

Evolutionary Psychology

www.epjournal.net – 2012. 10(5): 899-909

Original Article

The Dating Mind: Evolutionary Psychology and the Emerging Science of Human Courtship

Nathan Oesch, Department of Experimental Psychology, University of Oxford, Oxford OX1 3UD, UK.
Email: nathan.oesch@psy.ox.ac.uk (Corresponding author).

Igor Miklousic, Department of Individual Differences, Ivo Pilar Institute of Social Sciences, Zagreb, Croatia.

Abstract: In the New York Times bestselling book *The Game: Penetrating the Secret Society of Pickup Artists* (2006), the world was granted its first exclusive introduction to the steadily growing dating coach and pick-up artist community. Many of its most prominent authorities claim to use insights and information gleaned both through first-hand experience as well as empirical research in evolutionary psychology. One of the industry's most well-respected authorities, the illusionist Erik von Markovik, promotes a three-phase model of human courtship: *Attraction*, building mutual *Comfort and Trust*, and *Seduction*. The following review argues that many of these claims are in fact grounded in solid empirical findings from social, physiological and evolutionary psychology. Two texts which represent much of this literature are critiqued and their implications discussed.

Keywords: applied evolutionary psychology, mate choice, sexual selection, dating science, human behavior

Introduction

In the recent New York Times bestseller *The Game: Penetrating the Secret Society of Pickup Artists* (2006), the world was granted its first popular introduction to the burgeoning dating coach and pick-up artist community (referred to hereafter as the “Community”). In the years following its release, the Community has rapidly garnered mainstream media attention and subsequently grown into a multi-million dollar industry. Interestingly, many of its most prominent authorities claim to use insights and information gleaned through empirical research in evolutionary psychology. Indeed, one of the industry's most well-respected authorities, the illusionist Erik von Markovik (also known by his stage name “Mystery”), promotes a three-phase model of human courtship, based on evolutionary psychology literature as well as his own “field-tested” interactions with thousands of women.

The primary conceptual domains, referred to by Markovik as the “Mystery Method”, promulgated to represent the various phases of human courtship include

Attraction, building mutual *Comfort and Trust*, and *Seduction* (Markovik, 2007). Although first formally articulated by Markovik in his written work entitled *The Mystery Method: How to Get Beautiful Women into Bed* (2007), this basic structure of courtship has now been endorsed and advocated by a steadily growing majority of the Community worldwide. However, despite the growing success of this industry, few psychologists and social scientists have taken a critical look as to whether or not the various concepts and teachings promoted by this Community can be substantiated by empirical psychological research. Although the Community has now expanded considerably into various different methods and schools of thought, we have selectively focused here on what we believe to be the most important and nearly-universal concepts within the industry.

Community Literature on Human Courtship Strategies

For the present analysis, we examined several popular works from the Community. The Community consists broadly of heterosexual men who market various tactics, techniques, and methods to meet, date, and ultimately seduce women. Both published books and online forums offer opportunities to garner and share this information with a wide audience of people interested in improving their dating and romantic success.

Two main texts were chosen for this analysis. The first text, entitled *The Mystery Method: How to Get Beautiful Women into Bed* (Markovik, 2007), is widely regarded as one of the most important works in the Community. The second text, written by Markovik's protégé and New York Times columnist Neil Strauss, also known on online forums as *Style*, is entitled *Rules of the Game* (Strauss, 2009). The two texts were selected mainly for the authors' prominence and popularity in the Community. Both authors have appeared on several cable television programs and interviews.

Markovik gained increased public eminence after the cable television station VH1 aired the program *The Pickup Artist*, starring himself, intended to showcase his methods to a worldwide audience. Markovik (2007) situates his teachings within a Darwinian framework, arguing his "science of social dynamics" is firmly grounded in evolutionary psychology research, as well as the distilled first-hand experience garnered from "field-tested" interactions with thousands of women in bars, nightclubs and other public gatherings. In the preface to the text, Markovik (2007, p. xiii) ostensibly draws from Darwinian theory with the declaration, "Nature will unapologetically weed your genes out of existence if you don't take action and learn how to attract women now". Elsewhere in the text, Markovik (2007, p. 15) highlights the adaptive discrepancy between the modern environment and the Environment of Evolutionary Adaptiveness (Tooby and Cosmides, 1990) noting that, "while unimaginably sophisticated and complicated, [we] are nonetheless an out-of-date model. Put simply, nature has not designed [us] for the world in which [we] live".

Parental Investment Theory and Conflict between the Sexes

The general starting point for much of the Community's literature, whether explicitly stated or not, often begins with Trivers' (1972) theory of parental investment.

According to Trivers' (1972), the sex with higher parental investment (i.e., time and energy spent in gestation and rearing offspring) will be choosier with respect to mate selection. As a consequence, women very rarely accept propositions for casual sex with strangers (Voracek, Hofhansl and Fisher, 2005), typically imposing a much more careful and rigorous screening process before consenting to sexual activity (Grammer, 1989; Pawlowski and Dunbar, 1999; Pawlowski and Dunbar, 2001). On the other hand, human males as the biologically less investing sex, often have little to lose by mating with as many females as possible (Buss and Schmitt, 1993). Indeed, Schmitt et al. (2001) have shown that men desire more lifetime sex partners, seek sexual intercourse sooner, and are frequently more motivated to seek casual sex than are women.

In the absence of a clear understanding of the biological bases of such differences, the courtship process and ensuing relationship dynamics can often appear confusing, frustrating and even debilitating. Such conflicts of interest in men and women's sexual strategies (Buss and Schmitt, 1993), often coined "the war of the sexes", can be a significant cause of conflict and ultimately failure to find and maintain a lasting long-term relationship. However, as we will argue, this conflict is not inevitable. The knowledge of our evolved sexual strategies gives us significant capability to improve interactions between the sexes by choosing appropriate actions and deactivating others – ultimately reducing conflict between men and women. In this respect, we argue that when properly and ethically understood, the dating and seduction industry, despite its provocative label and origins outside of academia, is founded on solid empirical research as well as first-hand courtship and relationship experience. Ultimately, it is our suggestion that an informed appraisal of this information will ultimately help to lessen conflict and improve dating and relationships between men and women.

The Three Phases of Human Courtship: Attraction, Comfort and Trust, and Seduction

Attraction

The first reputed phase of human courtship, *Attraction*, is primarily concerned with creating opportunities to exploit evolved cues for what women generally find attractive in men. As defined by social psychologists, attraction is typically described as an individual's positive evaluation of another person and the desire to initiate contact or establish physical intimacy with them (Finkel and Baumeister, 2010). The Community generally concurs with this definition, while further dividing the beginning courtship stage of *Attraction* into two different types of conversational starters with an unacquainted romantic interest: direct and indirect conversational openers (Strauss, 2009). Direct conversational openers typically begin with a very bold and straightforward proclamation, directly to one's prospective romantic interest. For instance, a typical example of this type of opener might be: *Hi, I saw you standing there, thought you looked attractive, and wanted to say hello*. While apparently awkward or unimpressive to the inexperienced, many Community enthusiasts will swear by the ability of this approach to generate instant attraction in a prospective romantic interest. And indeed, there may in fact be psychological research to legitimate this claim. For instance, research has shown that expressions of social dominance (Sadalla et al.

1987), social risk-taking (Wilke, Hutchinson, Todd, and Kruger, 2006), and courageousness (Farthing, 2005; Kelly and Dunbar, 2001) are often attractive to women (as such an approach would clearly seem to demonstrate).

The second type of conversation starter, referred to as an indirect conversational opener, often begins with an off-handed opinion or question, at first merely designed to capture attention. For example, indirect openers often include apparently random queries such as, *Excuse me- a friend and I were debating something. Could I have a female opinion on how a man should treat a lady on a first date?* (Markovik, 2007; Strauss, 2009). In stark contrast to a direct opener, the specific content of an indirect opener is often irrelevant; the more important objective is often to smoothly get a conversation started. However, once a conversation is underway, enthusiasts of indirect openers will often casually move into more intentional conversational material specifically designed to display attractive cues to a prospective romantic interest. For instance, the conversational content at this point generally moves into interesting personality conveying material, such as humor, an exciting personal anecdote, a fun game, or even a simple piece of stage magic, intended to solicit attraction from a prospective romantic interest (Markovik, 2007; Strauss, 2009). Markovik (2007) describes the advertisement of such qualities as “Demonstrations of Higher Value” (DHVs), which it is claimed, cause an increase in mate value and create attraction, thus providing the person access to more desirable mates. And indeed, psychological research has shown that many of these qualities, when well-presented, can often be quite attractive to the opposite sex.

For example, in a recent sample of UK personal advertisements, women rated charming social skills, wittiness, and a good sense of humor as among the most desirable traits in a prospective date (Pawlowski and Dunbar, 1999; Pawlowski and Dunbar, 2001), which would seem to reinforce the claims made by the community (Markovik, 2007; Strauss, 2009). Numerous studies have demonstrated the importance of humor in mate selection (Regan and Joshi, 2003, Bressler and Balshine, 2006; Bressler et al., 2006), with good sense of humor considered universally appealing. Humor has been further argued to be an honest signal of other cognitive abilities, such as intelligence (Howrigan and MacDonald, 2008) and therefore an indicator of higher mate value (Greengross and Miller, 2008; Kaufman, Kozbelt, Bromley, and Miller, 2007).

Psychological research has supported the importance of advertising other aspects of personality toward mate attraction. For example, in a study of 37 cultures around the world, Buss (1989) and his collaborators found qualities such as having an exciting personality, intelligence, adaptability, and creativity as among the top ten most desirable traits for both men and women. Bale, Morrison, and Caryl (2006) has further shown that “pick up” lines that demonstrate qualities such as helpfulness, generosity, cosmopolitanism and wealth are significantly more attractive than straightforward propositions for sexual activity. In sum, as the Community maintains, these qualities are often best-presented with the right “pick up” line, interesting story or personal anecdote, game, magic, or various other types of personality-conveying material (Markovik, 2007; Strauss, 2009).

The Community further advocates a peculiar strategy known as “pre-selection” which is claimed to be often useful in crowded social gatherings (Markovik, 2007). Pre-selection is a strategy whereby a man in a public gathering will establish an innocent

acquaintanceship with an attractive woman, gaining her trust, comfort, and friendship, only to later use her presence by his side to attract other surrounding women that are actually the intended object of his desire (Markovik, 2007). The phenomenon where females will copy or imitate the preferences of other females for a particular male mate has been documented in a wide variety of species, and is commonly referred to by evolutionary biologists as mate choice copying (Bennett, Lim and Gilbert, 2008; Dugatkin, 1992; Freed-Brown and White, 2009). Moreover, there is now increasing evidence to suggest that such strategies, whether intentionally practiced or consistently understood by those using them, are also found in humans (Eva and Wood, 2006; Hill and Buss, 2008; Place, Todd, Penke and Asendorpf, 2010). For instance, Place et al. (2010) found an increase in male attractiveness among women who observed mutually interested romantic couples, while Jones, DeBruine, Little, Burriss, and Feinberg (2007) found a similar effect if other women were observed smiling at male faces; a reverse effect was found for unsmiling faces (Jones et al. 2007) or uninterested romantic couples (Place et al., 2007). Markovik (2007) also suggests, in order to amplify this attraction cue still further, to bring and surround yourself with female friends (known as “pivots”) to social gatherings, wear female perfume, or have a (occasionally staged) lipstick kiss on your neck or cheek.

Comfort and Trust

The second reputed phase of human courtship, building mutual *Comfort and Trust*, further seems to have a significant degree of support by various psychological research studies. Firstly, once *Attraction* has been established, community literature advocates the importance of taking the time to build rapport, comfort and trust before proceeding with seduction (Markovik, 2007; Strauss, 2009). Indeed, psychological research has shown that many particular moral virtues are not only sexually attractive, but also relationship-stabilizing (see Miller 2007, for a review). For example, many studies have demonstrated the importance of honesty, niceness, agreeableness and nonviolence (Boon and McLeod, 2001; Haselton, Buss, Oubaid, and Angleitner, 2005; Botwin et al., 1997; Urbaniak and Kilman, 2003), both in the early stages of a romantic encounter for soliciting *Attraction*, as well as later in the sequence of courtship for establishing *Comfort and Trust*. Still further, as an acquaintanceship develops, empathy, fondness, forgivingness, trust, perspective-taking, and kindness (Kilpatrick, Bissonnette, and Rusbult, 2002; Fincham, Beach, and Davila, 2004), , defined as emotional responsiveness to the needs of others (Jensen-Campbell, Graziano, and West, 1995; Li, Kenrick, Bailey, and Linsenmeier, 2002), have been shown to be critical for both establishing and maintaining an intimate relationship.

Trust and comfort is often further established through the use of kinesthetic touch, or what the Community often refers to simply as “kino” (Markovik, 2007; Strauss, 2009). For instance, from a study of courtship behavior in singles’ bars, Moore (1985) found that incidental touching, prolonged eye contact, swaying the upper body towards a prospective romantic interest while talking, and a number of other tactical devices designed to attract attention were frequently implemented. Moreover, many community enthusiasts will practice and encourage the use of touch throughout the courtship process, evidently aware of its critical role in courtship and seduction (Markovik, 2007; Strauss, 2009). Touch has been found to be a diverse, adaptable and nontrivial modality, in that it can consistently

communicate complex emotions such as happiness, surprise, gratitude, sympathy, and even love among both opposite sex strangers and established couples (Thompson and Hampton, 2011).

The role of touch has also been argued to have an adaptive function in bonding, both in human and non-human primates, involving complex psychopharmacological chemicals including oxytocin, endorphins, dopamine, and various other neuropeptides (Dunbar, 2010). Moreover, recent research has documented the ability of touch and bodily affection to increase feelings of trust and comfort, in that increased oxytocin levels and decreased blood pressure are often found among couples with more frequent hugging (Light, Grewen, and Amico, 2005). Indeed, the hormone oxytocin has been shown to promote pro-social feelings of bonding and trust (Huber, Veinante, and Stoop, 2005; Kosfeld et al., 2005), and put individuals at ease in social situations (Haxby, Hoffman, and Gobbini, 2000; Kirsch et al., 2005).

Seduction

The final reputed phase of human courtship, *Seduction*, begins once mutual *Attraction* and *Comfort and Trust* have been established between two individuals. For instance, women typically require more time and intimacy to develop the same amount of passion as men (Baumeister and Bratslavsky, 1999). Consistent with psychological research, the Community often advocates what is known as the “seven-hour rule”; the idea being that a woman typically needs a minimum of seven cumulative hours of rapport-building in order to develop a strong emotional and intellectual connection (including shared interests, shared values, and a deep inter-subjective understanding) before consenting to sexual activity (Markovik, 2007; Strauss, 2009). In order to accomplish this objective, the community encourages a process of mutual self-disclosure, whereby each gets to know the other person on a very deep and intimate level (Markovik, 2007; Strauss, 2009), reinforcing psychological research on the development of relationships (Collins and Miller, 1994) and passionate love (Hatfield and Rapson, 1993).

In similar fashion, social psychologists have argued that, according to the self-expansion model of motivation and cognition, people seek to expand and enhance the identity of the self through close and intimate relationships (Aron, Aron and Norman, 2003). More specifically, participants in close intimate relationships “include each other in their selves in the sense that other’s perspectives, resources, and identities are to some extent one’s own” (Aron, Aron and Norman, 2003, p. 490). In other words, the subjective feeling of love that often, but granted not always, precedes intimate gestures of affection and sexual activity, may require further conversational exchanges and deeper rapport building, as community devotees will maintain (Markovik, 2007; Strauss, 2009). Of course, just as touch and physical affection are important during the *Comfort and Trust* phase of courtship, during the later stages of *Seduction*, both become increasingly more important for solidifying the connection between two people, as well as escalating sexual activity. As such, physiological research has demonstrated that the bonding and trust hormone oxytocin, which has been shown to increase in both men and women following sexual arousal (Blaicher et al., 1999; Carmichael et al., 1987), and in the later stages of courtship, may be integral to relationship maintenance and development (Bartz and Hollander, 2006).

Future Directions and Ethical Implications

In conclusion, it would seem clear that there is in fact a substantive degree of psychological research to support many claims made by the Community. The three reputed phases of courtship, *Attraction*, building mutual *Comfort and Trust*, and *Seduction*, are supported by a significant and steadily growing literature based in physiological, social and evolutionary psychology research. Men and women have evolved opposing sexual strategies, often leading to a conflict of interests, creating significant discord and confusion with respect to mate selection (Buss and Schmitt, 1993). Given the frustration and confusion many singles currently experience in the dating marketplace, this knowledge could be an important aid to couples reducing conflict, frustration and finding fulfilling relationships.

In light of these findings, it is equally important to note that many of the strategies advocated by the community are not currently supported by peer-reviewed literature. For example, one particular strategy known as “peacocking,” (in dubious reference to Zahavi’s (1975) handicap principle) involves wearing very ostentatious clothing specifically designed to exploit evolved cues for what women find attractive (Markovik, 2007). Although research has shown that women generally find social status attractive in men (Buss, 1989; Pawlowski and Dunbar, 2001), thus far there is no direct evidence in support of this particular behavior. A similar strategy, known as “negging”, has been claimed to increase a male’s attractiveness by demonstrating he has high standards (Markovik, 2007). For example, a male might exclaim, *Wow, those are great fingernails! Are they real? Oh, no? Well, they still look nice.* Consistent with this argument, Eastwick, Finkel, Mochon, and Ariely (2007) have shown that men who appear to have high standards are considered more attractive than males who do not; nevertheless, there is currently no direct evidence that “negging” is universally effective. An important area for future research would be to more closely analyze a broader spectrum of community literature and determine the scientific veracity of unsubstantiated claims.

Moreover, there may be important unrecognized ethical implications from using portions of this material. For instance, it has been argued that the initiation of touch or “kino” throughout the courtship process and alleged prioritization of physical over verbal consent may at times problematize interpretations of consent (Denes, 2011). To this end, we do contend that such material has the potential for abuse and urge caution with the use of the Community’s material, especially in the context of short-term relationships where sexual activity may be the sole objective. On the other hand, within the context of helping people to initiate long-term, stable relationships, we argue that informed male behaviors are not so unlike women attempting to manipulate perceived attractiveness through the use of perfume, cosmetics, clothing, liposuction and cosmetic surgery, and thus disrupt normal mate choice by men (Roberts, Miner and Shackelford, 2010). Therefore, if such practices allow men to approach, attract, and connect with women in similar fashion, we wholeheartedly endorse the ethical practice of such materials for establishing meaningful long-term relationships.

Acknowledgements: We thank two anonymous reviewers for helpful comments.

Received 8 May 2012; Revision submitted 5 August 2012; Accepted 10 August 2012

References

- Aron, A., Aron, E. N., and Norman, C. (2003). Self-expansion model of motivation and cognition in close relationships and beyond. In G. J. O. Fletcher and M. S. Clark (Eds.), *Blackwell handbook of social psychology: Interpersonal processes*, (pp. 478-501). Oxford: Blackwell Publishers Press.
- Bale, C., Morrison, R., and Caryl, P. G. (2006). Chat-up lines as male sexual displays. *Personality and Individual Differences*, *40*, 655-664.
- Bartz, J. A., and Hollander, E. (2006). The neuroscience of affiliation: Forging links between basic and clinical research on neuropeptides and social behaviour. *Hormones and Behavior*, *50*, 518-528.
- Baumeister, R. F., and Bratslavsky, E. (1999). Passion, intimacy, and time: Passionate love as a function of change in intimacy. *Personality and Social Psychology Review*, *3*, 49-67.
- Bennett, G. G., Lim, T. C. W., and Gilbert, G. S. (2008). Evidence of mate choice copying in Norway rats, *Rattus norvegicus*. *Animal Behaviour*, *75*, 1117-1123.
- Blaicher, W., Gruber, D., Bieglmayer, C., Blaicher, A. M., Knogler, W., and Huber, J. (1999). The role of oxytocin in relation to female sexual arousal. *Gynecological and Obstetric Investigation*, *47*, 125-126.
- Boon, S. D., and McLeod, B. A. (2001). Deception in romantic relationships: Subjective estimates of success at deceiving and attitudes toward deception. *Journal of Social and Personal Relationships*, *18*, 463-476.
- Botwin, M. D., Buss, D. M., and Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality*, *65*, 107-136.
- Bressler, E. R., and Balshine, S. (2006). The influence of humor on desirability. *Evolution and Human Behavior*, *27*, 29-39.
- Bressler, E. R., Martin, R. A., and Balshine, S. (2006). Production and appreciation of humor as sexually selected traits. *Evolution and Human Behavior*, *27*, 121-130.
- 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., and Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 204-232.
- Carmichael, M. S., Humbert, R., Dixen, J., Palmisano, G., Greenleaf, W., and Davidson, J. M. (1987). Plasma oxytocin increases in the human sexual response. *The Journal of Clinical Endocrinology and Metabolism*, *64*, 27-31.
- Collins, N. L., and Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, *116*, 457-475.
- Denes, A. (2011). Biology as consent: Problematizing the scientific approach to seducing women's bodies. *Women's Studies International Forum*, *34*, 411-419.

- Dugatkin, L. A. (1992). Sexual selection and imitation: Females copy the mate choice of others. *The American Naturalist*, 139, 1384-1389.
- Dunbar, R. I. M. (2010). The social role of touch in humans and primates: Behavioural function and neurobiological mechanisms. *Neuroscience and Biobehavioral Reviews*, 34, 260-268.
- Eastwick, P. W., Finkel, E. J., Mochon, D., and Ariely, D. (2007). Selective versus unselective romantic desire: Not all reciprocity is created equal. *Psychological Science*, 18, 317-319.
- Eva, K. W., and Wood, T. J. (2006). Are all the taken men good? An indirect examination of mate-choice copying in humans. *Canadian Medical Association Journal*, 175, 1573-1574.
- Farthing, G. W. (2005). Attitudes toward heroic and nonheroic physical risk takers as mates and as friends. *Evolution and Human Behavior*, 26, 171-185.
- Fincham, F. D., Beach, S. R. H., and Davila, J. (2004). Forgiveness and conflict resolution in marriage. *Journal of Family Psychology*, 18, 72-81.
- Finkel, E. J., and Baumeister, R. F. (2010). Attraction and rejection. In R. F. Baumeister and E. J. Finkel (Eds.), *Advanced social psychology* (pp. 419-459). New York: Oxford University Press.
- Freed-Brown, S. G., and White, D. J. (2009). Acoustic mate copying: Female cowbirds attend to other females' vocalizations to modify their song preferences. *Proceedings of the Royal Society B*, 276, 3319-3325.
- Grammer, K. (1989). Human courtship behaviour: Biological basis and cognitive processing. In A. E. Rasa, C. Vogel, and E. Voland (Eds.), *The sociobiology of sexual and reproductive strategies* (pp. 147-169). London: Chapman and Hall.
- Greengross, G., and Miller, G. F. (2008). Dissing oneself versus dissing rivals: Effects of status, personality, and sex on the short-term and long-term attractiveness of self-deprecating and other-deprecating humor. *Evolutionary Psychology*, 6, 393-408.
- Haselton, M. G., Buss, D. M., Oubaid, V., and Angleitner, A. (2005). Sex, lies, and strategic interference: The psychology of deception between the sexes. *Personality and Social Psychology Bulletin*, 31, 3-23.
- Hatfield, E., and Rapson, R. L. (1993). *Love, sex, and intimacy: Their psychology, biology, and history*. New York: Harper Collins.
- Haxby, J. V., Hoffman, E. A., and Gobbini, M. I. (2000). The distributed human neural system for face perception. *Trends in Cognitive Science*, 4, 223-233.
- Hill, S. E., and Buss, D. M. (2008). The mere presence of opposite-sex others on judgments of sexual and romantic desirability: Opposite effects for men and women. *Personality and Social Psychology Bulletin*, 34, 635-647.
- Howrigan, D. P., and MacDonald, K. B. (2008). Humor as a mental fitness indicator. *Evolutionary Psychology*, 6, 652-666.
- Huber, D., Veinante, P., and Stoop, R. (2005). Vasopressin and oxytocin excite distinct neuronal populations in the central amygdala. *Science*, 308, 245-248.
- Jensen-Campbell, L. A., Graziano, W. G., and West, S. G. (1995). Dominance, prosocial orientation, and female preferences: Do nice guys really finish last? *Journal of Personality and Social Psychology*, 68, 427-440.

- Jones, B. C., DeBruine, L. M., Little, A. C., Burriss, R. P., and Feinberg, D. R. (2007). Social transmission of face preferences among humans. *Proceedings of the Royal Society B*, 274, 899-903.
- Kaufman, S. B., Kozbelt, A., Bromley, M. L., and Miller, G. F. (2007). The role of creativity and humor in mate selection. In G. Geher and G. Miller (Eds.), *Mating intelligence: Sex, relationships, and the mind's reproductive system* (pp. 227-262). Mahwah, NJ: Erlbaum.
- Kelly, S., and Dunbar R. I. M. (2001). Who dares, wins: Heroism versus altruism in women's mate choice. *Human Nature*, 12, 89-105.
- Kilpatrick, S. D., Bissonnette, V. L., and Rusbult, C. E. (2002). Empathic accuracy and accommodative behaviour among newly married couples. *Personal Relationships*, 9, 369-393.
- Kirsch, P., Esslinger, C., Chen, Q., Mier, D., Lis, S., Siddhanti, S., . . . Meyer-Linderberg, A. (2005). Oxytocin modulates neural circuitry for social cognition and fear in humans. *The Journal of Neuroscience*, 25, 11489-11493.
- Kosfeld, M., Heinrichs, M., Zak, P. J., Fischbacher, U., and Fehr, E. (2005). Oxytocin increases trust in humans. *Nature*, 435, 673-676.
- Li, N. P., Kenrick, D. T., Bailey, J. M., and Linsenmeier, J. A. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology*, 82, 947-955.
- Light, K. C., Grewen, K. M., and Amico, J. A. (2005). More frequent partner hugs and higher oxytocin levels are linked to lower blood pressure and heart rate in premenopausal women. *Biological Psychology*, 69, 5-21.
- Markovik, E. V. (2007). *The mystery method: How to get beautiful women into bed*. New York: St. Martin's Press.
- Miller, G. F. (2007). Sexual selection for moral virtues. *The Quarterly Review of Biology*, 82, 97-125.
- Moore, M. M. (1985). Non-verbal courtship patterns in women: Context and consequences. *Ethology and Sociobiology*, 6, 237-247.
- Pawlowski, B., and Dunbar, R. I. M. (1999). Impact of market value on human mate choice decisions. *Proceedings of the Royal Society B*, 266, 281-285.
- Pawlowski, B., and Dunbar, R. I. M. (2001). Human mate choice decisions. In R. Noe, P. Hammerstein, and J. A. R. A. M. van Hooff (Eds.), *Economic models of human and animal behaviour*, (pp. 187-202). Cambridge: Cambridge University Press.
- Place, S. S., Todd, P. M., Penke, L., and Asendorpf, J. B. (2010). Humans show mate copying after observing real mate choices. *Evolution and Human Behavior*, 31, 320-325.
- Regan, P., and Joshi, A. (2003). Ideal partner preferences among adolescences. *Social Behavior and Personality*, 31, 13-20.
- Roberts, S. C., Miner, E. J., and Shackelford, T. K. (2010). The future of an applied evolutionary psychology for human partnerships. *Review of General Psychology*, 14, 318-329.
- Sadalla, E. K., Kenrick, D. T., and Vershure, B. (1987). Dominance and heterosexual attraction. *Journal of Personality and Social Psychology*, 52, 730-738.

- Schmitt, D. P., Shackelford, T. K., Duntley, J., Tooke, W., and Buss, D. M. (2001). The desire for sexual variety as a key to understanding basic human mating strategies. *Personal Relationships*, 8, 425-455.
- Strauss, N. (2006). *The game: Penetrating the secret society of pickup artists*. New York: Regan Books.
- Strauss, N. (2009). *Rules of the game: The stylelife challenge, the routines collection and the style diaries*. New York: It Books.
- Thompson, E. H., and Hampton, J. A. (2011). The effect of relationship status on communicating emotions through touch. *Cognition and Emotion*, 25, 295-306.
- Tooby, J., and Cosmides, L. (1990). The past explains the present: Emotional adaptations and the structure of ancestral environments. *Ethology and Sociobiology*, 11, 375-424.
- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man, 1871-1971* (pp. 136–179). Chicago, IL: Aldine.
- Urbaniak, G. C., and Kilmann, P. R. (2003). Physical attractiveness and the “nice guy paradox”: Do nice guys really finish last? *Sex Roles*, 49, 413-426.
- Voracek, M., Hofhansl A., and Fisher, M. L. (2005). Clark and Hatfield's evidence of women's low receptivity to male strangers' sexual offers revisited. *Psychological Reports*, 97, 11-20.
- Wilke, A., Hutchinson, J. M. C., Todd, P. M., and Kruger, D. J. (2006). Is risk-taking used as a cue in mate choice? *Evolutionary Psychology*, 4, 367-397.
- Zahavi, A. (1975). Mate selection: A selection for a handicap. *Journal of Theoretical Biology*, 53, 205-214.