Mating Intelligence

Sex, Relationships, and the Mind's Reproductive System

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Contents

Foreword: The Future of Mating Intelligence

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Within the field of psychology, research and theory on human mating has gone from being a fringe area studied by a few "soft" psychologists to one of the most theoretically and empirically commanding domains in the entire discipline. Indeed, the area of mating shows all the hallmarks of a rapidly maturing science—cogent theories that have stood the test of time and a rapidly cumulating body of empirical findings. At the same time, new theoretical and empirical breakthroughs continue at an exciting pace, and many key areas still await intrepid researchers. This book on mating intelligence highlights some of the cutting-edge work and points the way to important domains for new discoveries.

HISTORICAL CONTEXT OF MATING INTELLIGENCE

It is worthwhile placing the current volume in historical context. The evolutionary psychology of human mating can be traced back to Charles Darwin, who developed the most important theoretical foundation for the study of mating today—the theory of sexual selection (Darwin, 1859, 1871). After his original formulation of natural selection (sometimes called "survival selection"), Darwin remained deeply troubled by phenomena that his theory could not explain. Examples included sex differences (e.g., why are male elephant seals four times the size of female elephant seals, given that both have faced the same problems of survival?) and the elaborate ornamentation of some species that seemed detrimental to survival (e.g., enormous antlers, brilliant plumage). Darwin even noted that "The sight of a feather in a peacock's tail, whenever I gaze at it, makes me sick!" (Darwin in a letter to Asa Gray, Apr. 3, 1860).

Darwin's troubles ceased, at least in part, when he formulated the theory of sexual selection—the evolution of characteristics due to *mating advantage* rather than *survival advantage.* Darwin identified two causal processes by which sexual selection could occur. The first is *intrasexual selection* or same-sex competition. If members of one sex compete with one another, and the victors gain preferential mating access to members of the opposite sex, then sexual selection favors an increase in the frequency of qualities linked with success in the contests (assuming the qualities had

some heritable basis). The qualities favored by intrasexual selection need not be physical. They could, for example, involve "scramble competition" for reproductively relevant resources or the ability to ascend status hierarchies, if elevation in status hierarchies gave individuals preferential access to mates. Conversely, heritable qualities linked with losing intrasexual competitions would decrease in frequency over time.

The second causal process of sexual selection is *intersexual selection,* which Darwin sometimes called "female choice." If members of one sex display some consensus about the qualities they desired in the opposite sex, then those possessing the desired qualities have a mating advantage. If the desired qualities have some degree of heritability, they will increase in frequency over time. For example, if females prefer males with brilliant plumage or better territories or superior resource-acquisition skills, then sexual selection would favor the evolution of these qualities in males in succeeding generations.

Sexual selection theory, although initially discounted by many biologists of Darwin's day, has emerged as one of the most important theories in evolutionary biology (e.g., Fisher, 1930/1958; Trivers, 1972; Andersson, 1994; Kokko et al., 2003). It has also provided an overarching theoretical framework for research on human mating strategies (Buss, 1989, 1994/2003; Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Kenrick & Keefe, 1992; Miller, 2000; Townsend, 1998). Many conceptual and empirical advances have been made in sexual selection theory, and these have been reflected in a profusion of research on human mating strategies. I'll mention a few.

First, although Darwin initially conceptualized intersexual selection as mainly "female choice" and intrasexual competition as mainly male-against-male competition, work on humans has documented that *both processes apply to both sexes.* Thus, both sexes have elaborate and well-honed mate preferences (Buss, 1989; Buss & Schmitt, 1993; Kenrick & Keefe, 1992; Li et al., 2002), and both sexes compete vigorously for access to desirable mates (Buss, 1988a; Schmitt & Buss, 1996; Tooke & Camire, 1991). Many aspects of mate competition have been empirically documented in both men and women, including *tactics of mate attraction* (Buss, 1988a), *derogation of competitors* (Buss & Dedden, 1990), *tactics of mate retention* (Buss, 1988b; Buss & Shackelford, 1997), and *tactics of mate poaching* (Schmitt & Buss, 2001; Schmitt, 2004).

Second, the importance of "good genes" in both mate preferences and mate competition has been increasingly recognized (Buss & Schmitt, 1993; Gangestad & Thornhill, 1997; Gangestad & Simpson, 2000; Greiling & Buss, 2000; Miller, 2000). Hypotheses about the importance of good genes in mating go back to Fisher (1915) and they come in several varieties (Greiling & Buss, 2000). One version focuses on qualities such as symmetry and masculinity as markers of good health, low mutation load,

or ability to withstand environmental insult—qualities that can be passed on to children (e.g., Gangestad & Thornhill, 1997; Gangestad et al., 2005). Another version focuses on "sexy son genes" (Fisher, 1915, 1930/1958). Women might prefer to mate with males who are especially attractive or desirable to females, not because they will bear more offspring, but because they will bear "sexy sons" who will give them more grandchildren (obviously, no conscious intent is implied by this class of hypotheses). Yet another version of good-genes theory focuses on qualities such as ability to produce humor, music, and art—courtship displays that have no direct pragmatic utility for the mate selector, but are preferred because they signal heritable fitness to the mate selector (Miller, 2000). Of course, all these hypotheses about "good genes" are likely to involve fitness signals of one sort or another. Even qualities that serve utilitarian functions for the mate selector—such as preferring mates who have the physical formidability to offer protection, or the qualities that lead to good parenting skills—are likely to be partly heritable, and thus are also markers of "good genes." In short, good-genes sexual selection has become increasingly recognized as an important and complex process in human mating.

A third development has been the increasing recognition that *the two components of sexual selection can be causally related to each other* (Buss, 1988a). The mate preferences of one sex can determine the domains in which members of the opposite sex compete. If women prefer men who can provide resources or offer protection, for example, then, over evolutionary time, men will compete with each other to display resource-providing and athleticism and other protection-indicating abilities. Conversely, the domains in which males compete (e.g., physical contests, hierarchy negotiation skills) can, in turn, influence the evolution of female mate preferences.

A fourth development has been the increasing recognition of *the importance of sexual conflict* and its relationships to sexual selection (Arnqvist & Rowe, 2005). Theoretical developments in sexual-conflict theory have increasingly led to research on human mating, including the domains of sexual aggression and coercion (Buss, 1989b; Malamuth, 2005; Thornhill & Palmer, 2000), sexual harassment (Browne, 2006), and sexual deception (Haselton, Buss, Angleitner, & Oubaid, 2005).

All of these developments in sexual selection theory, and others, have proved to be exceptionally fruitful for evolutionary biologists and evolutionary psychologists in theory and research on mating strategies. Sexual selection theory, in its modern manifestations, remains the most powerful overarching theoretical framework, guiding most research on human sexual strategies since the seminal article by Trivers (1972) on parental investment and sexual selection. It has also guided, explicitly or implicitly, most of the chapters in this volume on mating intelligence.

THE VALUE OF THE CONSTRUCT OF MATING INTELLIGENCE

This volume brings together a wonderful collection of chapters on many facets of the new construct of mating intelligence. These include how mating intelligence is related to how individuals search for mates (Penke and colleagues; De Backer, Braeckman, & Farinpour); the critically important, but often neglected, role of personality in mating strategies (Nettle & Clegg); deception in mating strategies (O'Sullivan); how the existence of children changes the adaptive problems an individual faces, and hence alters mating strategies (Weekes-Shackelford, Easton, & Stone); how different "mating budgets" influence mate preferences (Li); the role of mutation load in mating (Keller); how mental disorders undermine the successful deployment of mating strategies (Shaner, Miller, & Mintz); the role of creativity and humor in mate selection (Kaufman, Kozbelt, Bromley, & Miller); the relationship between emotional intelligence and mating intelligence in partner selection and relationship quality (Casey, Garrett, Brackett, & Rivers); the possible conceptual independence of mating intelligence and general intelligence (Kanazawa); and the role of ecological factors such as climatic variation on mating intelligence (Ash & Gallup; Figueredo and colleagues). The volume concludes with excellent chapters on frequently asked questions about mating intelligence (Miller), and an integrative model of mating intelligence (Geher, Camargo, & O'Rourke) that provides a foundation for future research in this field.

One of the truly important features of *Mating Intelligence* is that it focuses both on species-typical mating mechanisms as well as individual differences. The field of evolutionary psychology, with some important exceptions, has focused—theoretically and empirically—primarily on universal psychological mechanisms. The incorporation of individual differences into theories and research has been much slower. This book highlights the importance and necessity of understanding both classes of mechanisms within a unified theoretical framework, and thus heralds a more comprehensive understanding of the psychology of human mating.

Since mating intelligence is a new construct, it is worthwhile to scrutinize it, evaluate its worth, note its limitations, and offer suggestions for future work in this domain. I see the primary benefit of the construct of mating intelligence as a *heuristic one*—it guides researchers to new domains of inquiry that may have been neglected, and points to phenomena that may have been overlooked. I would single out the heuristic value that mating intelligence focuses on relative success or failure in the deployment of various mating strategies. This focus has some historical precedent, albeit without the phrase "mating intelligence." For example, there has been empirical research on which tactics are more and less effective at mate attraction (Buss, 1988a; Schmitt & Buss, 1996), which tactics

are more and less effective at mate retention (Buss, 1988b), and which tactics are more and less effective at promoting successful sexual encounters (Greer & Buss, 1994). Nonetheless, an explicit focus on the effectiveness of varied mating tactics, as how they are deployed with differential effectiveness by different by individuals in different circumstances, will guide future mating researchers to important discoveries.

This focus will also guide researchers to a fuller exploration of the cognitive abilities underlying mating tactics, such as the psychological mechanisms that lead to successful mate poaching, sexual deception, or successful mate retention. An abilities focus has proven effective in many domains, including the constructs of general intelligence, social intelligence, and emotional intelligence. An abilities focus, as conceptualized by the notion of mating intelligence, should prove fruitful in research on human mating.

SEXUAL SELECTION THEORY PROVIDES A FRAMEWORK FOR CONCEPTUALIZING MATING INTELLIGENCE

One way to organize the emerging study of mating intelligence is to specify the major adaptive problems that need to be solved in order to successfully mate and reproduce. Darwin's initial theory of sexual selection, with important modern modifications, provides such a provisional framework. Identifying the major adaptive problems of mating is the key to assessing how intelligently they are solved.

Table 1 presents a sampling of some of the key mating adaptations that can be deployed more or less successfully, and hence more or less intelligently, for solving problems of mating. The adaptive problems are large in number and require formidable abilities to solve successfully. Those involved in *mate selection,* for example, include calibrating or adjusting one's mate preferences based on: one's current mate value; anticipated future mate value trajectory; whether one is seeking a short-term mate, long-term mate, or extra-pair-copulation partner; operational sex ratio; parasite prevalence in the local ecology; one's history of successes and failures of courtship efforts; and many others. Adaptations involved in *intrasexual competition* include: initial mate attraction adaptations (e.g., flirtation, displays of fitness indicators) to evaluate interest and evoke interest from potential mates; subsequent mate attraction tactics to escalate commitment; sexual persistence adaptations and possibly sexual coercion adaptations; mate deception adaptations; adaptations to monitor, intimidate, and derogate intrasexual rivals; mate poaching adaptations; mate retention adaptations; and many others.

Success at solving many of these adaptive problems requires formidable cognitive skills. These include *mind-reading skills* to gauge and evoke

TABLE 1
Mating Intelligence Adaptations: A Selected Sample Framed by Sexual Selection Theory

Mate Preference Adaptations

1. Calibrate mate preferences to one's current mate value
2. Calibrate mate preferences to anticipated future mate value trajectory
3. Calibrate mate preferences to gains or losses of mate value
4. Adjust mate preferences based on whether one is seeking short-term or long-term mate
5. Calibrate mate preferences to operational sex ratio
6. Calibrate mate preferences to parasite prevalence in local ecology
7. Calibrate mate preferences to number and quality of available potential mates
8. Adjust mate preferences based on phase of ovulation cycle
9. Adjust mate preferences based on the local intensity of intrasexual competition
10. Adjust mate preferences based on successes and failures in mating attempts
11. Adjust mate preferences based on current adaptive needs (e.g., whether one has dependent children)
12. Adjust mate preferences after a breakup, based in part on assessment of causes of relationship failure (e.g., mate value discrepancy)

Intrasexual Competition Adaptations

1. Deploy initial round of mate-attraction tactics (flirtation, courtship displays) in order to:
   a. evaluate interest from target (mind reading)
   b. evoke interest from target (mind reading)
   c. allow closer and fuller assessment of mate quality
2. Deploy subsequent mate-attraction tactics (courtship displays) designed to:
   a. fulfill the desires of potential mate (e.g., displays of mate quality; commitability)
   b. escalate comment
   c. allow more thorough evaluation of mate quality, compatibility, exploitability, etc.
3. Sexual persistance adaptations
4. Sexual coercion adaptations
5. Mate-deception adaptations (e.g., mislead targeted mate about one's mate value or future intentions)(mind reading)
6. Assess and monitor mate value of key intrasexual rivals
7. Deter intrasexual rivals through intimidation
8. Derogate intrasexual rivals to targeted mate
9. Interfere with intrasexual rival's courtship tactics
10. Damage social reputations of intrasexual rivals

TABLE 1 (continued)

11. Mate poaching adaptations, such as . . .
    a. drive wedge in existing relationship
    b. deploy attraction tactics that better fulfill targeted mate's desires
    c. derogate partner of targeted mate
12. Mate retention adaptations, such as . . .
    a. monitor intrasexual rival's interest in one's mate
    b. drive off intrasexual rivals
    c. cloister mate to remove from proximity to intrasexual rivals

mating interest, to monitor a mate's commitment, to anticipate a mate's infidelity or defection, and to carry out successful deception. They include *self-assessment abilities* to evaluate one's mate value, one's future mate value trajectory, and shifts in mate value as a consequence of key life events (e.g., rise or loss of status; gain or loss of a key social ally). They include the *other-assessment abilities,* such the capability as to monitor the mate value and mate-value trajectories of mates and intrasexual rivals. And they include *the ability to anticipate satellite adaptive problems* that follow from deploying particular adaptive solutions. Successful mate guarding, for example, may activate counter-mate guarding adaptations in the mate or in the mate's kin, which create problems that must be solved.

The degree to which success at solving each mating problem is correlated with success at solving other mating problems is an intriguing issue that remains to be determined empirically. Possible outcomes include (1) a "g" in the mating intelligence realm, indicating a positive manifold in the mating intelligence matrix analogous to the "g" in the domain of cognitive abilities; (2) some level of specificity to mating intelligence—those successful at long-term mating may not necessarily be successful at short-term mating, and vice-versa (this outcome would be expected if their exist heritable individual differences in sexual strategies, or if some individuals, through effort and practice, "specialize" in one sexual strategy and hence improve their performance on that strategy to the detriment of performance on other strategies). Only extensive empirical work will reveal the structure of mating intelligence, but the findings will surely be fascinating and provide key insights into human mating.

Future work on mating intelligence will also have to deal with some uncomfortable issues, including important adaptive problems not covered by this volume, but that might be included in future work. I'll mention one—*sexual coercion.* Although there is debate about whether males have evolved adaptations to rape (Thornhill & Palmer, 2000), there is

tremendous consensus on the point that *male sexual coercion has been a recurrent adaptive problem for women over human evolutionary history* (Buss, 2003). Thus, an important domain of mating intelligence would involve the tactics that women bring to bear on solving this adaptive problem—perhaps selecting mates who can function as "body guards," avoiding circumstances in which there is an elevated risk of rape, deflecting unwanted sexual attention, avoiding men who display cues correlated with sexual aggression, and even successfully solving the "satellite" adaptive problems caused by being raped, such as avoiding damage to reputation or mate value (Buss, 2003). Women, their mates, their friends, and their kin are likely to differ in their mating intelligence in this realm. The key point is that work on mating intelligence will benefit from a comprehensive treatment of the adaptive problems of mating, including sensitive and controversial ones such as sexual coercion.

Another key issue centers on providing *criteria for gauging and measuring mating intelligence.* A sensible criterion is given by the existing framework of evolutionary psychology—success at solving the adaptive problems of mating, such as successful mate attraction, mate retention, mate poaching, mate switching, and so on. Thus, research on mating intelligence could fruitfully move toward an explicit focus on which tactics are successful at solving mating problems, individual differences in the successful deployment of these tactics, and delineation of the contexts in which certain individual's deployment of specific tactics are effective. This will prove to be much more complicated that it might appear at first blush. One reason is that the success of a tactic typically depends critically on context. Consider the tactic a woman might use to attract a mate—wearing skimpy clothing, showing cleavage, and sucking seductively on a straw. This tactic proves highly effective at attracting short-term mates, but actually backfires in attracting long-term mates (Buss & Schmitt, 1993; Greer & Buss, 1994). Tactic effectiveness is highly context-dependent.

Another complexity is that solutions to one mating problem can produce a cascade of consequences for other adaptive problems. To take one simple example, successful mate poaching (luring a desirable individual away from an existing relationship for a sexual encounter or long-term mateship) may create satellite adaptive problems such as retribution from the poachee's previous mate, or damage to one's social reputation. In the extreme, successful mate poaching (surely an indicator of mating intelligence) may lead to getting ostracized, injured, or even killed (perhaps not so intelligent after all). In short, success at solving the adaptive problems of mating is highly dependent on circumstances and must be examined within the broader context of the cascade of satellite adaptive problems for which the solution has relevance.

Temporal context, the dimension anchored by short-term and long-term mating, will be critical for evaluating all forms of mating intelligence

(Buss & Schmitt, 1993). Mate preferences of both sexes shift as a function of temporal context. Women, for example, place a greater premium on physical attractiveness and immediate resource display in short-term than long-term mating contexts. Sexual fidelity is extremely important for men in long-term mating, but is largely irrelevant in short-term mating. Consequently, success at short-term mating will require the deployment of different tactics than success at long-term mating.

SUMMARY

Mating intelligence offers a fresh framework that is likely to have heuristic value in guiding researchers to new domains of mating and discovering new mating phenomena. Given the early stage of theorizing, much work remains to be done. This work includes a comprehensive identification of the adaptive problems of mating (e.g., sexual coercion); developing measures to assess individual differences in the formidable skills and abilities required for solving each of these adaptive problems; exploring the cascading consequences of each solution for other adaptive problems; and empirically examining the relations among these abilities and determining their statistical structure. Readers of this volume undoubtedly will offer additional suggestions for advancing and clarifying the framework of mating intelligence. Regardless, all readers will enjoy the many mating insights offered by this volume.

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Chapter 1

Mating Intelligence: Toward an Evolutionarily Informed Construct

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This book introduces a new construct called 'Mating Intelligence' (MI) which concerns cognitive processes that uniquely apply to the domain of human mating, sexuality, and intimate relationships. This MI construct encompasses both species-typical psychological adaptations (such as the perceptual, cognitive, and decision-making processes for evaluating an individual's potential as a long-term mate), and a set of individual differences in the efficiencies, parameters, and design details of those traits. Although we all have some ability to assess who is attractive (a species-typical adaptation), some of us are better at this than are others (i.e., we show individual differences in adaptive functioning).

We propose the construct with some trepidation, because most new constructs in psychology are a waste of time. They may succeed in getting a new technical term associated with the name of a tenure-seeking researcher, but rarely lead to cumulative, consilient scientific progress (McGrath, 2005). Technically, new constructs rarely show good discriminant validity (predicting behavior differently from existing constructs) or

good incremental validity (predicting behavior better than existing constructs) (see, e.g., Gottfredson, 2003; Judge, Erez, Bono & Thoresen, 2002). The burden of proof should rightly be against researchers trying to introduce a new way of parsing human nature or a new individual-differences variable.

This is especially true in intelligence and personality research, where most new constructs turn out to be little more than the good old-fashioned *g* factor (general intelligence, IQ), and/or one or more of the 'Big Five' personality traits (openness, conscientiousness, extroversion, agreeableness, emotional stability). For example, some evidence suggests that 'political authoritarianism' corresponds empirically to low intelligence plus low openness (i.e., conservatism), high conscientiousness (i.e., sense of duty), and low agreeableness (i.e., aggressiveness) (Heaven & Bucci, 2001; Jost, Glaser, Kruglanski, & Sulloway, 2003; Schultz & Searleman, 2002). Many other newly introduced constructs turn out to be little more than statistical sub-factors of general intelligence. For example, Howard Gardner's 'multiple intelligences' (Gardner, 1983) all correlate positively with general intelligence, but often can't be measured with as much reliability and validity, so they look more attractively elusive and mystical (see Gordon, 1997; Hunt, 2001; Klein, 2003; Pyryt, 2000). Similar problems afflict Robert Sternberg's construct of 'practical intelligence' (Gottfredson, 2003).

On the other hand, there are a few constructs—notably 'social intelligence' (Cantor & Kihlstrom, 1987) and 'emotional intelligence' (Salovey & Mayer, 1990)—that have provoked progressive research traditions in the last several decades. Research on social intelligence (including Theory of Mind, Machiavellian intelligence, autism, and face perception) has arguably been the most important innovation in developmental psychology and comparative psychology in the last 30 years (e.g., Reader & Laland, 2002). It has yielded thousands of papers on the 'mind-reading' skills of apes, children, and adults. Research on emotional intelligence has had a similar impact in business management, organizational behavior, clinical psychology, and relationship research (e.g., George, 2000). Both constructs are also informing the emerging fields of social neuroscience and affective neuroscience (e.g., Bar-On, Tranel, Denburg, & Bechara, 2003).

For both social and emotional intelligence, though, the development of reliable, valid individual-differences measures of the constructs has proven somewhat frustrating and elusive (e.g., Davies, Stankov, & Roberts, 1998; Geher, 2004; cf. Mayer, Caruso, & Salovey, 1999)—especially in finding measures that show good discriminant validity beyond well-established measures of general intelligence and personality (De Raad, 2005). Some evidence for discriminant validity has been published for some emotional intelligence scales (e.g., Livingstone & Day, 2005; Petrides & Furnham, 2001, 2003; Tett, Fox, & Wang, 2005). However, skeptics

suggest that social intelligence is just general intelligence plus extroversion, or that emotional intelligence is just general intelligence plus agreeableness and emotional stability (see, e.g., De Raad, 2005; Matthews, Zeidner, & Roberts, 2004; Schulte, Ree, & Carretta, 2004).

Although such criticisms are important, they often miss the crucial tension that makes these constructs scientifically productive—these constructs bridge the gap between research on human universals and research on individual differences. They unify the experimental psychology tradition of Wilhelm Wundt and the correlational psychology tradition of Francis Galton. They identify not just a distinctive part of human nature, but a cluster of human differences that are socially salient and important. The human-universal aspect of these constructs helps researchers identify key adaptive problems, social functions, and cognitive mechanisms. The individual-differences aspect helps researchers develop valid ability tests that can drive comparative research across species, sexes, ages, populations, families, individuals, and psychopathologies.

For instance, emotional intelligence is a set of mental abilities (to read facial expressions, identify emotions in self and other, and control one's own emotions under trying situations), but it is also a partly-heritable, partly-trainable dimension of variation that is helpful to appreciate in school, work, and family life (Ciarrochi, Forgas, & Mayer, 2006). We all have emotional intelligence in some form, to a far higher degree than most other species. But we differ in how well it works, and even small individual differences in emotional intelligence can yield huge differences in life-outcomes—getting promoted versus fired, driving to a second honeymoon versus a divorce hearing. We suspect that Mating Intelligence will also turn out to have two faces—a set of universal mechanisms, and a dimension of individual differences—as a psychological construct.

A HISTORY OF MUTUAL NEGLECT BETWEEN MATING RESEARCH AND INTELLIGENCE RESEARCH

We aim for 'mating intelligence' to serve a research-motivating function like the 'social intelligence' and 'emotional intelligence' constructs did. Specifically, we hope it will build bridges between mating research (including evolutionary psychology, human sexuality, and relationship research) and intelligence research (including psychometrics and behavior genetics). These two fields have neglected each other for over a century.

Human intelligence research has neglected the central adaptive challenge in the life of any sexually reproducing species—finding mates and having offspring. To quantify this neglect, we examined all volumes of the premier international journal *Intelligence* since its inception in 1977. We searched in SciSearch for *Intelligence* articles that included all keywords we

could list related to mating (e.g., *mating, mate, marriage, sex*) in the title or abstract. We then read the abstracts to see if they genuinely concerned mating issues. As of November 2005, only 3 of 811 articles (0.8 percent) in *Intelligence* have dealt directly with human mating (Benbow, Zonderman, & Stanley, 1983; Kanazawa & Kovar, 2004; Rushton, 2004). Another 43 articles concern sex differences unrelated to the context of mating behavior (e.g., Deary, Thorpe, Wilson, Starr, & Whalley, 2003).

Equally, mating research has neglected intelligence—the most reliably measurable, predictive, heritable construct in the history of psychology (Jensen, 1998). Evolutionary psychology has been at the forefront of human mating research since about 1990, and its premier journal is *Evolution and Human Behavior.* Since changing its name from *Ethology and Sociobiology* in 1997, only 1 of its 311 research articles (Flinn, Geary, & Ward, 2005), as of November 2005, has dealt directly with intelligence (according to a similar keyword search in SciSearch). Another 6 concern sex differences in specific cognitive abilities (e.g., Silverman, Choi, Mackewn, Fisher, Moro & Olshansky, 2000), but do not directly relate intelligence to mating behavior. Similarly, the premier journal in relationship research, the *Journal of Social and Personal Relationships*, contains only 2 of 939 articles directly concerning intelligence since its inception in 1985 (Rowatt, Cunningham, & Druen, 1999; Sprecher & Regan, 2002).

More generally, although SciSearch returns 44,111 results for 'mating' and 27,974 results for 'intelligence' in all journals since 1950 (out of 51,477,995 total records), the combination of 'mating' and 'intelligence' appear in only 40 relevant articles. (In descending order of citation impact, the top 10 were: Crow, 1993, 1995; Feingold, 1992; Lykken & Tellegen, 1993; Miller & Todd, 1998; Furlow, Gangestad, & Armijo-Prewitt, 1998; Eaves, 1973; Hatfield & Sprecher, 1995; Li, Bailey, Kenrick, & Linsenmeier, 2002; Rushton & Nicholson, 1988). Most of these concerned assortative mating for intelligence. (Another 60-odd articles concerned different 'mating' strategies in genetic algorithms, an artificial 'intelligence' optimization method, based on early work by Todd & Miller, 1991). Those 40 relevant mating/intelligence articles are only twice as many as would be expected by chance (24), given the base-rate frequency of 'mating' (.000857) and 'intelligence' (.000543) in the whole scientific literature of 51 million papers since 1950. In fact, 'mating' is less likely to be associated with 'intelligence' (121 total papers) than with 'cockroach' (168 papers), 'Norway' (178), or 'steel' (182). Thus, 'mating' and 'intelligence' do not seem very closely connected in the minds of scientists.

Indeed, we could find only three areas of overlap between mating research and intelligence research.

First, as mentioned above, there is the literature of assortative mating for intelligence, which is important to ascertain mostly for technical

reasons in behavior genetics (overlooked assortative mating can bias estimates of heritability from twin and adoption studies).

Second, there are sporadic references to mate preferences for intelligence, creativity, adaptability, and other aspects of general intelligence in the evolutionary psychology literature on human mate choice—including research on cross-cultural preferences, personal ads, and sperm-donor preferences (e.g., Buss, 1989; Dunbar, Marriott, & Duncan, 1997; Haselton & Miller, 2006; Kenrick et al., 1990; Li et al., 2002; Scheib, 1994).

Third, there is the clinical psychology literature on mental illnesses that undermine mating intelligence in particular ways that are not entirely explained by reduced general intelligence. These mating-intelligence disorders include the following: Borderline personality disorder includes highly unstable evaluations of the commitment level and mate value of a potential mate, and of one's own mate value (Skodol, Gunderson, Pfohl, Widiger, Livesley, & Siever, 2002). Anorexia—severe, sometimes fatal under-eating—often includes misconceptions that the other sex is attracted to a much thinner body form than they actually prefer, and such misconceptions are often driven by media stereotypes and adolescent peer-group gossip (Groesz, Levine, & Murnen, 2002; Paxton, Schutz, Wertheim, & Muir, 1999). Asperger's syndrome and autism are characterized by deficits in social understanding and communication abilities that result in pervasive, consistent problems in attracting, retaining, and understanding sexual partners (Ashton, 2002; Baron-Cohen, Wheelwright, Skinner, Martin, & Cubley, 2001; Baron-Cohen, Richler, Bisarya, Gurunathan, & Wheelwright, 2003). Narcissistic personality disorder—extreme arrogance, grandiosity, self-involvement, and showing off—can be construed as obsessive overinvesting in conspicuous, public fitness-displays to attract multiple short-term mates (Buss & Shackelford, 1997; Gabriel, Critelli, & Ee, 1994; Robins & Beer, 2001). Antisocial personality disorder (psychopathy)—a pervasive pattern of callous, exploitative, impulsive, violent, and promiscuous behavior—can be construed as over-reliance on deceptive, coercive, and short-term mating tactics (see Dunsieth, Nelson, Bursman-Lovins, Holcomb, Bechman, Welge, Roby, Taylor, Soutullo, & McElroy, 2004; Krueger, Hicks, Patrick, Carlson, Iacono, & McGue, 2002). All these personality disorders seriously reduce long-term mating success, relationship satisfaction, and marital stability (Grant, Hasin, Stinson, Dawson, Chou, Ruan, & Pickering, 2004; Skodol, Gunderson, McGlashan, Dyck, Stout, Bender, Grilo, Shea, Zanatini, Morey, Sanislow, & Oldham, 2002), so can be viewed partly as disorders of Mating Intelligence. However, antisocial personality disorder in males often increases short-term reproductive success (Moffitt, Caspi, Harrington, & Milne, 2002)—insofar as this represents a successful 'alternative strategy' in male mating behavior, this emphasizes the point that Mating Intelligence can have a very dark side indeed.

Clearly, none of these research areas has developed an integrated view of Mating Intelligence as a major adaptive domain of human cognitive functioning. We think this century of mutual neglect between mating research and intelligence research has been harmful in many ways. It led mating researchers to neglect the romantic attractiveness of intelligence in its diverse manifestations. It led relationship researchers to neglect intelligence as an explanatory variable in predicting relationship formation, satisfaction, conflict, and dissolution. It led intelligence researchers to focus on the predictive validity of general intelligence in the public domains of education and employment rather than the private domains of relationships and family life, making it easier for critics to portray the 'general intelligence' construct as exclusively concerned with modern book-learning. It led sex-differences researchers to spend decades on sterile debates about cognitive differences between men and women, without any sexual-selection theory from mating research to drive sex-differences predictions, or sophisticated psychometrics from intelligence research to clarify the nature of the cognitive differences.

Each of these scientific problems led to lost opportunities in applied psychology—decades of delay in understanding the real-world effects of intelligence differences in the domains of human mating, relationships, sexuality, marriage, and family life—and in understanding all their associated 'social' (i.e., sexual) problems, such as teen pregnancy, sexually transmitted diseases, abortion, single motherhood, spousal abuse, depression, suicide, divorce, rape, sexual discrimination, and so forth. Research on happiness ('subjective well-being') consistently shows that the quality of intimate relationships (especially sexual relationships) is a major predictor of overall life-satisfaction—often more important than education, income, or occupational status (DePaulo & Morris, 2005; Diener, Oishi, & Lucas, 2005; Lucas, 2005; Mroczek & Spiro, 2005). By neglecting to study the links between mating, intelligence, and human happiness, psychologists have done a great disservice to humanity. Our proximal goal with this book is to spark more interdisciplinary research on mating intelligence, but our ultimate goal is to promote the happiness of human individuals and the sustainability of human societies by shedding more light on the most intimate and important sources of satisfaction in life.

AN EVOLUTIONARY PSYCHOLOGY CONTEXT FOR MATING INTELLIGENCE

If the 1960s is often characterized as the era of the *cognitive revolution* (Martel Johnson & Erneling, 1997), then the 1990s and the current decade must surely qualify as the period of the *evolution revolution* in psychology. A

recent content analysis of articles featured in *Behavioral and Brain Sciences*, an elite interdisciplinary journal, revealed that more than 30 percent of articles published in the last decade include *evolution* in the title or as a keyword (Wilson, Garruto, McLeod, Regan, Tan-Wilson, unpublished manuscript). Evolution has come of age in psychology, not just in the new field of evolutionary psychology proper, but in the prominence of adaptationist analysis across many areas of traditional psychology—perceptual, cognitive, social, developmental, and abnormal.

However, many areas of psychology have been slow to incorporate evolutionary principles. Intelligence research is a case in point. To be sure, much work has addressed the heritability of intelligence (e.g., Plomin & Spinath, 2004), and the evolutionary origins of 'human intelligence' (e.g., Sternberg & Kaufman, 2002). Yet the behavior genetics work on intelligence has rarely connected to the evolutionary stories to yield an integrated evolutionary genetic theory of the selection pressures that shaped human intelligence to have the structure, dimensions of variance, and types of heritability that it does. In particular, competing theories of intelligence (e.g., Jensen vs. Sternberg vs. Gardner) have never been resolved by appeal to evolutionary principles. Also, the unitary nature of the *g* factor (general intelligence) has not been reconciled with evolutionary psychology's 'massive modularity' claim that the human cognitive architecture is composed of hundreds of distinct psychological adaptations. Further, although some new constructs, such as emotional intelligence (Salovey & Mayer, 1990), seem more closely related to core adaptive challenges of humans as social primates, work on such constructs has generally progressed separately from evolutionary psychology (Geher & Renstrom, 2004).

In the past several years, evolutionary psychologists have provided insights into many aspects of human behavior that would not have been possible without the broad and powerful explanatory nature of evolutionary theory. Many such findings deal with issues of human mating (e.g., Buss, 2003), including diverse topics such as sexual jealousy (Buss, Larsen, Westen, & Semmelroth, 1992), the effects of body symmetry on attractiveness ratings (Gangestad & Thornhill, 1997), and the phenomenology of short and long-term mating strategies across the sexes (Schmitt, Shackelford, & Buss, 2002).

This focus on human mating taken by evolutionary psychology is not capricious. In general, evolutionary psychology underscores reproductive success as the ultimate arbiter of whether some trait is likely to replicate across generations and thereby become species-typical. Mating processes influence reproductive success more directly than any other class of human behaviors. As such, the mating domain deserves a special status in evolutionary psychology. In the words of David Buss:

> Because differential reproduction is the engine that drives the evolutionary process, the psychological mechanisms surrounding reproduction should be especially strong targets of selection. (Buss, 2004, p. 103)

Yet, in spite of all the evolutionary psychology work on human mating, evolutionary theorizing about the origins of human intelligence has neglected the mating domain as a possible source of selection pressures, or an adaptive arena in which intelligence matters.

The book is a first step in trying to synthesize insights concerning human mating and human intelligence within an evolutionary framework. With few exceptions, existing conceptions of intelligence are devoid of mating-related content. Similarly, mating research in evolutionary psychology generally ignores intelligence, except as a vaguely defined trait that seems sexually attractive for obscure reasons (see Miller, 2000, for an exception). Likewise, human sexuality research and intimate relationships research neglects intelligence differences between people. These facts are troubling given the centrality of both mating and intelligence in human psychology. So we have a situation in which two important areas of psychology, intelligence and mating psychology, need to be synthesized. Given the utility of short, memorable phrases as labels for emerging research areas, we think it is useful to label this synthesized construct *mating intelligence* (MI).

MATING INTELLIGENCE (MI) DEFINED

Roughly, we think of mating intelligence (MI) as the mind's reproductive system: the total set of psychological capacities for sexual courtship, competition, and rivalry; for relationship-formation, commitment, coordination, and termination; for flirtation, foreplay, and copulation; for mate-search, mate-choice, mate-guarding, and mate-switching; and for many other behavioral capacities that bring mainly reproductive (rather than survival) payoffs. MI is not a single capacity, a single adaptation, a single brain region, or a single 'group factor' under the *g* factor (general intelligence). Rather, it is a collective noun that covers dozens or hundreds of distinct adaptations, exaptations, learned skills, and *ad hoc* tactics for mating. MI forms a coherent category only at the functional level (capacities evolved, learned, or invented *for* mating). As is addressed in Miller's 'Frequently Asked Questions' chapter in this volume, MI is probably not best conceived as a coherent category at the level of genetics (we don't expect distinct MI genes), neuroscience (we don't expect distinct MI cortical areas), or cognitive processes (we don't expect distinct MI modes of Bayesian inference).

Some of the many MI capacities may be human universals that show very high efficiency and adaptiveness across all neurologically normal, sexually mature adults; thus, they might show little variation between individuals and low correlations with general intelligence. In later chapters, we often refer to these as 'mating mechanisms,' to emphasize their efficient, reliable functioning. Other MI capacities might show high variance and heritability, and might have high *g*-loadings (high correlations with general intelligence or IQ). In later chapters, we often refer to these as 'mental fitness indicators,' to emphasize their conspicuous variation across individuals. Thus, the relationships between MI, general intelligence, social intelligence, and emotional intelligence will vary from capacity to capacity—sometimes closely connected, sometimes not.

Even within mating mechanisms that operate efficiently within all normal humans, we might still expect substantial adaptive differences in their design details, including perceptual inputs, decision parameters, and behavioral outputs, across sexes, ages, levels of mental and physical attractiveness, and many other cross-individual and cross-situational variables.

DIFFERENT VIEWS OF MI

As will become clear from the diversity of ideas included in this volume, different researchers have different views of MI. This theoretical diversity is not unusual in intelligence research (see Geher, 2004). One of this book's goals is to provide a forum for these different voices, in hopes of moving toward a consensual MI framework that can fruitfully guide future research, and that is well-rooted in the current theories and findings of evolutionary psychology, human sexuality research, intimate relationship research, and intelligence research.

As a starting point, we sketch four distinct views of MI as they have been articulated by or as they have influenced various contributors to this volume (see Table 1.1.):

A. *The SUNY New Paltz Mating Intelligence Project.* The authors from the State University of New York (SUNY) at New Paltz (Glenn Geher, Jeremy Murphy) do empirical research on MI construed as *a set of inter-related cognitive abilities that bear directly on mating-relevant issues and that show variability across individual adults*. We think of MI as partially independent of general intelligence, and as distinct from other domains of (e.g., social intelligence, emotional intelligence). From this perspective, MI must include all mating-relevant domains that have proven important in the extant literature on evolutionary psychology and human sexuality (e.g., factors that predict success in attracting and retaining short- and long-term mates, reactions to dif-

TABLE 1.1.
Four Conceptions of Mating Intelligence

	SUNY New Paltz Mating Intelligence Project	*Cosmides and Tooby (2002)*	*Kanazawa (2004)*	*Miller (2000)*
Conception of Mating Intelligence	Set of task-specific cognitive abilities to handle ancestral mating problems	Set of task-specific cognitive abilities to handle ancestral mating problems	Set of task-specific cognitive abilities to handle ancestral mating problems	Focused on sexually selected creative courtship abilities that show high variability, heritability, and difficulty
Relation to General Intelligence (g)	Modest positive correlations with g (as with social & emotional intelligence)	Slight positive correlations with g, which is a 'bundling together' of domain-specific abilities	No correlation with g, except when mating involves evolutionarily novel problems	High positive correlations with general intelligence; Reliable, valid g-indicators
Understanding Lewinskygate	Clinton's sometimes ill-judged mating decisions are largely unrelated to his high general intelligence	Clinton's affair-seeking reflects ancestral mating adaptations for extra-pair copulation by high-status males	Clinton's affair-seeking reflects ancestral mating adaptations for extra-pair copulation by high-status males	Clinton's ability to attract young females reveals his general genetic and phenotypic quality, including general intelligence

ferent kinds of infidelity, etc.; see Buss, 2003). Also, this perspective emphasizes 'cross-sex mind-reading'—our social-cognitive abilities to understand the beliefs and desires of the opposite sex, and to make accurate mating-relevant judgments of their psychological traits. For example, we are interested in whether males can accurately judge which personal advertisement (among three describing potential male marriage partners) will prove most attractive to female raters. We are provisionally defining high MI as the ability to make accurate judgments of this sort across several different mating-related tasks. Other key MI-demanding tasks include detecting sexual interest

from a potential mate, detecting sexual infidelity by a partner, and detecting sexual envy from a rival. Readers who are familiar with ability-based methods of measuring emotional intelligence (e.g., Brackett & Salovey, 2004; Mayer et al., 2000) will recognize this framework as similar. This MI-as-ability view has influenced mainly the chapters in this volume first-authored by Glenn Geher, James Casey, and Scott Kaufman.

B. *Cosmides and Tooby's Conception of Domain-Specific Psychological Adaptations.* In their foundational papers in evolutionary psychology, Cosmides and Tooby emphasize massive modularity as a hallmark of adaptations that comprise the human mind. Their view of 'intelligences' is no exception. Cosmides and Tooby (2002) divide intelligences into two distinct categories: *dedicated intelligences* and *improvisational intelligence*. A dedicated intelligence is a reliably developing, universal human ability to solve a set of adaptively important, ancestrally recurring problems. For instance, in their work on the cheater-detection module (Cosmides & Tooby, 1992), they argue that selection favored specialized cognitive modules that allowed us to detect individuals who cheat on implicit social contracts (who take without giving in return). Improvisational intelligence, on the other hand, concerns abilities to solve evolutionarily novel problems such as driving cars, learning calculus, or investing in pensions. They conceive of this more domain-general kind of intelligence as being comprised of a 'bundling together' of several dedicated intelligences. From this perspective, 'Mating Intelligence' is *a class of domain-specific dedicated intelligences attuned to ancestral mating challenges, plus whatever forms of improvisational intelligence deal with evolutionarily novel mating challenges* (e.g., single's ads, contraception, divorce courts). This MI-as-domain-specific-adaptations view has influenced virtually all the chapters in this book, especially those first-authored by Lars Penke, Charlotte de Backer, Norm Li, Maureen O'Sullivan, Viviana Weekes-Shackelford, Jessica Ash, and Aurelio José Figueredo.

C. *Kanazawa's Separation of Mating Domains from General Intelligence.* In a recent set of papers on the evolution of intelligence (Kanazawa & Kovar, 2004; Kanazawa, 2004, Kanazawa, this volume; cf. Borsboom & Dolan, 2006), Satoshi Kanazawa agrees with Cosmides and Tooby that massively modular, domain-specific adaptations (including MI capacities) sufficed for most problem solving in our evolutionary past. However, he argues that humans also evolved a new, domain-specific adaptation, 'general intelligence,' for solving evolutionarily novel problems (e.g., new ways of hunting, socializing, making tools). From this perspective, mating (as an evolutionarily ancient domain) should have little connection to general intelligence (as an adaptation for evolutionary novelty), so MI abilities should be uncorrelated with

measures of general intelligence, and mating research and intelligence research should proceed without much cross-talk.

D. *Miller's Focus on MI as Mental Fitness Indicators.* In previous work, one of us (Geoffrey Miller) has extended the Cosmides/Tooby framework in a different direction, arguing that many human domain-specific mental traits evolved through sexual selection as 'mental fitness indicators' (Miller, 2000a, b). In this view, many unique human capacities for language, art, music, humor, and creativity evolved to attract sexual partners, and they did so because they were reliable signals of general intelligence (a brain with high 'neurodevelopmental stability') and good genes (a genotype with relatively few harmful mutations). This view predicts substantial correlations between general intelligence and many sexually attractive mental fitness indicators, but does not predict such correlations between general intelligence and most other components of MI. This fitness indicator framework has influenced the chapters first-authored by Lars Penke, Daniel Nettle, Matthew Keller, Andrew Shaner, Scott Kaufman, and Geoffrey Miller.

MATING INTELLIGENCE VERSUS TRADITIONAL NORMS OF RATIONALITY

These four views differ in their emphasis on MI as a way of understanding others versus a way of impressing them, in their predictions about MI's relationship with general intelligence, and in their views about mismatches between ancestral and modern mating conditions. What they have in common is a biologically grounded view of 'intelligence' as adaptive behavior rather than rational choice. In traditional social stereotypes, 'intelligence' implies cold, rational, analytical calculation. In traditional economics and other social sciences that use Rational Choice Theory, 'intelligence' implies the maximization of expected subjective utilities given consistent, transitive preferences. In research on judgment and decision-making, 'intelligence' implies adherence to rather narrow procedural norms of logical reasoning and statistical inference. None of these meanings fit very well with this book's emphasis on the hottest domain of human cognition—mating—which seems both too carnal and too transcendental to fit into such narrow, workaday meanings of 'intelligence.'

As with social and emotional intelligence, mating intelligence can embody hidden forms of adaptive logic that violate traditional norms of rationality, including traditional criteria of 'intelligence,' narrowly construed. For example, mating intelligence is what makes high-school kids distracted when they're taking the SAT test—they might pay so much attention to the socio-sexual cues of interest from their peer group that

they miss some analytical reasoning questions. Their parents and their college admission boards might despair over this, but the kids are tuned into the evolutionarily salient forms of intelligence that really count.

Mating Intelligence is not just distracting from academic tasks; it has been under different kinds of selection pressures that favor different performance criteria. For example, many analytical reasoning tasks assume that the reasoner's goal should be to maximize accuracy—the probability of a 'correct' response. By contrast, most evolutionary psychologists now understand that animals and humans are under selection not to maximize raw accuracy in decision-making, but to maximize expected benefits and to minimize expected costs (Haselton & Buss, 2000; Haselton & Nettle, 2005). When fitness costs and benefits of different errors are very different (e.g., failing to notice a saber-toothed cat vs. false-alarming to a rock as if it were a saber-toothed cat), then selection can favor extremely biased responses (e.g., a very low threshold for detecting predators) rather than raw accuracy. Selection favors tendencies to commit errors that are less harmful.

For example, accuracy-maximization might favor young men who go around assuming that most young women are not interested in having a short-term sexual affair with them. However, benefit-maximization might favor young men evolving the opposite assumption (that all women secretly desire them), because, if they are motivated to court many women (as a result of such biased assumptions), the reproductive benefits of finding the very women who say 'yes' may vastly outweigh the reproductive costs (e.g., slightly lower social status due to the embarrassment of being rejection) of the many women who say 'no' (Haselton & Buss, 2000). From a narrow rationality perspective, the young men who assume that all women want them are showing severe social-cognitive inaccuracies, judgment biases, and probably narcissistic personality disorder. However, from an evolutionary perspective, those young men may be showing an adaptive bias that has consistently maximized the reproductive success of their male ancestors—however annoying it was to their female non-ancestors. In this case, male Mating Intelligence would look very low on first inspection (very inaccurate), but rather high on closer examination.

Another recently documented case of adaptive bias is that women tend to perceive men as less committed in relationships than they really are (Haselton & Buss, 2001). Here again the reasons concern an asymmetry in the costs of under-perceiving a male's commitment (which may annoy him, but motivate more conspicuous commitment-displays and attentiveness), versus over-perceiving commitment (which could lead to impulsive sex, pregnancy, abandonment by the male, and subsequent death of the child through lack of paternal investment). It is much worse to be impregnated by a commitment-pretending psychopath than to doubt a truly committed partner's intentions. Thus, women doubt male commitment, and

men feign more commitment than they feel—a never-ending arms race of romantic skepticism and excess that has shaped both female and male Mating Intelligence.

A third example of adaptive biases in MI comes from the Ideal Standards Model of Fletcher and Simpson (2000), which explicitly considers which mating contexts should favor raw judgment accuracy versus adaptively biased judgment. According to this perspective, there are times during the mating process when raw accuracy is most adaptive (and should be typical), while there are other times when specific biases are most adaptive (and should prevail). Consider, for instance, the mate-selection phase of the game. When initially assessing the value of a potential mate as a long-term partner, accuracy is crucial. Assessments of kindness, fertility, strength, and social status are key to acquiring a mate who would be good for the long haul. However, when you find yourself in the throes of a long-term relationship with several shared children who need much parental support, focusing on your partner's many annoying habits that have unfolded across the relationship may not be best for everyone involved. Rather, holding an idealized, biased, overly rosy picture of one's partner at this stage may be best for both proximal relationship satisfaction and ultimate survival of offspring (see Murray, Holmes, & Griffin, 1996, for evidence suggesting that such biased perceptions of partners do, in fact, emerge in healthy long-term relationships).

Thus, high MI may not correspond in any simple way to traditional narrow norms of procedural rationality, such as logical deduction or statistical induction. MI researchers may often benefit from viewing human mating tasks from a formal decision-making perspective, as long as they remember that evolution maximizes reproductive success—not personal happiness, relationship stability, parental love, or accuracy in understanding the other sex. To test a formal decision-making model of some mating task—one that includes explicit performance criteria—a good first step might be to see whether people who score higher on general intelligence (e.g., traditional IQ tests) also tend to score higher on the mating task performance criteria. If they do not, there is probably something wrong with the formal model and its performance criteria (see Stanovich & West, 2000).

Another major misconception about Mating Intelligence derives from stereotypes about nerds, geeks, and highly intelligent but socially awkward engineers. Some of the most conspicuously 'intelligent' individuals in modern society are physicists, software engineers, and members of other highly technical professions that require years of obsessive dedication to achieving academic credentials at the cost of one's social and sexual maturation. The result is that the most successful members of these professions are often males with some degree of Asperger syndrome—a keen interest in abstract systems of thought rather than human relationships

(Baron-Cohen et al., 2001; 2003). Such nerds would tend to score very highly on traditional tests of General Intelligence, but very poorly on tests of Mating Intelligence. This is likely a source of continuing frustration to their girl-friends, spouses, and co-workers (see Aston, 2002). The nerd-prevalence rate—especially in academic settings—can thereby give the false impression that General Intelligence must be uncorrelated—or even negatively correlated—with Mating Intelligence in the general population.

MATING INTELLIGENCE IN RELATION TO SOCIAL INTELLIGENCE

Social Intelligence (a.k.a. Machiavellian Intelligence, Theory of Mind, mind-reading) concerns our abilities to understand the beliefs and desires of others (Cantor & Kihlstrom, 1987). As such, it clearly overlaps with any reasonable notion of Mating Intelligence, because human heterosexual relationships depend upon understanding the beliefs and desires of opposite-sex partners and same-sex rivals. For example, successful mating depend on assessing each potential mate's beliefs, desires, and preferences through their verbal and non-verbal signals; remembering a vast array of social information about each potential mate's relatives, friends, offspring, previous lovers, and would-be lovers; sorting through conflicting social information (gossip) about each potential mate that is generated or repeated by other individuals with their own socio-sexual agendas; and assessing each potential mate's relative social status in the local dominance hierarchy and mating market. In a highly social primate species such as ours, the sexually successful must be socially competent.

Social intelligence becomes even more important in longer-term relationships, as partners must coordinate their foraging, parenting, and social efforts given somewhat conflicting interests, agendas, personalities, and preferences. Indeed, for people who have been successfully married a long time, one's mental model of one's spouse is probably the most accurate and detailed understanding of another human that one ever develops in his or her lifetime. This is one reason why the death of a spouse is so traumatic.

From this point of view, MI is a sub-set of Social Intelligence, but Social Intelligence also concerns Theory of Mind applied to non-sexual relationships with parents, offspring, siblings, kin, friends, allies, trading partners, enemies, dominants, subordinates, peers, mentors, pupils, and other groups. MI might thereby be classed alongside research on Parenting Intelligence, Trading Intelligence, Status Intelligence, and Group-Competition Intelligence.

However, MI is not entirely subsumed by Social Intelligence, because it also includes some psychological adaptations that do not concern understanding the beliefs and desires of others. For example, male adaptations

for being attracted to facial beauty and for having stronger orgasms given sperm competition are clear components of MI, but do not obviously depend on Theory of Mind. So, Mating Intelligence and Social Intelligence are partially overlapping, but partially distinct constructs.

What can MI research learn from Social Intelligence research? Kihlstrom and Cantor (2000) argue that social intelligence is an important psychological construct in principle, but that it has shown a limited capacity in practice to guide progressive empirical research. Ever since Thorndike (1920, as cited in Kihlstrom & Cantor, 2000) defined social intelligence as the ability to understand and interact with others, there have been countless attempts to develop reliable, valid measures of social intelligence. However, many early measures of social intelligence (e.g., the George Washington Social Intelligence Test) correlated so heavily with measurements of general intelligence that the social intelligence construct seemed to have little discriminative validity (Kihlstrom & Cantor, 2000). Perhaps social intelligence was just general intelligence applied to social problems, rather than a distinctive set of psychological processes.

In fact, social intelligence research seemed to flourish only after it gave up any connection to psychometric research on individual differences, and turned into the study of adaptive species-typical capacities for certain kinds of social inference (e.g., Theory of Mind research in primates, children, and autistics—see Whiten & Byrne, 1997). For example, Gardner (1983) posited distinctions between general intelligence, 'intrapersonal intelligence' (ability to understand one's own thoughts and feelings), and 'interpersonal intelligence' (ability to understanding the thoughts and feelings of others), but he never demonstrated that the latter can be operationalized into reliable, valid individual-differences measures that are distinct from the *g* factor. Instead, his arguments for the adaptive importance of these 'intelligences' inspired work in comparative, evolutionary, developmental, and clinical psychology on domain-specific, species-typical capacities for social cognition. In the last 25 years, there has been an explosion of research on 'social intelligence,' but it has almost nothing to do with mainstream intelligence research.

MATING INTELLIGENCE IN RELATION TO EMOTIONAL INTELLIGENCE

MI also overlaps partially with Emotional Intelligence, such that neither is a clear super-set of the other. Emotional Intelligence concerns abilities to understand and influence the emotions of others and of oneself (Salovey & Mayer, 1990). It has been better operationalized than Social Intelligence as an individual-differences construct. For example, the four-part model of emotional intelligence developed by Mayer, Salovey, and colleagues (e.g.,

Mayer, Salovey, & Caruso, 2000) has proven valid and useful in several ways (Matthews et al., 2004). This currently dominant model views emotional intelligence as comprised of four somewhat distinct capacities (to identify, understand, and manage emotions, and to modulate emotions adaptively to promote effective cognition) that vary between individuals, but that tend to positively inter-correlate with each other and with general intelligence. Emotional Intelligence researchers still disagree about the best ways to define and operationalize the construct (see Geher, 2004), but agree that Emotional Intelligence is important across many domains of human social life.

Such emotional-comprehension and emotional-influence capacities are certainly a crucial part of human mating, which activates virtually the whole range of human emotions (e.g., interest, lust, love, surprise, disgust, happiness, sadness, jealousy, envy, hate, rage, fear, anxiety, anticipation, orgasm). Successful courtship demands exemplary abilities to influence a potential mate's emotional state—to maximize interest, lust, and love; to minimize disgust and hate; to optimize levels of jealousy and anxiety; and to create romantic contexts conducive to orgasm. It also requires very high levels of emotional self-control, which are often (unconsciously) tested to the breaking point by potential mates. But there is much more to MI than just Emotional Intelligence, because MI includes many other mating-related adaptations for perception, cognition, memory, learning, planning, decision-making, and motor control. Most mating is very emotionally charged, because the fitness stakes are so high, but human sexuality is not driven exclusively by 'basic emotions' (such as 'lust' or 'jealousy') as normally construed.

MATING INTELLIGENCE: IS BILL CLINTON AN EXEMPLAR?

Bill Gates exemplifies general intelligence; Oprah Winfrey exemplifies Emotional Intelligence. Who exemplifies Mating Intelligence? Several conceptual issues about MI can be clarified by asking whether former U.S. President Bill Clinton captures this construct.

By nearly all accounts, Clinton is extremely intelligent: despite a humble background in a small Arkansas town, he graduated from Georgetown University, visited Oxford as a Rhodes scholar, and got a law degree from Yale University (see Clinton, 2004). As an orator and writer, he has proven articulate, insightful, and highly persuasive to many voters and political peers. The media have consistently portrayed him as one of America's most intelligence presidents. For example, LaRouche (2002) wrote "Clinton was, personally, perhaps the most intelligent President of the Twentieth Century . . ."

Clinton embodies both the light and dark side of mating intelligence: he shows high general intelligence, but is especially strong on mating-relevant abilities: verbal fluency, moral vision, humor, charisma, mind-reading. He's also renowned for showing 'bad sexual judgment' that actually would have had high reproductive payoffs in prehistory—not just with White House intern Monica Lewinsky, but in allegedly dozens of extramarital affairs with many women throughout his adult life, some of whom would have become pregnant if contraception did not exist. So, he would have had a lot of kids—and that's evolutionary success, not political scandal.

Different reactions to 'Lewinskygate' (the 1998 political scandal following the Lewinsky affair) highlight the vastly different implicit views of Mating Intelligence held by media pundits and most psychologists (including intimate relationship researchers, sexuality researchers, and marriage counselors) versus views held by normal voters and evolutionary psychologists. To the former groups, Clinton's affairs revealed reckless impulsiveness, poor judgment, and the pursuit of short-term lust over long-term political respectability and marital stability. Why seek a few minutes of pleasant fellatio when the potential costs were so high—months of embarrassing impeachment hearings and divorce court? The apparent 'poor judgment' shown by Clinton warranted a chapter (written by Diane Halpern) in Robert Sternberg's (2002) book *Why Smart People Can Be So Stupid*. Halpern's cognitive analysis of Clinton's decision-making focused on his individual learning history regarding infidelity (e.g., his father's behavior), and his social learning processes (e.g., the example of other presidents who were highly promiscuous without impeachment). While these learning processes might have influenced Clinton to some extent, they amount to little more than post hoc explanations of apparent psychopathology.

By contrast, to the normal voters and evolutionary psychologists, sexual promiscuity by high-status male social primates comes as no surprise. Indeed, it is both the statistical norm across species, cultures, and history, and the whole adaptive point of status-striving by males (Betzig, 1986; Buss, 2003). As all animal behavior researchers know, males generally compete for resources and status in order to maximize their reproductive success, typically by attracting many females. This may explain Clinton's 'surprisingly' resilient public opinion ratings throughout the Lewinsky-gate scandal—almost 70 percent of American voters approved of his presidency even as the House of Representatives was voting on impeachment (Lawrence & Bennett, 2001; Sonner & Wilcox, 1999; Shah, Watts, Domke, & Fan, 2002).

Consider intelligence as "purposive adaptation to, and selection and shaping of, real-world environments relevant to one's life" (Sternberg, 1985, p. 45). If we interpret this adaptive notion of intelligence in clear

evolutionary terms (where 'adaptive' means promoting reproductive success) rather than vague socio-economic terms (where 'adaptive' might mean promoting personal wealth, happiness, political respectability, or marital stability), then we can understand why Mating Intelligence for high-status leaders in complex hierarchical societies typically leads to the organization of formal harem systems that produce hundreds of offspring (Betzig, 1986). From that perspective, the Moroccan despot Moulay Ismail the Bloodthirsty (1672–1727), who sired over 600 sons and killed thousands of male sexual rivals with his own sword (Betzig, 1986), could be viewed as embodying a very high level of adaptive Mating Intelligence. True, he was also a sexist, oppressive, patriarchal psychopath, but evolutionary adaptiveness rarely equals moral virtue (ask any predator or parasite). In this perspective, Clinton was showing impaired Mating Intelligence only to the extent that he used contraception, chose some indiscreet female partners, and provoked sexual envy by lower-status male rivals.

In thinking about Mating Intelligence, we must realize that there is often a mismatch between what is currently adaptive versus what would have been adaptive under ancestral, prehistoric conditions (Tooby & DeVore, 1987). Psychological adaptations in general, and mechanisms of Mating Intelligence in general, have been shaped by prehistoric selection pressures to take advantage of typical fitness opportunities and to avoid typical fitness costs as they would have confronted our ancestors. Evolution cannot anticipate the future. It cannot have shaped human Mating Intelligence to perform optimally given evolutionary novelties such as contraception, religiously imposed monogamy, the American Constitution's impeachment process, or right-wing sexual hypocrisy.

Thus, in judging Clinton's Mating Intelligence, it is only marginally relevant to ask whether Clinton's liaison with Lewinsky resulted in a Clinton-Lewinsky baby (an actual reproductive benefit) or an impeachment (an actual status cost). However, it may be worthwhile to review some of the mating cues that may have influenced Clinton's behavior. At the time of the affair in 1995, Monica Lewinsky (b. 1973) was 22 (near peak fertility), and Clinton's wife Hilary (b. 1947) was 48 (with negligible fertility, approaching menopause). From a strictly reproductive viewpoint, Hilary had an expected future reproductive value of zero, and Monica had the potential for several offspring. Although Hilary (a graduate of Yale Law School) doubtless had higher intelligence and leadership potential than Monica, those heritable qualities could no longer be passed on to offspring. Thus, from a strict evolutionist perspective, Clinton's behavior looks adaptive—a hallmark of mating intelligence.

Clinton's liaisons with Lewinsky provide insights directly into how to best understand the construct at hand: MI. To provide applications of the different conceptions of MI presented in this chapter, we may consider how each conception differentially pertains to the scandal. The provisional

SUNY New Paltz conception of MI takes the tack that MI is comprised of mating-relevant cognitive abilities which should be generally unrelated to *g*. From this perspective, we may conceptualize Clinton's mating-relevant decision-making as reflecting short-term mating tactics that are not rooted in Clinton's relatively high level of intelligence. More simply, from this perspective, he is a smart man who may not tend to make particularly smart decisions when it comes to relationships.

Cosmides and Tooby's (2002) modularistic perspective on intelligence provides a similar account of Lewinskygate. They see (and provide good evidence for; see Cosmides & Tooby, 2005) the human mind as comprised of multiple, discrete modules designed to address specific adaptive hurdles presented to our ancestors across evolutionary time. From this perspective, mating-relevant decision-making may be broken into multiple discrete, (and largely independent) psychological components. This framework would potentially conceive of Lewinskygate as representative of Clinton's cheating-in-monogamous-relationships module, shaped not primarily by his own experiences (as suggested by Halpern, 2002), but, rather, by selection pressures that favored sexual infidelity in males given certain conditions in our ancestral past. From this perspective, *g* barely enters the picture; domain-general intelligence is largely irrelevant to such domain-specific behavioral patterns.

Kanazawa's (2004) framework for understanding the relationship between intelligence and mating would conceive of Lewinskygate in a relatively straightforward manner. From this vantage point, general intelligence evolved primarily to deal with evolutionarily novel situations. Whether (and under what conditions) one should cheat in a monogamous relationship characterizes ancestral psychology. Given the evolutionarily familiar nature of infidelity, psychological mechanisms tied to infidelity should be altogether independent of general intelligence. This analysis is consistent with the SUNY New Paltz MI analysis stated prior; Clinton is a smart man—and his high level of general intelligence buys him no benefits when it comes to most mating-relevant decision-making.

Miller's (2000) account of general intelligence as rooted in mating-relevant pressures across evolutionary history potentially provides a very different view of Lewinskygate. From this perspective, *g* and MI are largely one-and-the-same. As such, the fact that Clinton is high in *g* corresponds to an increased likelihood of his ability to acquire mates and of engaging in behaviors that should positively correlate with outcomes associated with reproductive success. His ability to effectively utilize his power, charm, and physical features in a coordinated effort to attract reproductively viable and attractive young women speaks to relatively high fitness levels and his ability to advertise such fitness well. From this perspective, Lewinskygate does not necessarily reflect unintelligent behavior. As a testament to this perspective, note that Clinton's marriage,

presidency, and place in history may largely have been unaffected by the scandal.

A further point regarding MI that is addressed by the current case study corresponds to whether MI is best conceptualized in terms of *accurate* versus *biased* decision-making. One may envision Clinton having thought something like, "The odds of getting caught are pretty much zero, and the costs associated with getting caught are not likely to be great . . ." Such thoughts did not necessarily capture the reality of the contingencies of the situation accurately. As such, from an accuracy-corresponds-to-intelligence perspective, such thinking would seem unintelligent.

However, modern-day evolutionary social psychologists (and other social psychologists in general [see Taylor & Brown, 1988]) have made the case that erroneous judgments which are biased in ways that are likely to increase genetic fitness are essentially more adaptive (in the evolutionary sense) than relatively accurate judgments across many kinds of situations (e.g., Krebs & Denton, 1997). From this perspective, we can think of the aforementioned hypothetical presidential thoughts as biased in exactly that kind of fitness-enhancing manner. In effect, such judgments are somewhat similar to judgments by males of females' sexual interest which tend to overestimate such interest (as found in Haselton and Buss' [2000] work on error management theory). Given that such judgments represent *overestimates*, they are inaccurate by definition. However, from an evolutionary perspective, it is easy to see how such biased judgments may impel behavior that is more likely to lead to reproductive success compared with alternative behaviors, thus being *adaptive* in the relatively ultimate sense of the word.

This analysis of Clinton's scandalous behavior was designed to provide a context that allows for a discussion of issues that underlie disparate conceptualizations of MI. Are there dedicated intelligences pertaining to domains underlying human mating that are distinct from *g*? Are cognitive factors associated with mating conceptually and empirically conflated with *g*? Is MI best conceptualized as a set of accurate decision-making skills? Is MI, rather, better conceptualized as the tendency to make judgments in mating-relevant contexts that are biased in such a way so as to likely increase an individual's overall likelihood of successful reproduction?

MATING DOMAINS RELEVANT TO MATING INTELLIGENCE

In our attempt to delineate the areas of psychology that need to be considered in the development of MI as a construct, we have, heretofore considered sexual selection and the shaping of human intelligence, whether

intelligent mating decisions are relatively accurate versus erroneous, how MI relates to general intelligence, and how MI relates to extant constructs related to social intelligence. We also believe that it is crucial to address the multiple behavioral domains that underlie human mating. In the development of such an organization of these domains, we start with the theory of sexual selection. Sexual selection is divisible into (a) selection occurring due to the preferences of an individual for certain characteristics in a mate, and, separately, (b) selection occurring as a result of several individuals of the same sex competing for a mate (Buss, 2003). More simply, we are speaking formerly of inter-sexual choice, and secondly of intra-sexual competition. Seeing as these terms relate to the process of sexual selection, it follows that the interplay of both choice and rivalry in mating would lead to specific adaptations. These mating-relevant adaptations, to some extent, must themselves represent a part of what we are labeling MI.

Adaptations arising from mate-choice have obvious corollaries in the animal kingdom, such as the example of the peacock's plumage. In the domain of human mating, desires of one sex (e.g., females' desire for a wealthy mate) may select qualities of the other sex (e.g., males' tendencies to seek and display wealth). Thus, qualities desired in potential mates and qualities advertised to potential mates, by both sexes, likely comprise important domains of MI. An important implication of this point regarding MI is that it may well be structured differently across the sexes so as to take into account specific selective pressures that have differentially acted across the sexes over evolutionary history. For instance, an important component of MI in males may be to effectively advertise wealth (regardless of actual levels of wealth); an important component of MI in females may be to effectively advertise youth (regardless of actual age). The integrative model of MI presented in the final chapter of this book (Geher, Camargo, & O'Rourke) addresses this notion of MI as sex-differentiated.

Alternately, the latter half of our division of sexual selection—intra-sexual rivalry, may have played a similarly large role in the shaping of MI. The common example used within this sub-category is the size of the stag's horns. Presumably, such large horns evolved through a form of ritualized inter-locking of horns, in which winners (often the males with the biggest horns) gained access to females. Similarly, in male humans, much of the sexual dimorphism, characterized by larger and stronger males, developed through competition between males for the same mate. Again, given variability in intra-sexual tactics designed to obtain mates across the sexes, it is likely that MI regarding male intra-sexual rivalry differs from MI regarding female intra-sexual rivalry in some important ways. Males who are high in intra-sexual MI may be effective at dominating mixed-sex social situations, for instance. Females who are high in intra-sexual

MI may be effective at framing rivals as overly promiscuous without coming across as overly catty.

Adaptations in both males and females could presumably have arisen in the form of cognitive skills devoted to the judgment and assessment of potential rivals. These assessment skills would reduce the cost of competing with a rival who is clearly more adept or more fit than oneself. Also, adaptations for impressing or deterring rivals could arise in the form of a kind of socially intelligent adeptness at boasting, deceiving, or all around showing-off.

In this manner, it is apparent how cognitive abilities in the domain of mating could arise variably in the human species as a result of sexual selection at the level of inter-sexual choice or, alternatively, at the level of intra-sexual competition. A host of abilities might be identified as sexually selected adaptations. We suggest that MI can be conceptualized as addressing the different mating domains derived from sexual-selection theory.

THIS BOOK

This introductory section 1 contains the foreword by David Buss, the preface, and this introductory Chapter 1. The book is organized into six further sections.

Section 2 addresses mate search—the process of searching through potential sexual partners to find the most attractive ones who will reciprocate one's interest. In Chapter 2, Penke, Todd, Lenton, and Fasolo, consider the complexities that arise from mutual mate choice in humans—the fact that both men and women tend to be choosy about their long-term partners. They examine simple mate-search heuristics that learn to take into account one's own attractiveness, to avoid wasting time on the unattainable (whose mate value is much higher than one's own) or the undeserving (whose mate value is much lower than one's own.) In Chapter 3, De Backer, Braeckman, and Farinpour examine mate search in the context of newspaper personal ads, to assess one important component of MI: how accurate each sex is at understanding the distinctive traits sought by the other sex.

Section 3 concerns strategic flexibility in mating intelligence: How we adapt our mating preferences, goals, strategies, and tactics to local environmental circumstances and to our own strengths and weaknesses as potential mates. In Chapter 4, Li analyzes adaptive shifts in mate preferences in an economic 'mating market' framework, considering how individuals shift from favoring 'necessities' (e.g., female fertility, male resources) to favoring 'luxuries' (e.g., intelligence, creativity, sense of humor) in mates as their own mate value increases. In Chapter 5, Nettle and Clegg

analyze major human personality traits as distinct mating strategies that may flourish under different social, sexual, and environmental conditions. In Chapter 6, O'Sullivan analyzes the darker side of mating intelligence by considering several domains of human mating where deception and self-deception can have adaptive benefits. In Chapter 7, Weekes-Shackelford, Easton, and Stone consider how women's mate preferences shift adaptively depending on whether the women already have children from previous relationships—mating intelligence should work differently for virgins versus matriarchs, and in choosing a first boy-friend versus a potential stepfather to one's teenagers.

Section 4 concerns aspects of MI that we call 'mental fitness indicators'—traits that display intelligence, personality, mental health, or other qualities of brain function, that vary conspicuously across individuals, and that are romantically attractive. In Chapter 8, Keller analyzes the role of genetic mutations in maintaining heritable variation in the quality of mental fitness indicators, and how such indicators can work as reliable cues of 'good genes' in mate choice. In Chapter 9, Shaner, Miller, and Mintz consider the 'mental disorders' such as schizophrenia and depression, that can result when these mental fitness indicators develop poorly, and explain why such disorders are so often associated with poor MI and so harmful to mating success and intimate relationships.

Section 5 considers MI in relation to other well-studied individual differences, such as general intelligence, social intelligence, emotional intelligence, creativity, and sense of humor. In Chapter 10, Kaufman, Kozbelt, Bromley and Miller review the theoretical and empirical relationships between MI, creativity, sense of humor, general intelligence, and certain personality traits. In Chapter 11, Casey, Garrett, Brackett, and Rivers review emotional intelligence in relation to intimate relationships and MI. In Chapter 12, Kanazawa argues that MI and general intelligence are independent constructs, because they evolved to guide adaptive behavior in different domains (mating in the case of MI; mastery of evolutionarily novel econiches and technologies in the case of general intelligence).

Section 6 puts MI in its ecological context, since human adaptations for mating must have always been shaped in various ways by the surrounding social, cultural, ecological, and climatic environments. In Chapter 13, Ash and Gallup consider the possible role of prehistoric climate variability in favoring the emergence of larger human brains and human intelligence—factors which may have set the paleoclimatic stage for the evolution of mating intelligence. In Chapter 14, Figueredo, Brumbach, Jones, Sefcek, Vásquez, and Jacobs develop an integrative framework for considering the evolution of life-history strategies, including mating strategies, in relation to local socio-ecological variables.

Section 7 includes two concluding chapters. In Chapter 15, Miller tries to answer some 'frequently asked questions' about MI, summarizing several themes throughout the book and briefly touching on some topics not covered elsewhere (such as MI in homosexual relationships, and the genetic and neural bases of MI). In Chapter 16, Geher, Camargo, and O'Rourke provide a unifying framework for understanding MI by drawing a major distinction between mating mechanisms (i.e., universal mating-relevant adaptations) and mental fitness indicators (i.e., courtship-display abilities) of MI. That chapter also sketches out some possible directions for future theoretical and empirical research on MI.

WHAT THE MATING INTELLIGENCE CONSTRUCT CAN OFFER TO SCIENCE

The MI construct, at best, offers different benefits to different areas of basic and applied research. Here we sketch out a few that seem most salient to us at the moment:

- intelligence research: MI offers an additional, evolutionarily central, emotionally important domain of challenging psychological problems in which to investigate the role of the *g* factor and specific intelligences; one in which there might even be specific learning disabilities and cognitive deficits that have gone undiagnosed by professionals (though often noted by spouses!)
- evolutionary psychology: MI offers a way to integrate psychometrics and behavior genetics into the study of human universals, in a domain where individual differences are highly salient
- clinical psychology: MI offers a new perspective on certain psychological dysfunctions, psychopathologies, and anxieties that make people unhappy, especially because they interfere with mate acquisition, mate choice, and general relationship functioning
- psychiatry: MI offers a new perspective on issues in 'cosmetic psychopharmacology'—if MI is a legitimate domain of psychological functioning, then drugs that 'merely' make people more psychologically attractive (e.g., more confident, happy, empathic, creative) are more than superficial band-aids on 'real, underlying problems'; they're absolutely central to human well-being
- educational psych: MI highlights a whole domain of learnable skills and cognitive-developmental challenges that are virtually ignored in public schooling and higher education—we train people for decades to be productive workers, but devote hardly any time to being happy, loving, empathic sexual partners.

CONCLUSION

In sum, this book is necessarily challenging in many ways. It is ambitious in both its breadth and its goals. It was designed to bridge an important and conspicuous gap in the psychological literature; the gap between scholarship on human mating and scholarship on intelligence. As implied by Miller's (2000) work on human mating, intelligence and mating are, given our evolutionary heritage, intimately related. This book represents our match-making effort to induce these major areas of psychology to cross-fertilize each other.

The integration of these heretofore disparate ideas into one coherent construct should lead to useful and productive scholarship in psychology. With that said, there are clear challenges in the development of this construct. First, extant theories that *do* address the interplay between mating and intelligence have a somewhat heterogeneous quality; they tend to disagree on important points (e.g., Kanazawa's [2004] ideas on the relationship between general intelligence and mating success versus Miller's [2000] ideas on this same topic). Further, little empirical work has been conducted dealing with (a) ways to operationally define MI, (b) the factorial structure of MI, and (c) the correlates of MI. To develop a coherent model of MI, ideas pertaining to the evolution of intelligence, species-typical aspects of human mating, social intelligences, general intelligence, and the idea of mental-fitness indicators need to be integrated. While this integration is challenging, the high quality of the contributors to this volume coupled with the inclusion of an organizing model presented in the final chapter should serve to help work toward a coherent and useful framework for understanding MI.

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