

Volume 11, Number 4

Submitted: September 28, 2005

First Revision: November 15, 2005

Accepted: November 16, 2005

Published: November 16, 2005

### **ALTERNATIVE MALE MATING STRATEGIES ARE INTUITIVE TO WOMEN**

Daniel J. Kruger  
University of Michigan

Maryanne L. Fisher  
St. Mary's University

#### **ABSTRACT**

*In this investigation, female college students (291) read brief sketches of characters from 19th Century novels exemplifying alternative male mating strategies. The proper hero "dad" advertises high potential for paternal investment by being compassionate, romantic, and industrious, whereas the dark hero "cad" advertises high genetic quality by being competitive, dominant, and brave. Women preferred the "dad" for long-term relationships, but were more likely to choose the "cad" for brief sexual relationships. These preferences were expected, as they benefit the women's reproductive success. Participants also inferred critical attributes and behaviors from the character descriptions that omitted this information.*

## INTRODUCTION

Sigmund Freud once remarked, "The great question which I have not been able to answer, despite my 30 years of research into the feminine soul, is 'What does a woman want?'" (Jones, 1981). Freud's now infamous question has been addressed, in part, by contemporary research on women's sexuality and relationship choices. To some extent, women seek the same characteristics in partners as men, such as kindness, understanding, and intelligence (Kenrick & Simpson, 1997). However, cross-culturally women demonstrate stronger preferences than men for partners to have good financial prospects, and to be ambitious, industrious, older in age, and emotionally mature (Buss, 1989). Women appear to prefer men who are likely to have the ability and willingness to sustain long-term relationships with substantial contributions of resources (Buss, 1994). In other words, men who are socially respected, financially stable, older, wealthy, ambitious, industrious, dependable, emotionally stable, and romantic are most attractive to women (e.g., Ardener, Ardener, & Warmington, 1960; Buss, 1989, 1994; Feingold, 1992; Kenrick & Simpson, 1997; Townsend, 1989; Townsend & Roberts, 1993; Wiederman & Allgeier, 1992).

This preference is understandable, given the tremendous investment necessary for the successful rearing of children. Men contribute substantially more to the provisioning and care of offspring than males of most other mammalian species (Fisher, 1992). Having a father in residence reduces the probability of infant mortality, especially in pre-technological societies (Hill & Hurtado, 1994; Geary, 1998). Thus, it is not surprising that women pursue long-term relationships with men who will help to ensure offspring survival, thereby enabling offspring to successfully produce families themselves.

Although men's parental investment is typically high relative to other mammalian males, it is considerably outweighed by the investment of women. The biological differentiation of the sexes is based not on chromosomes, but on the cytoplasmic contribution to sex cells. Female eggs are notably more costly to produce than male sperm. In mammals, females make greater contributions both prenatally and postnatally, in terms of the energy and nutrients they supply during pregnancy and breastfeeding, and also in offspring care. This difference is even more exaggerated in humans, where an elongated period of development extends childcare into the teenage years (Fisher, 1992).

Because women invest more in offspring than men, and are much more limited in the number of offspring they can produce, they tend to be more selective of partners (Trivers, 1985). Empirical evidence across species supports the connection between greater female investment and greater male competition for mates (see Trivers, 1985). This differential investment accounts for the much greater willingness among men than women to enter into sexual relationships with minimal concern (e.g., Clark & Hatfield, 1989). Thus, throughout human evolutionary history, males have needed to demonstrate that they are suitable candidates for successful long-term partnerships. However, women do occasionally undertake short-term relationships with men (see Mealy, 2000), which is puzzling, as short-term relationships would appear to be more in agreement with a man's reproductive interests than a woman's. Why would women have a relationship with someone who may not be around to help raise delicate offspring? To address

this issue, Fisher (1930) proposed these women could benefit from the genetic contribution that males provide in short-term relationships.

This "sexy son" hypothesis suggests that women should choose short-term partners whose phenotypic qualities indicate a genotype that is quite successful in the current environment (Gangestad & Simpson, 2000). Thus, this preference implies that the associated attributes may vary from what women value in long-term mates. One study demonstrated that women were choosier with respect to the physical attractiveness of potential partners when considering a brief sexual affair than a longer relationship (Kenrick, Groth, Trost, & Sadalla, 1993). Another study found that some women with high socio-economic potential would agree to have sex with an attractive man with low socio-economic status; however none of them would consider him for marriage. The reverse pattern was found for men of high socio-economic status, as women consistently preferred marriage to sex regardless of their attractiveness (Townsend & Roberts, 1993). Physical attractiveness requires relatively stable physiological development, as well as resistance to infectious diseases and parasites. Thus, physical attractiveness is an honest indicator of genetic quality (see Mealy, 2000).

Some men may be more successful in obtaining brief sexual affairs than others. Patricia Draper and her colleagues propose that men specialize in one of two alternative mating strategies. "Cads" specialize in a short-term mating strategy, and they demonstrate their genetic quality to women by being highly competitive, dominant, and brave, and give the promise of sons with the same characteristics (Belsky, Steinberg, & Draper, 1991; Draper & Belsky 1990; Draper & Harpending 1982, 1988). Cads have a high risk, but potentially high reward strategy. "Dads" exhibit an alternative, long-term mating strategy, and demonstrate their attractiveness to women by showing that they are compassionate, kind, romantic, and industrious. These features signal the potential for substantial investment in the woman and their mutual offspring. Draper and Belsky (1990) exhibit cross-cultural evidence of two types of men, with traits reflecting the criteria women value in long-term or short-term relationships.

In fact, there appears to be a firm psychological foundation that facilitates these alternative male mating strategies. Gagne and Lydon (2003) have shown that men who have high levels of commitment to their romantic relationships tend to exaggerate their partner's virtues, whereas men with low levels of commitment tend to devalue their partner's virtues. Interestingly, there was no effect for relationship satisfaction, and women did not exhibit this pattern. This study suggests that males adopting a dad-style mating strategy with high levels of commitment will think highly of their mates, regardless of the satisfaction they feel in their relationship, while males following a cad-style strategy with low levels of commitment will not think as highly of their mates. This pattern may effectively reinforce the likelihood of the relationship being maintained.

Although the distinction between cad and dad mating strategies has been described, there is very little research investigating women's mating preferences and responses in regard to these strategies. Therefore, we recently developed a psychological instrument to examine women's relationship choices with character descriptions representing dad and cad mating strategies (Kruger, Fisher, & Jobling, 2003). British Romantic literature of the late 18th and early 19th centuries is distinguished by the introduction of the dark (also called the Romantic or Byronic)

hero. The Romantic hero is similar to the earlier Gothic villain in that he is ambitious, passionate, and cunning. However, unlike the Gothic villain, these dark heroes have redeeming features. Although they may be violent and rebellious, yet this rebellion occurs in the context of a tyrannical authority. Dark heroes are socially dominant and self-confident. They are able to achieve numerous short-term relationships with women; however, they are not successful in long-term relationships such as marriage (see Jobling, 2002).

In contrast, the proper hero (or hero of sensibility) of the Romantic period is typically happily married at the end of the story. Like the traditional folk tale hero, the proper hero's motives are kind and altruistic, which are incongruent with the egoistic ambitions of the dark hero. However, the proper hero is not very "heroic" in the modern sense; he is not distinguished by intelligence, dominance, or heroic actions. Proper heroes stay neutral in the background, unless forced to come forward by circumstances and even then tend to have reservations (see Jobling, 2002). The correspondence between the personality traits of proper and dark heroes and the attributes of dad and cad mating strategies is striking (Jobling, 2002). Proper heroes follow long-term mating strategies with reliable paternal investment in offspring; dark heroes maximize their reproductive success by having many short-term relationships with minimal or no parental investment.

We predicted and established that women's tendencies to choose dark heroes over proper heroes for a hypothetical relationship would be inversely related to the length of the desired relationship (Kruger, Fisher, & Jobling, 2003). Women preferred a dark hero cad's promise of successful genes for a brief sexual affair, and preferred the proper hero dad's potential for paternal care and resources for a long-term relationship. However, in hindsight we realized that the study was potentially confounded in that character descriptions inadvertently contained information on the mating attributes of the characters. One proper hero dad would repeat "verses to his beautiful wife, who shall hang on his arm." A dark hero cad was described as having qualities that made one "successful with women," and that he was responded to by some "very attractive women." Participants may have been primed to associate proper hero dads with long-term relationships and dark hero cads with short-term relationships, making the experimental results tautological.

Thus, in the current study, our aim was to replicate the original results with a more stringent task in which participants were not given explicit information on a character's behavior in sexual or romantic relationships. We also extended our original analyses to investigate whether women are able to predict the attributes associated with dad and cad mating strategies from a description that does not reveal this information. We believe that women are able to intuitively infer complex patterns of behavior associated with alternative male mating strategies from reading these brief personality descriptions.

To further these goals, we developed a number of items that assessed women's inferences about the qualities of dads and cads pertaining to sexual relationships and parental investment, such as how long they thought a relationship with each would last, who would be better with children, who would be more likely to commit sexual infidelity, and who would provide more resources to his family if they had equivalent incomes. We also asked women to indicate which character their parents would prefer them to date and which they would prefer to see engaged to their own (hypothetical) 25 year old daughter. Presumably, dads are more likely to provide parental investment to offspring and are less likely to divert resources towards other women than are

cads, so it is probable that parents would prefer their daughters to develop long-term, stable relationships with dads. In addition to the aversive effects of father absence, maternal grandparents may divert resources to a daughter and grandchild(ren) because of a lack of paternal investment, decreasing their inclusive fitness by reducing resources that could be otherwise allocated.

Cads benefit women not through extensive resource investment, but by the high quality genes they provide to offspring. Thus, we asked women who they would prefer to have an affair with if they were already in a relationship. We are not implying that women consciously think, “I am going to have an affair with him because it is going to enhance the propagation of my genetic material into future generations.” From an evolutionary perspective, it is not necessary for the psychological mechanism to be this explicit. An inherent tendency towards an adaptive behavior will spread regardless of the subjective mental experience (or non-experience) of the individual, as long as the action reliably occurs. It could be the case that women choose to have affairs with cads because they find cads to be thrilling, enjoyable to be around, and/or an exiting break from an otherwise mundane life. Also, to assess the degree to which the genetic basis of the “sexy-son” strategy is explicitly recognized, we asked women to imagine that their husband is infertile and to pick which character they would prefer as a sperm donor.

We also examined the relationship between self-perceived similarity to the character descriptions and their relationship preferences. Women who report a higher degree of resemblance to the dad may be less likely to predict brief sexual relationships with either character, and may show wariness of the cad for relationships of any length. Women who report a higher degree of resemblance to the cad may show the opposite pattern.

## **METHOD**

### **Participants**

Ethnically diverse (61% reported varying degrees of non-Western European ancestry) female undergraduates ( $N = 291$ ;  $M$  age = 18.91,  $SD$  age = 1.18) at a large Midwestern-American university participated to fulfill a course requirement. A total of 48.6% were not currently involved in a romantic relationship, 15.3% were involved in a casual romantic relationship, and 36.1% were involved in a committed romantic relationship.

### **Procedure**

Participants completed a demographic survey, and then read a descriptive passage (200-300 words) of a prototypical proper hero dad, Waverley from *Waverley* (1814) by Walter Scott, a portion of which is excerpted below:

“He was also not as concerned as his fellow warriors about military honor. As one of his acquaintances said of him, 'High and perilous adventure is not his forte. He would never have been his celebrated ancestor Sir Nigel [a famous warrior], but only Sir Nigel's eulogist and poet. I will tell you where he will be at home and in his place - in the quiet

circle of domestic happiness, lettered indolence, and elegant enjoyments of his family's estate. "

Participants also read a passage for a prototypical dark hero cad, George Staunton from *The Heart of Midlothian* (1818) by Walter Scott. A portion of this passage is excerpted below:

"His carriage was bold and somewhat supercilious, his step easy and free, his manner daring and unconstrained. His features were uncommonly handsome, and all about him would have been interesting and prepossessing, but for that indescribable expression which habitual dissipation gives to the countenance, joined with a certain audacity in look and manner."

Vocabulary keys defining several arcane words or phrases were included for each passage. In the passages, the dad was described as happy, peaceable, and bookish whereas the cad was described as bold, arrogant, unconstrained, and moody. Participants answered, "how well do the personality characteristics described in this passage describe you?" and the extent to which they would like to have a long term committed relationship with each person, to have a short-term relationship with each person, and to have a brief sexual affair with each person on a seven point scale from "Not at all" to "Completely." Participants also rated how long they thought a relationship with each person would last on a seven point scale from "One day" to "At least a year."

Using forced-choice items, participants indicated which character they would prefer to go to a party with, to date, for sexual relations, for cheating on their current partner with, for marriage, as a sperm donor, and to see engaged to a hypothetical 25-year old daughter. Participants also chose which character they thought would be better with children, who would provide more resources to his family (assuming they had the same income), who would be more likely to cheat on them, and who their parents would prefer them to date.

We employed paired samples *t*-tests to compare the participant ratings of dads and cads across the paired passages, and binomial probabilities to indicate preferences for the forced choice items. We used the HC-Holm procedure (Toothaker, 1993) to hold the family-wise error rate at .05 for the inferential statistics, and thus effect sizes (*d*) of statistically significant comparisons are presented for participants' ratings. Cohen (1988) suggests that the benchmarks for interpretation in the behavioral sciences are small, *d* = .20, medium, *d* = .50, and large, *d* = .80.

## RESULTS

### Preferences for Dads and Cads by Type of Relationship

Women's estimated likelihoods for relationships with the dad increased as the length of the relationship increased, whereas women's estimated likelihoods for relationships with the cad followed the reverse pattern (see Table 1). Participants had a stronger preference for the dad than the cad for a long-term committed relationship and a stronger preference for the cad than the dad for a brief sexual affair (see Table 1).

**Table 1. Participants' Ratings of Relationships with Dads and Cads**

Item	<i>M</i> dad	<i>SD</i> dad	<i>M</i> cad	<i>SD</i> cad	<i>d</i>
Long-term relationship	3.56	1.83	2.61	1.57	.39
Short-term relationship	3.25	1.50	3.52	1.80	.13
Brief sexual affair	2.41	1.63	3.76	2.17	.64
Relationship length	3.63	1.72	2.72	1.33	.42

Participants also demonstrated a weak but statistically significant preference for the cad for a short-term relationship, and thought that a relationship with the dad would last longer than one with the cad. The forced-choice items revealed that participants preferred dads for a date, marriage, and engagement to their hypothetical 25-year old daughter (See Table 2). However, participants preferred the cad for sexual relations and an extra-relationship sexual affair. Participants thought that their parents would prefer that they date the dad, that the dad would provide more resources to his family, and that he would be better with children. In contrast, participants rated the cad as more likely to cheat on them. There was no significant overall preference for a sperm donor.

**Table 2. Participants' Choices between Dads and Cads**

Item	% Dad	% Cad	Favors
Better with children	89	11	Dad
Engaged to your 25 year old daughter	85	15	Dad
Parents prefer you to date	83	17	Dad
Prefer to marry	82	18	Dad
Provide more resources to his family	78	22	Dad
Prefer to date	57	43	Dad
Sperm donor	55	45	Draw
Prefer for sexual relations	34	66	Cad
Prefer to go to a party with	24	76	Cad
Prefer for cheating	21	79	Cad
More likely to cheat on you	6	94	Cad

The degree to which participants felt they resembled the dad was directly related to the estimated likelihood of having a long-term committed relationship with the dad,  $r(131) = .632, p < .001$ , and a short term relationship with the dad,  $r(131) = .632, p = .047$ . There were no relationships between personality match with the dad and sexual relations with the dad, or with any relationships involving the cad. The degree to which participants felt they resembled the cad was directly related to the estimated likelihood of having brief sexual relations with the dad,  $r(131) = .352, p < .001$ , and cad,  $r(131) = .392, p < .001$ ; as well as short-term,  $r(131) = .453, p < .001$ , and long term committed relationships  $r(131) = .590, p < .001$ , with the cad.

## DISCUSSION

The current study replicates and extends the central finding of our previous study. Women's tendencies to choose cads over dads for a hypothetical relationship increased as the length of the

relationship decreased. In both the present investigation and our previous study, we found that women prefer cads more as short-term mates than as long-term mates, and prefer dads more as long-term mates than as short-term mates. Our replication ameliorates concern over the potential confound of including mating behaviors in the original study.

Participants associated the proper hero dad with a cluster of characteristics indicative of a successful long-term, low risk and high parental investment male mating strategy. Women also preferred dads as dating partners, suggesting that women often seek men who display these characteristics. For less committed interactions, such as seeking a party companion or a partner for a brief sexual affair, women more often chose the cad. Cads were overwhelmingly thought of as the one most likely to cheat, and a large percentage of women were also more likely to cheat on their current partner with the cad than the dad. These attributes reflect the properties of a high risk but potentially high return short-term male mating strategy. We propose that an understanding of the attributes of males exhibiting dad and cad mating strategies underlies the relationship choices made by women.

Our results demonstrate an intuitive leap from discovering male personality features to discerning male mating and parenting strategies. Basic personality characteristics are inferred to be indicators of attributes that would potentially affect a woman's reproductive success, such as the tendency for mate defection and the potential amount of investment in offspring. The salience and interpretability of these personality characteristics supports the argument that women are not naive targets of male mating strategies, but are well aware of the likelihood of relationship stability and long-term provisioning. In fact, the popularity of mass-marketed romance novels may be related to the fantasy of transforming a cad into a dad, and thus winning a partner with the attractive attributes of cads as well as the security and support provided by dads (Salmon & Symons, 2003).

Preferences for partners depend on length of relationship and reflect the form of contribution that is valued in each type of relationship: reliable parental investment for long term relationships and genetic investment for brief sexual relationships. In a sense, both characters are genetically "fit," as dads are also likely to generate descendants. Yet, those men with traits enabling them to successfully carry out a cad mating strategy will have offspring that are likely to share the traits promoting attractiveness to women. The value of these traits for acquiring partners would be especially important when the prospects of obtaining reliable paternal investment are slim (Gangestad & Simpson, 2000).

We frame these sexual strategies in terms of the tendencies that may enhance reproductive success. The psychological mechanisms promoting preferences for cads may include the constructs previously described and other factors leading to riskier behavioral patterns. The relationship between the perceived resemblances to the dad and cad and estimated likelihood of relationships reveal that to some extent women may seek partners who match their own personality and strategies. Also, the more women's personalities resemble the cad, the more likely they may be to enter into relationships with the cad with expectations of long, stable relationships and substantial paternal investment, despite the cad's greater tendency for abandonment. Women might also overestimate a man's motivation to provide parental investment, or be deliberately deceived by a man interested in a short-term sexual relationship. It



is also believed that men have a greater interest than women, on average, in casual sexual relationships and may manipulate women into sexual relationships but abandon them if a pregnancy occurs (Oliver & Hyde, 1993; Symons, 1979).

We find it interesting that there was no significant preference for either character as a sperm donor. More women were interested in sexual relations and going to a party with the cad than were interested in having him as a sperm donor, and more women were interested in dating and marrying the dad than having him as a sperm donor. Thus, women appear to understand the genetic benefit provided by cads, but also value other factors such as experiential enjoyment. However, one limitation of this study is that the average participant is quite young and probably has not encountered fertility difficulties. It would be informative to repeat the same task with women who are actually seeking sperm donors to resolve fertility issues.

A potential avenue for further exploration concerns time perspective (Zimbardo & Boyd, 1999), as it may be an important feature of an individual's psychological profile. Women with shorter time horizons may be more likely to pursue short-term relationships and be attracted to men who may more readily abandon them. In contrast, women with greater abilities to delay gratification may find stable partnerships with more reliable men who will be more likely to provide for them and their children. This area of research has profound implications, indicating the effect of early childhood experiences on behavioral tendencies and outcomes throughout the lifespan.

Some may claim that our results reflect stereotypes deeply rooted in patriarchal Western family systems. Although we consider this explanation unlikely, as anthropological research finds dad and cad morphs with distinct clusters of personality traits cross-culturally (see Draper & Belsky, 1990), we are very interested in replicating this study in other cultures. It would be especially useful to conduct this experiment in a society where fathers are typically absent and/or where male parental investment has little effect on reproductive success. Women in these societies may be able to distinguish cad and dad types, but may exhibit different patterns of preferences given the constraints of their local environments.

Our results imply that women can readily infer a number of critical attributes and behaviors that are important in reproductive relationships when they are provided with a brief character sketch. These inferences enable women to make informed mating decisions, and allow them to choose a partner providing qualities valued in a given type of relationship. Women's character selections across the choice items create a telling rendition of expectations for dads and cads, and also clearly follow alternative male mating strategies. This pattern suggests that male mating strategies are congruent with female mating strategies.

## **REFERENCES**

Ardener, E. W., Ardener, S. G., & Warmington, W.A. (1960). *Plantation and village in the Cameroons*. London: Oxford University Press.

Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development*, 62, 647-670.

Buss, D. M. (1994). *The evolution of desire: Strategies of human mating*. New York: Basic Books.

Buss, D. M. (1989). Sex difference in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences* 12, 1-49.

Clark, R.D., & Hatfield, E. (1989). Gender differences in receptivity to sexual offers. *Journal of Psychology and Human Sexuality*, 2, 39-55.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Academic Press.

Draper, P., & Belsky, J. (1990). Personality development in evolutionary perspective. *Journal of Personality*, 58, 141-61.

Draper, P., & Harpending, H. (1982). Father absence and reproductive strategy: An evolutionary perspective. *Journal of Anthropological Research*, 38, 252-73.

Draper, P., & Harpending, H. (1988). A sociobiological perspective on the development of human reproductive strategies. In K. B. MacDonald (ed.), *Sociobiological Perspectives on Human Development* (pp. 340-72). New York: Springer.

Feingold, A. (1992). Gender differences in mate selection preferences: A test of the parental investment model. *Psychological Bulletin*, 112, 125-139.

Fisher, H. (1992). *Anatomy of love*. New York: Norton & Company.

Fisher, R. A. (1930). *The genetical theory of natural selection*. Oxford: Oxford University Press.

Gangestad, S.W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Brain and Behavioral Sciences*, 23, 573-644.

Geary, D. (1998). *Male, female: The evolution of human sex differences*. Washington DC: American Psychological Association,.

Hill, K. & Hurtado, A. M. (1996). *Ache life history: The ecology and demography of a foraging people*. Hawthorne NY: Aldine de Gruyter.

Jobling, I. (2002). Byron as cad. *Philosophy and Literature*, 26, 296–311.

Jones, E. (1981). *The life and work of Sigmund Freud*. New York: Perseus Books Group.

Kenrick, D.T., Groth, G.E., & Trost, M. R. (1993). Integrating evolutionary and social exchange perspectives on relationships: Effects of gender, self-appraisal, and involvement level on mate selection criteria. *Journal of Personality & Social Psychology*, 64, 951-969.

Kenrick, D. T. & Simpson, J. A. (1997). Why social psychology and evolutionary psychology need one another. In J. Simpson and D. Kenrick, (eds.), *Evolutionary Social Psychology* (pp. 1-20). Mahwah, NJ: Lawrence Erlbaum Associates.

Kruger, D. J., Fisher, M., & Jobling, I. (2003). Proper and dark heroes as dads and cads: Alternative mating strategies in British Romantic literature, *Human Nature*, 14, 305-317.

Oliver, M. B. & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin*, 114, 29-51.

Richard, F. D., Bond, C. F., & Stokes-Zoota, J. L. (2003). One hundred years of social psychology quantitatively described. *Review of General Psychology*, 7, 331-363.

Salmon, C., & Symons, D. (2001) *Warrior lovers: Erotic fiction, evolution and female sexuality*. London: Weidenfeld & Nicolson.

Scott, W. (1969). *The heart of Mid-Lothian*. [1818]. New York: Holt.

Scott, W. (1986). *Waverley*. [1814]. Oxford: Oxford University Press.

Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford University Press.

Toothaker, L. E. (1993). *Multiple comparison procedures*. Newbury Park, CA: Sage.

Townsend, J. M. (1987). Mate selection criteria: A pilot study. *Ethology and Sociobiology*, 10, 173-206.

Townsend, J. M., & Roberts, L.W. (1993). Gender differences in mate selection among law students: Divergence and convergence of criteria. *Journal of Psychology*, 29, 507-528.

Trivers, R. (1985). *Social evolution*. Menlo Park, CA: Benjamin Cummings Publishing Co.

Wiederman, M. W., & Allgeier, E. R. (1992). Gender differences in mate selection criteria: Sociobiological or socioeconomic explanation? *Ethology and Sociobiology* 13, 115-124.

Zimbardo, P., & Boyd, J. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271-1288.

## **AUTHOR BIOGRAPHIES**

Daniel J. Kruger, Ph.D. (Loyola University Chicago, 2001) is an assistant research scientist at the Prevention Research Center of the University of Michigan. His evolutionary research interests include altruism, cooperation, competition, life history, mating strategies, risk taking, and mortality patterns. [kruger@umich.edu](mailto:kruger@umich.edu)

Maryanne L. Fisher, Ph.D. (York University, 2004) is an assistant professor in the Department of Psychology at St. Mary's University in Halifax, Canada. Her research interests include mate selection, sex differences in competition for mates, maintenance of romantic relationships, and the measurement of physical attractiveness. [mlfisher@smu.ca](mailto:mlfisher@smu.ca)