary psychological principles. It, therefore, seemed reasonable to assume, argued Davies et al., that if there were benefits exclusive to poaching which *do* motivate individuals to poach, *at least one* of the benefits presented to participants in their study would have been among them.

As with any study that employs a self-report methodology, there is always the possibility that participants' responses may be influenced by social desirability concerns. Thus, participants may have failed to give any of the benefits a rating greater than 5.0 due to social norms that frown upon the stealing of the romantic partners of others. Davies et al. (2006b) contended that these concerns were somewhat mitigated by the fact that participants were assured both verbally and in written form of the anonymity of their responses. Self-presentation concerns may, however, still have made some participants reluctant to report that any of the benefits would

motivate them to poach. Nevertheless, around 50% of men and 30% of women in their sample reported having attempted to poach someone at some time (Davies et al., 2006a). Thus, argued Davies et al., as it does not seem reasonable that self-presentation concerns would have prevented participants from admitting that any of the benefits would motivate them to poach, while failing to prevent them from admitting to actually having attempted to poach, it appears unlikely that such concerns greatly influenced participants' ratings of benefits. Davies et al. stated that it seemed reasonable, therefore, to accept the finding that none of the benefits considered in the their study were substantial enough to motivate any of the participants to poach when the available attached and unattached individuals are perceived as being equally attractive.

Davies et al. (2006b) suggested that their finding that for men and women to be motivated to poach, any available attached individual must be perceived as being more attractive than any available unattached individual, indicates that an issue that should be investigated in future research is *how much* more attractive than an unattached individual must an attached individual be if someone is to be motivated to poach. Further, given the aforementioned hypothesis that men may be more ready to move from attracting unattached individuals to poaching, there would be value in such research investigating sex differences in any such attractiveness disparity.

Another limitation suggested by Davies et al. (2006b), is that participants were asked to rate each benefit in sequential order and before they had been presented with any of the costs. As ratings are likely to be relative, not absolute, the ratings given by participants may, thus, have been influenced by order effects and the fact that participants were unable to consider all of the benefits and costs before providing ratings. Further, we speculate that actual potential poachers might weigh-up all benefits and all costs against each other simultaneously. In reality, therefore,

the decision-making process undergone by individuals contemplating a mate poach may be more complicated than that suggested by the question format used in the present study, in which each benefit and cost was isolated from all others. Davies et al. stated that future research into the motivations for and against poaching that addresses these limitations might secure ratings that better reflect the influence that particular benefits and costs have on poaching decisions.

An additional potential limitation considered by Davies et al. (2006b) is that it was assumed in constructing the survey that the benefits and costs of poaching are independent. This assumption may not be correct. For instance, the costs, "risk of being physically harmed" and "stress of concealment and deception" may be related to the benefits, "challenge of trying to attract someone away from their partner" and "excitement of an illicit affair." Davies et al., therefore, suggested that there is likely to be value in considering such reciprocal relationships in future studies.

Davies et al. (2006b) suggested several variables not considered in their study that would be worthwhile considering in future research. These include whether the potential poacher is attached or unattached, whether he or she has dependent children, as well as whether the potential poached has dependent children. Davies et al. stated that such factors might affect any cost-benefit analyses conducted by individuals when they are deciding whether to poach.

Summary and Implications for Counselors

Evolutionary psychology posits that the mind consists of numerous domain-specific psychological mechanisms, each of which evolved because it motivated behavior that solved a particular adaptive problem. By doing so, these mechanisms increased the reproductive success of individuals possessing them relative to that of individuals who did not possess them. As a result the mechanisms spread to fixation, such that all humans evolved to possess them.

From an evolutionary psychological perspective, therefore, infidelity is not seen as a psychological or behavioral disorder. Rather, infidelity is viewed as a strategy motivated by the proper operation of an evolved psychological mechanism by which individuals attempt to increase their own reproductive success at the expense of that of their partners. Infidelity, therefore, is expected to have led to the evolution an additional psychological mechanism that causes individuals to experience romantic jealousy in response to a suspected or actual infidelity of their partner. This is because romantic jealousy motivates individuals to enact behaviors that reduce the likelihood that their partners will commit a romantic infidelity or facilitate them in avoiding the reproductive costs associated with being the victim of an infidelity. Further, through a consideration of the sex difference in obligatory parental investment, evolutionary psychological reasoning has identified that men are more likely to experience greater distress in response to a partner's sexual infidelity, whereas women are more likely to experience greater distress in response to a partner's emotional infidelity.

An evolutionary perspective also suggests that, as at any particular time during humans' evolutionary history a significant proportion of individuals will have been mated, humans will have evolved a psychological mechanism for mate poaching. In accordance with this, research presented in this chapter indicates that a significant proportion of individuals are aware that the individuals with whom they are attempting to have sexual relations are currently in nominally exclusive relationships with others. Moreover, by facilitating the identification of benefits and costs specifically associated with poaching and accounting for sex differences in the importance placed on them, evolutionary reasoning has allowed researchers to gain a greater understanding of why people choose to poach or avoid doing so. In addition, such reasoning has enabled researchers to secure findings which suggest that poaching is pursued only if there are no

unattached individuals of sufficient attractiveness available. This has led evolutionary psychologists to hypothesize that people may pursue a *hierarchy of mating strategies*, in which poaching may fall between general romantic attraction and coercive strategies.

As we are not clinicians ourselves, we hesitate to offer specific advice as to how to counsel individuals who commit or are victims of infidelities. We hope, however, that this chapter has illustrated the value of using evolutionary reasoning to provide insight into infidelity. Accordingly, we suggest that by considering the selection pressures that resulted in the evolution of human psychology, counselors may better understand the motivations that lead individuals to commit infidelities and the distress experienced by those who are cheated on.

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Table 1

Mean Ratings of Benefits and Costs

	Sex of rater	
	Men	Women
Benefit(poaching context)	*M* (*SD*)	*M* (*SD*)
Freedom from the need to fully commit oneself to the poached	2.8 (2.5)	2.4 (2.3)
Person has been pre-approved by someone else (short-term)	2.9 (2.7)	2.3 (2.5)
Person has been pre-approved by someone else (long-term)	2.6 (2.5)	2.2 (2.6)
Person has been pre-approved by someone else (exclusive)	2.8 (2.6)	2.6 (2.9
Excitement of an illicit affair	2.9 (2.8)	2.4 (2.5)
Challenge of trying to attract someone away from their partner (short-term)	3.6 (3.0)	2.3 (2.7)
Challenge of trying to attract someone away from their partner (long-term)	2.7 (2.7)	2.0 (2.4)
Challenge of trying to attract someone away from their partner (exclusive)	2.1 (2.4)	2.1 (2.6)
Gaining revenge on someone who has wronged you (short-term)	3.9 (3.0)	3.4 (3.0)
Gaining revenge on someone who has wronged you (long-term)	2.9 (2.8)	2.7 (2.7)
Gaining revenge on someone who has wronged you (exclusive)	2.3 (2.5)	2.5 (2.9)
Ego is boosted (short-term)	4.4 (3.1)	3.2 (2.9)
Ego is boosted (long-term)	4.2 (3.1)	3.5 (3.1)

Table 1 continued

	Sex of rater	
	Men	Women
Benefit (poaching context) (continued)	*M* (*SD*)	*M* (*SD*)
Ego is boosted (exclusive)	4.0 (3.1)	3.8 (3.4)
Less likely to have to help raise or financially support the child	2.4 (2.6)	N/A (N/A)
Cost (poaching context)		
More bother and effort and less likely to be successful (short-term)	5.3 (2.9)	5.1 (2.9)
More bother and effort and less likely to be successful (long-term)	5.3 (2.9)	5.3 (2.8)
More bother and effort and less likely to be successful (exclusive)	5.6 (3.0)	5.7 (2.9)
Danger of being physically harmed (short-term)	3.9 (3.1)	4.8 (3.2)
Danger of being physically harmed (long-term)	4.0 (3.1)	5.0 (3.3)
Danger of being physically harmed (exclusive)	4.1 (3.2)	5.5 (3.0)
Stress of concealment and deception (short-term)	5.1 (3.0)	5.4 (2.9)
Stress of concealment and deception (long-term)	5.3 (3.0)	5.6 (3.0)
Stress of concealment and deception (exclusive)	5.9 (8.0)	5.8 (3.0)
Feelings of guilt and ethical concerns (short-term)	5.8 (2.8)	6.0 (2.8)
Feelings of guilt and ethical concerns (long-term)	5.9 (2.7)	6.0 (2.9)

Table 1 (continued 2)

	Sex of rater	
	Men	Women
Cost (poaching context) (continued)	*M* (*SD*)	*M* (*SD*)
Feelings of guilt and ethical concerns (exclusive)	6.1 (2.9)	6.6 (2.7)
Suffer shame and gain a bad reputation (short-term)	4.8 (2.9)	6.1 (2.9)
Suffer shame and gain a bad reputation (long-term)	4.8 (3.0)	6.3 (2.8)
Suffer shame and gain a bad reputation (exclusive)	5.0 (3.1)	6.5 (2.7)
Greater risk of raising baby on your own	N/A (N/A)	6.3 (3.0)
Sexually unfaithful to previous partner (exclusive)	6.0 (2.8)	5.8 (3.1)
Emotionally unfaithful to previous partner (exclusive)	4.8 (2.7)	4.5 (2. 8)

Note. *M* = mean, *SD* = standard deviation, N/A = not applicable. See text for additional information.