
Age and gender differences in mate selection criteria for various involvement levels

BRAM P. BUUNK,^a PIETERNEL DIJKSTRA,^a DETLEF FETCHENHAUER,^a AND DOUGLAS T. KENRICK^b

^aUniversity of Groningen; and ^bArizona State University

Abstract

The present study investigated mate preferences for five different levels of relationship involvement—marriage, serious relationship, falling in love, casual sex, and sexual fantasies—among individuals of 20, 30, 40, 50, and 60 years of age. Consistent with an evolutionary perspective, men preferred mates who were higher in physical attractiveness than themselves, whereas women preferred mates who were higher in income, education, self-confidence, intelligence, dominance, and social position than themselves. The lower the level of relationship involvement, the lower were the preferred levels of education, physical attractiveness, and, particularly for males, preferred intelligence in comparison to oneself. For sexual fantasies, men and women preferred mates who were higher in physical attractiveness than those they preferred for real partners. There were few age differences in mate preferences, although older individuals set higher standards for a potential mate's education.

Although gender differences in mate selection criteria among humans have been observed by social and behavioral scientists for decades (e.g., Goffman, 1959; Waller, 1937), only recently have such differences been interpreted and studied from an evolutionary perspective, such as theories of *differential parental investment* and *sexual selection* (e.g., Buss, 1998; Symons, 1979; Trivers, 1972). According to this perspective, because females and males invest different resources in their offspring, they should value different characteristics in a mate. Males invest more indirect resources such as food and protection, and females more direct resources (their own bodily nutrients). Therefore, it is assumed that males and females will be attentive to the potential of a partner to provide such specific resources, with females being more attentive to characteristics related to resource acquisition such as status and dominance, and males

more to characteristics signaling reproductive potential, in particular physical attractiveness (Buss, 1998). These predictions have garnered considerable support. For instance, Buss (1989) found in a study across 37 cultures that men ranked a potential mate's physical attractiveness more important than did women, whereas women ranked a potential mate's social status more important than did men. Moreover, according to the differential parental investment model, there are not only differences in the nature of the characteristics males and females value in a mate, but also in the overall tendency to be selective. Whereas women make necessarily high investments in their offspring, men have the potential to invest minimally (one act of sexual intercourse at the theoretical low end). As a consequence, according to the model, women set higher standards for their partner choice than men do.

However, as noted by Kenrick, Sadalla, Groth, and Trost (1990), the general parental investment model for mammals must be qualified for humans because human males may also invest heavily in their offspring and,

Correspondence should be addressed to Bram P. Buunk, Department of Social and Organizational Psychology, University of Groningen, Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands; e-mail: buunk@ppsw.rug.nl.

as a consequence, would also be selective about the characteristics of acceptable mates. Therefore, Kenrick et al. (1990) suggested the *qualified investment model*, according to which men should be equally as selective as women with respect to long-term mates, but less selective than women with respect to short-term mates. In line with this model, participants in one study were asked to specify their minimum criteria for four levels of involvement (date, sexual relations, dating, and marriage). Females were more selective than males, particularly with respect to sexual relations. In that study it was not explicitly made clear to the participants that "sexual relations" referred to casual sex, a distinction that is crucial for testing the qualified parental investment model. However, in a related study, Kenrick, Groth, Trost, and Sadalla (1993) found that men were indeed particularly less selective with respect to the traits desired in a partner for casual sex ("one-night stands"). For instance, men demanded a much lower level of attractiveness and dominance from a casual sex partner than from a potential spouse, whereas for women the requirements for both types of partners were quite alike (see also Buss & Schmitt, 1993).

We extended this earlier research for several reasons. First, with the exception of some studies on personal advertisements, virtually all research on mate selection criteria has been done among young adults (in particular, college students). Little is known about whether older adults also distinguish between various levels of involvement. Finding evidence that among older adults similar sex differences are found as among younger adults would indicate that such differences are not just a characteristic of young people who are in the process of choosing partners, but reflect robust differences between the sexes. Second, the research that has been done among adults other than college age has examined the content of personal advertisements, leaving open the possibility that those placing ads constitute a select sample (Rasmussen, Rajecki, Ebert, Lagler, Brewer, & Cochran, 1998). Third, although there have been studies outside of North America on mate selection criteria, as far as we are aware

there has been virtually no research in non-North American cultures examining such criteria for different involvement levels. The Netherlands provide an interesting context in which to investigate this issue because, compared to the United States, Dutch culture is characterized by a relatively high level of femininity—that is, by less emphasis on psychological differences between men and women (Hofstede, 1984)—and by a higher degree of sexual liberalism as manifested in more tolerance of sex outside marriage and of cohabitation (e.g., Buunk, 1983; Buunk & Van Driel, 1989).

In the present research, we expanded earlier research by employing five levels of relationship involvement: sexual fantasy, one-night stand, being in love, serious relationship, and marriage. Thus, we considered fantasy as the lowest level of involvement. "Being in love" is an imperfect translation of the Dutch term *verliefdheid*, a state that is somewhere between what has been designated in the English language literature as *passionate love*, *being in love*, and *limerence*. On the basis of the existing literature conducted on mate preferences from an evolutionary perspective (e.g., Buss et al., 1990; Kenrick et al., 1993), we examined the following mate selection criteria: income, education, physical attractiveness, self-confidence, intelligence, social position, and dominance. We were particularly interested in whether individuals apply different criteria for partners in their sexual fantasies than for partners in real relationships. As such fantasies are not constrained by practical considerations, we would expect individuals to be relatively free in expressing their true desires—those desires that are predicated on evolutionary theory (Ellis & Symons, 1990; Wilson, 1997). If, as evolutionary theory proposes, a mental mechanism has evolved in which men and women differ in their mate preferences, then sexual fantasies in particular should show such sex differences, and these differences should be more or less independent of age. Whether older people benefit from reproductive outcomes is irrelevant, as fantasies merely require them to express what they really like. Although there is a considerable literature on sex differences in sexual fantasies

(e.g., Leitenberg & Henning, 1995), little is known about the *criteria* for choosing partners about whom to fantasize, and little is known about the extent to which such criteria differ from the criteria for choosing real partners. In line with our argument, Wilson (1997) found that, as a proportion of total fantasy output, females were more likely than males to fantasize about famous partners. To conclude then, we would expect gender differences on the level of desires for traits in a partner to be particularly pronounced for sexual fantasies.

In most previous research mate preferences have been assessed by asking participants to indicate whether they preferred a partner who was higher or lower than they were themselves on the various dimensions. In contrast, we assessed the preferred mate value relative to one's own *mate value*. The reason for doing so was that, in selecting mates, individuals relate their own attributes to those of potential mates. As noted by Gilbert, Price, and Allan (1995), humans have developed mechanisms to assess their status in the group, in particular their own attractiveness in comparison to same sex others and, by implication, in comparison to opposite sex others. Such mechanisms allow individuals to avoid wasting time in futile competition with those above their own rank, and prevent those with relatively lower reproductive success from investing in a mate whose assets are lower than one might expect on the basis of one's own assets.

Method

Participants

Seventy men and 67 women participated in the study. To examine the effects of age on mate preferences, it was decided to select groups that were clearly distinct in age. By doing so, the power of the analyses was enhanced. Therefore, five age groups were selected: individuals of ages 20 ($n = 28$), 30 ($n = 36$), 40 ($n = 30$), 50 ($n = 21$), and 60 ($n = 15$) years. For all age groups, individuals maximally one year older or one year younger were also included. Thus, for example, the 40-year-old

age group included individuals of 39, 40, and 41 years of age. Of the sample, 80% of the participants were involved in a close relationship, and 20% were not.

Procedure

In various public places in the province of Groningen, such as railway stations, libraries, and shopping malls, people were approached and asked to participate in a study. About half of the individuals approached agreed to participate. They were first asked their age and it was assessed if their age met the requirements (thus, for example, people of 22 to 28 years of age were turned away). People who fit the criteria were told the study concerned preferences with respect to a heterosexual partner. It was emphasized that all data would be processed anonymously, and that it was important that they answer the questions as honestly as possible. The questionnaires were filled out on location. After assessing some demographic variables, participants were asked to rate their preferences. These questions were based on Kenrick, Gabrielidis, Keefe, and Cornelius (1996), and were introduced with the following statement: "Think for a few seconds about an attractive person of the opposite sex. Suppose you would want to sexually fantasize about/ have a casual affair with/ fall in love with/ have a serious relationship with/ marry this person. Assume this person would also want to sexually fantasize about/ have a casual affair with/ fall in love with/ have a serious relationship with/ marry you, and there would be an opportunity to sexually fantasize / have a casual affair/ fall in love/ have a serious relationship / marry." Participants were asked to indicate their preferences with respect to income, education, physical attractiveness, self-confidence, intelligence, social position, and dominance of the other person on 7-point scales ranging from 1 = *much less than me* to 7 = *much more than me*.

The order for the five levels of relationship involvement was randomized. To prevent any confounds, the template was the same for all involvement levels, including "falling in love" and "sexual fantasy," although these

types of involvement do not per se require the other person to want the same, nor do they require that there be an opportunity for the "relationship" to occur.

Results

A multivariate repeated measures MANOVA was performed on preferences with regard to a potential mate's income, education, physical attractiveness, self-confidence, intelligence, dominance, and social position using Participant Sex and Participant Age Category as between-subject variables and Level of Relationship Involvement as a within-subject factor with five levels. The analysis revealed a significant between-subject effect of Participant Sex ($F(6, 115) = 11.73, p < .001$) as well as a significant within-subject effect of Level of Relationship Involvement ($F(24, 97) = 2.99, p < .001$). The effect of Participant Age Category on the seven attributes was not significant ($F(24, 402) = 1.22, ns$), nor were any of the interactions between Participant Sex, Age, and Level of Relationship Involvement ($F_s < .91, ns$). To follow up the multivariate analysis, repeated measures ANOVAs were conducted separately on each of the seven attributes.¹

Income. With regard to a potential mate's income, the repeated measures ANOVA revealed only a between-subject effect of Participant Sex ($F(1, 120) = 23.80, p < .001$). Independent of age categories and relationship levels, women desired a potential mate who had a higher income than themselves ($M = 5.22$), whereas men in general desired a potential mate who hardly differed in income ($M = 4.38$). With regard to a potential mate's income, no other effects reached significance ($F_s < 1.27, ns$).

Education. A similar ANOVA on preferences with regard to a potential mate's education revealed significant effects of Participant Sex ($F(1, 120) = 8.71, p < .01$)

and Age Category ($F(1, 120) = 2.74, p < .05$). In general, women desired a potential mate who had a higher level of education than themselves ($M = 4.88$), whereas men in general desired a potential mate who hardly differed in educational level ($M = 4.43$). In addition, participants of age 40 years and up desired a potential mate whose educational level was somewhat higher than their own (40 years $M = 4.79$, 50 years $M = 4.75$, and 60 years $M = 4.99$), whereas younger participants desired a potential mate with an educational level more similar to (though still higher than) their own (20 years $M = 4.36$, 30 years $M = 4.49$). The ANOVA also revealed a significant within-subject effect of Level of Relationship Involvement ($F(4, 117) = 2.97, p < .05$) that followed a linear pattern ($F(1, 120) = 8.79, p < .01$), indicating that participants' preference for a highly educated mate gradually decreased as relationship involvement became lower (from marriage $M = 4.72$ to sexual fantasies $M = 4.52$). With regard to a potential mate's educational level, no other effects reached significance ($F_s < 1.62, ns$).

Physical attractiveness. A similar ANOVA on preferences with regard to a potential mate's physical attractiveness revealed a significant effect of Participant Sex ($F(1, 120) = 6.31, p < .05$). Men ($M = 5.44$), more than women ($M = 4.99$), desired mates who were more physically attractive than themselves. The ANOVA also revealed a significant within subject effect of Level of Relationship Involvement ($F(4, 117) = 7.10, p < .001$) that followed a linear pattern ($F(1, 120) = 26.11, p < .001$), indicating that participants' preference for a physically more attractive mate gradually increased as relationship involvement became lower (from marriage, $M = 4.99$, to sexual fantasies, $M = 5.55$). With regard to a potential mate's physical attractiveness no other effects reached significance ($F_s < 1.33, ns$).

Self-confidence. A similar ANOVA on preferences with regard to a potential mate's self-confidence revealed a significant between-subject effect of Participant Sex ($F(1, 120) = 29.19, p < .001$). Whereas men

1. Being in a committed relationship or not did not have any main effects on mate preferences, nor did it interact with gender.

desired mates who were slightly more self-confident than themselves ($M = 4.41$), women overall preferred mates who were considerably more self-confident than they were ($M = 5.00$). The ANOVA also revealed a marginally significant within-subject effect of Level of Relationship Involvement ($F(4, 117) = 2.19$, $p = .07$), which showed a marginally significant quadratic ($F(1, 120) = 2.89$, $p < .10$) and a significant cubic trend ($F(1, 120) = 6.62$, $p < .05$) with the average ratings being for potential marriage partners 4.70, for partners for serious relationships 4.71, for partners to fall in love with 4.58, for partners for casual sexual affairs 4.39, and for partners who occur in sexual fantasies 4.64. Though it is not easy to interpret the cubic trend, the findings suggested that with respect to partners for a committed relationship (i.e., marriage and serious relationship) as well as for sexual fantasy, higher levels of self-confidence were preferred than for partners for falling in love and casual sex. With regard to a potential mate's self-confidence no other effects reached significance ($F_s < 1.93$, *ns*).

Intelligence. With regard to a potential mate's intelligence, the ANOVA revealed significant effects of Participant Sex ($F(1, 120) = 6.09$, $p < .05$) and Level of Relationship Involvement ($F(4, 117) = 2.92$, $p < .05$), which were qualified by a significant Participant Sex by Level of Relationship Involvement interaction ($F(4, 117) = 3.76$, $p < .01$) following a linear trend ($F(1, 120) = 10.68$, $p < .001$). Whereas women, regardless of relationship level, preferred men who were more intelligent than themselves (M ranges from 4.72 to 4.87), men's preference for more intelligent partners decreased gradually as relationship involvement lowered. For marriage ($M = 4.75$), a serious relationship ($M = 4.64$), and falling in love ($M = 4.57$) men desired partners more intelligent than themselves, whereas for casual sexual affairs ($M = 4.20$) and sexual fantasies ($M = 4.20$) they did not. The ANOVA also revealed a marginally significant effect of Age Category ($F(1, 120) = 2.15$, $p = .08$) and of Participant Sex by Age Category interaction ($F(1, 120) =$

2.03 , $p = .09$). Although these effects have to be viewed with considerable caution, they seemed to suggest that as men and women aged, they preferred partners of increasing intelligence (from age 20 $M = 4.38$ to age 60 $M = 5.02$), and that in particular 60-year-old men tended to desire partners who were more intelligent than they were ($M = 5.2$).

Dominance. With regard to a potential mate's dominance the ANOVA revealed a significant main effect of Participant Sex ($F(1, 120) = 5.26$, $p < .05$). Although men and women reported preferring a potential mate of the same level of dominance as themselves, women, overall, preferred to have a mate somewhat more dominant ($M = 4.33$) than men ($M = 4.03$), who preferred a mate of the same level of dominance as they were. In addition, there was a marginally significant interaction effect between Participant Sex and Participant Age Category ($F(4, 120) = 1.98$, $p = .10$), providing some indication that although women in the other age categories desired a mate with approximately the same level of dominance as themselves (M ranging from 3.99 to 4.47), women around 50 years old desired a mate who was more dominant than themselves ($M = 4.80$).

Social position. An ANOVA on a potential mate's social position revealed only a main effect of Participant Sex ($F(1, 120) = 18.58$, $p < .001$). Regardless of Age Category and Level of Relationship Involvement, more than did men ($M = 4.37$), women desired a potential mate with a higher social position than themselves ($M = 4.93$).

Partners for sexual fantasies compared to real partners

We expected gender differences to be particularly pronounced for traits in a partner for sexual fantasies. In order to examine whether selection criteria for partners for sexual fantasies differed from criteria for real partners, the average ratings for the real partners were compared with ratings for partners for sexual fantasies. On these ratings seven

repeated measures ANOVAs were conducted using Participant Sex as a between-subject factor and Reality Level (reality vs. fantasy) as a within-subject factor. Only one significant effect was found. Reality Level had a significant main effect on ratings on the level of preferred physical attractiveness ($F(1, 120) = 18.53, p < .001$). Both men and women desired more attractive mates in sexual fantasies than in real life ($M = 5.54$ vs. $M = 5.14$).

Discussion

We began this research partly to examine whether sex differences that had been found in American college students would generalize to people of different ages in a different country, The Netherlands, which is somewhat more sexually liberal and feminine than the United States (Buunk, 1983; Buunk & Van Driel, 1989). We were also interested in how criteria for fantasy partners would differ from those for a real partner. True sexual mate preferences, in particular with regard to short-term mating, may be particularly expressed in sexual fantasies because in such fantasies individuals are not restricted by whether the sexual interest is mutual or whether one's desires are realistic (Ellis & Symons, 1990).

Our study results indicate that, compared with real mates, the typical mate for a sexual fantasy is higher in physical attractiveness. In general, with the exception that men prefer partners who are as dominant as they are, men and women seek mates who are higher in mate value than they are. However, in line with the general support typically found for predictions that result from theorizing on sexual selection and differential parental investment, in the present study men set higher standards than women for characteristics that are associated with a potential mate's reproductive value, such as physical attractiveness, whereas women set higher standards than men for characteristics that are associated with a potential mate's status and personality, such as income, education, self-confidence, dominance, and social position.

In line with the qualified investment model, Kenrick and Keefe (1992), however, have pointed out that the relative balance between the preference for physical attractiveness and for status and personality are, at least partly, influenced by men's choice of sexual strategy. Especially in long-term relationships, considerations with regard to status and personality can be expected to weigh relatively heavy, whereas in low involvement relationships considerations with regard to physical attractiveness can be expected to weigh relatively heavy (Kenrick & Keefe, 1992). This latter assumption is supported by our data, which suggest that, as relationship involvement decreases, men find it more important that a potential mate is physically attractive, but less important that she is intelligent. However, according to the qualified investment model, men, more than women, should lower their threshold for selection as relationship involvement decreases. Although men indeed prefer less intelligent mates as relationship involvement decreases, with regard to a potential mate's education both men and women lower their criteria as relationship involvement decreases. With regard to a potential mate's physical attractiveness, the reversed pattern emerges: both men and women desire physically more attractive mates as relationship involvement decreased. Of course, it would seem rather obvious to prefer a partner as sexually attractive as possible for sexual fantasies. But why would individuals prefer more attractive partners for short-term mating? It may be that men and women feel that there might be costs involved in terms of the partner's attraction to other mates when one has a long-term relationship with someone more attractive than oneself. Such costs would not be present in a short-term affair (assuming, of course, that it would be possible to attract a physically more attractive mate for such an affair). In addition, by having casual sex with physically attractive men while being involved in a steady relationship with a supportive male, women might enhance the genetic quality of their offspring (e.g., Buss & Schmitt, 1993).

The present findings suggest that partner selection criteria differ little between the various age groups. The only significant finding is that older participants are more selective with regard to education. This could in part be a cohort effect: individuals born in the 1930s and 1940s have, overall, a lower level of education than individuals who were born later, and may therefore view education as a particularly valuable asset. Moreover, some evidence was found that older men in particular attach more value to intelligence in a mate, and older women to the dominance of a mate. Because these findings were only marginally significant, we should definitely not overinterpret them. It could be that cohort effects cause the preference of older women for more dominant men, but we cannot think of a theoretically cogent explanation for why older men would have a stronger preference for intelligent mates.

One might argue that in some respects men's preferences should be affected differently by their own age than would the preferences of women. Indeed, men continue to have reproductive potential as they age, and, therefore, even with increasing age, men continue to evaluate their partners on the basis of cues for fertility and for reproductive potential. It was found in the present sample that females in all age groups have a preference for males who are around their own age up to about 10 years older than themselves (Buunk, Dijkstra, Kenrick & Warntjes, 2001). In contrast, males as they grow older develop a preference for women who are progressively younger than themselves (e.g., Kenrick & Keefe, 1992; Kenrick, Keefe, Bryan, Barr & Brown, 1995; Wiederman, 1993). However, it is difficult to see how and why age would affect the criteria that we examined among men differently than among women. There would be no reason to assume that men would pay *more* attention to physical attractiveness as they are older. It could be argued that for women beyond menopause there would be no reason any longer to prefer higher status males as they would not need the support and protection of males while raising offspring. This is indeed an interesting hypothesis, but one that is not supported by our findings. Thus, it seems that the female

preference for higher status is a quite robust phenomenon that is independent of age.

Finally, some potential limitations of this study have to be noted. First, we assessed preferences of trait levels relative to the self. Men and women might differ on some of these characteristics, such that their preferences could be the same, yet their preferences for trait levels relative to the self differ. However, this does not compromise the effects of relationship involvement. A second potential limitation is that the sample size was small, which may have limited the statistical power and may have obscured a number of possibly relevant effects. Despite these limitations, the present research provides a number of potential contributions to the literature. First, although this was found for only one of the criteria (intelligence), this study provides some preliminary evidence that the findings by Kenrick et al. (1990; 1993) that males, more so than females, lower their standards for short-term mates, are not necessarily restricted to American culture. The present findings are particularly relevant because, although Dutch culture is in many ways similar to American culture, there is evidence that Dutch culture is more feminine (Hofstede, 1984), and that physical attractiveness is considered less important in mate selection (VanYperen & Buunk, 1991). Second, with the exception of some studies on personal advertisements, most research on mate selection criteria has been done among young adults, in particular college students. The present research suggests that gender differences in criteria for short-term and long-term mates may not be restricted to young adults, but may be present to the same extent at all age levels. Finally, the present study suggests that gender differences in mate selection among adults that have been found in personal advertisements are also found when adults are approached through quite different channels. By showing that some of the gender differences in mate selection criteria are relatively independent of age, culture, and sample recruitment strategy, the present research provides some support for the evolutionary perspective on mate selection.

References

- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, *12*, 1–49.
- Buss, D. M. (1998). The psychology of human mate selection: Exploring the complexity of the strategic repertoire. In C. Crawford & D. L. Krebs (Eds.), *Handbook of evolutionary psychology: Ideas, issues, and applications* (pp. 405–430). Mahwah, NJ: Erlbaum.
- Buss, D. M., Abbott, M., Angleiter, A., Asherian, A., Biaggio, A., BlancoVillaSenor, A., Bruchon-Schweizer, M., Ch'u, Hai-yuan, Czapinski, J., DeRaad, B., Ekehammar, B., Fioravanti, M., Georgas, J., Gjerde, P., Guttman, R., Hazan, F., Iwawaki, S., Janakiramaiah, N., Khosroshani, F., Kreidler, S., Lachenicht, L., Lee, M., Liik, K., Little, B., Lohamy, N., Makim, S., Mika, S., Moadel-Shahid, M., Moane, G., Montero, M., Mundy-Castle, A. C., Niit, T., Nselenduluka, E., Peltzer, K., Pienkowski, R., Pirttila-Backman, A., Ponce De Leon, J., Rousseau, J., Runco, M. A., Safir, M. P., Samuels, C., Sanitioso, R., Schweitzer, B., Serpell, R., Smid, N., Spencer, C., Tadinac, M., Todorova, E. N., Troland, K., Van den Brande, L., Van Heck, G., Van Langenhove, L., & Yang, Kuo-Shu (1990). International preferences in selecting mates: A study of 37 cultures. *Journal of Cross-Cultural Psychology*, *21*, 5–47.
- Buss, D. M. & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 204–232.
- Buunk, B. P. (1983). Alternative lifestyles from an international perspective: A trans-atlantic comparison. In E. D. Macklin & R. H. Rubin (Eds.), *Contemporary families and alternative lifestyles. Handbook on research and theory*. Beverly Hills, CA: Sage.
- Buunk, B. P., Dijkstra, P., Kenrick, D. T., & Warntjes, A. (2001). Age preferences for mates as related to gender, own age and involvement level. *Evolution and Human Behavior*, *22*, 241–250.
- Buunk, B. P., & Van Driel, B. (1989). *Variant lifestyles and relationships*. Newbury Park, CA: Sage.
- Ellis, B. J. & Symons, D. (1990). Sex differences in sexual fantasy: An evolutionary psychological approach. *Journal of Sex Research*, *27*, 527–555.
- Gilbert, P., Price, J. & Allan, S. (1995). Social comparison, social attractiveness and evolution: How might they be related? *New Ideas in Psychology*, *13*, 149–165.
- Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, NJ: Doubleday.
- Hofstede, G. (1984). The cultural relativity of the quality of life concept. *Academy of Management Review*, *9*, 389–398.
- Kenrick, D. T., Gabrielidis, C., Keefe, R. C. & Cornelius, J. (1996). Adolescents' age preferences for dating partners: Support for an evolutionary model of life-history strategies. *Child Development*, *67*, 1499–1511.
- Kenrick, D. T., Groth, G. E., Trost, M. R., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives on relationships: Effects of gender, self-appraisal, and involvement level on mate selection criteria. *Journal of Personality and Social Psychology*, *64*, 951–969.
- Kenrick, D. K. & Keefe, R. C. (1992). Age preferences in mates reflect sex differences in human reproductive strategies. *Behavioral and Brain Sciences*, *15*, 75–133.
- Kenrick, D. T., Keefe, R. C., Bryan, A., Barr, A. & Brown, S. (1995). Age preferences and mate choice among homosexuals and heterosexuals: A case for modular psychological mechanisms. *Journal of Personality and Social Psychology*, *69*, 1166–1172.
- Kenrick, D. T., Sadalla, E. K., Groth, G. & Trost, M. R. (1990). Evolution, traits and the stages of human courtship: Qualifying the parental investment model. *Journal of Personality*, *58*, 97–117.
- Leitenberg, H. & Henning, K. (1995). Sexual fantasy. *Psychological Bulletin*, *117*, 469–496.
- Rasmussen, J. L., Rajecki, D. W., Ebert, A. A., Lagler, K., Brewer, C., & Cochran, E. (1998). Age preferences in personal advertisements: Two life history strategies or one matching tactic? *Journal of Social and Personal Relationships*, *15*, 77–89.
- Symons, D. (1979). *The evolution of human sexuality*. Oxford: Oxford University Press.
- Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man* (pp. 136–179). New York: Adline de Gruyter.
- VanYperen, N. W. & Buunk, B. P. (1991). Sex-role attitudes, social comparison, and satisfaction with relationships. *Social Psychology Quarterly*, *54*, 169–180.
- Waller, W. (1937). The rating and dating complex. *American Sociological Review*, *2*, 727–734.
- Wiederman, M. W. (1993). Evolved gender differences in mate preferences: Evidence from personal advertisements. *Ethology and Sociobiology*, *14*, 331–351.
- Wilson, D. S. (1997). Incorporating group selection into the adaptationist program: A case study involving human decision making. In J. A. Simpson, D. T. Kenrick, & T. Douglas (Eds.), *Evolutionary social psychology* (pp. 345–386). Hillsdale, NJ: Erlbaum.