Hypothesized Fitness Indicators and Mating Success

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ABSTRACT

This study will attempt to create a valid measure of mating success (a proxy for reproductive success), which focuses on the *quality* of a person's most recent long-term and short-term sexual relationship from an evolutionary perspective. Additionally, this thesis will test many hypotheses put forth by Miller's (2000b) 'fitness-indicator theory.' Results suggest that this new measure of mating success is highly reliable and correlates with female fluctuating asymmetry. Furthermore, the data do not support Miller's 'fitness-indicator theory,' and instead shows support for the 'trade-off hypothesis.' Finally, the data revealed that an individual's self-perceived desirability is dependent upon one's IQ level and one's preference for either short or long-term sexual relationships.

The Relationship Between Hypothesized Psychological

Genetic Fitness Indicators and Indices of Mating Success

This research, which is rooted in an evolutionary framework for understanding human behavior, is designed to develop a valid index of mating success that can be used for modern adult populations in post-contraceptive societies. Further, this work will test several hypotheses rooted in modern sexual-selection theory by addressing the degree to which several hypothesized indicators of genetic fitness are positively related to mating success. Ultimately, this work should (a) lead to a method for tapping into mating success that can be used in future research and (b) should provide insights into the degree to which several psychological traits (such as sense of humor) may be reasonably framed as fitness indicators.

Natural Selection

Darwin (1859/1998) noted that throughout nature there is always competition between individuals for survival. Darwin, for example, illustrated that in a given state of nature, a single sexually reproducing pair of elephants (one of the slowest reproducing organisms on this planet) could produce some 20 million descendents in as little as 750 years. Darwin duly recognized that no environment could support so many individuals and suggested that some would not be able to survive, hence creating competition between individuals for survival. He termed this competition, “struggle for existence” and suggested that the large amount of variability within a species gave some individuals of the species a better chance of surviving than others, within certain environmental conditions. He said that all living organisms seem to be perfectly suited to their environment and suggested that over many generations, certain individuals who were better adapted to their environment would thrive and those that were not would die. He writes, "Unless favorable variations be inherited by some of the offspring, nothing can be affected by natural selection (p. 134)." Suggesting that variation between individuals of the same species is necessary in order for evolution to take place.

Mayr (2001) goes on to say that this variability produced by sexual reproduction allows for a large number of different phenotypes (the total of all observable features of a developing or developed individual) to be acted upon by natural selection. This variation seems to ensure the survival of at least some individuals of a species' given a slight change in the environment, which increases that species chance of survival into the next generation. Sexual reproduction creates variability in a population by providing each individual with a slightly different set of genes, decreasing the chances of widespread extinction due to environmental change (Mayr, 2001). Although mass extinctions do occur, these events are very rare and generally the magnitude is so large that almost no amount of variability could ensure the survival of the species (Mayr, 2001). But what is it about those individuals who do survive mass extinctions that provides them with this advantage? Darwin (1859/1998) suggested that the large amount of variation observed in life allows some individuals to survive, while others perish, a term he dubbed, "natural selection."

Natural selection (or survival of the fittest) is the idea that the individuals of a species best adapted to their environments will survive and thus produce offspring while those individuals that are not as well suited to their environment will not survive to produce offspring (1859/1998). This definition of natural selection not only places importance on survival, but also on the ability of that individual to reproduce. As Fisher

(1915) explains, "…the success of an animal in the struggle for existence is not measured only by the number of offspring which it produces and rears, but also by the probable success of these offspring (p. 185)." An organism who is perfectly adapted to its environment, but is not able to reproduce is said to be a "genetic dead-end" (Mayr, 2001).

Mayr (2001) recognizes natural selection as a two-step process, the first step being the *production of variation*, which as previously shown, allows for a species to be better adapted to its environment. The second step involves the *non-random* aspects of survival and reproduction. These non-random aspects are precisely what make some individuals more successful than others. Those individuals with the most adapted phenotype (to the environment) are more likely to survive and reproduce than those individuals with less adapted phenotypes. Over the course of many generations, the best adapted individuals will leave more descendants than the lesser adaptive individuals, thereby causing the genetic lines of those lesser adaptive individuals to go extinct before the genetic lineage of the better adapted individuals. This argument implies that the best adapted individuals in every generation are the ones *most likely* to survive and if their adaptations are heritable (as Darwin said they should be) then their offspring will be endowed with the advantages that their parents had.

The importance of heritability plays a large part in evolution as this is how genes from one generation get passed down to the next generation. There is, however, a difference between traits that are "inherited" and those that are "heritable." All traits of a sexually reproducing species that depend on genes are inherited. Only traits that are based on genes *and* show differences between individuals are considered heritable. If a trait is constant across all individuals of a species (e.g., humans have two legs), it is considered to be inherited, but can not be said to be heritable. Miller (2000a) argues that the differential heritability of traits by individuals in a population does not affect an individual's adapted-ness to his/her environment, but rather his/her reproductive success (RS).

Sexual Selection

Darwin (1859/1998) placed a lot of importance on natural selection, suggesting that all organisms are modified through this process. He was hard-pressed however, to explain some of the differences between the sexes as being due to natural selection, since individuals of both sexes were well adapted to their environment. He noted that in many sexually reproducing species the males are more ornamented than the females, which does not lead to an increased chance of survival (it actually tends to decrease the likelihood of survival), but rather to an increased chance of reproduction. He proposed that a different type of selection process, sexual selection, produces the differences between the sexes in any given sexually reproducing species. He suggested that this selection pressure was not due to a struggle for existence, but to a struggle to reproduce, a key aspect of evolution. In the Descent of Man, Darwin (1871/2004) suggests that sexual selection is "…the advantage which certain individuals have over others of the same sex and species solely in respect of reproduction (p. 243)." Darwin suggests that many structures, which he called secondary sexual characteristics, have evolved through sexual selection and provide no other advantage to survival other than the ability for certain individuals (particularly males) to attract members of the opposite sex. Darwin (1859/1998) explains that the brightly colored and symmetrical plumage of the male peacock is attractive to peahens, therefore providing these males with greater access to females and thus greater RS than males with small, dull and asymmetrical tails. He also notes that peahens can be observed being attracted to the best tail.

Darwin (1871/2004) argues that the ability to attribute a standard of beauty to something should not be considered a unique human trait,

> It is certain that amongst almost all animals there is a struggle between the males for the possession of the female…Hence the females have the opportunity of selecting one out of several males, on the supposition that their mental capacity suffices for the exertion of a choice (p. 246).

Darwin's (1871/2004) explanation of sexual selection by mate preference was wanting however; mostly due to the emphasis he placed on female choice and the lack of evidence he had to support his theory. Ronald Fisher (1915) offered an answer to this issue by suggesting that these secondary sexual characteristics acted as indicators of an individual's genetic fitness. As long as these characteristics were associated with the general health of the male, females would exert a preference for this characteristic and it would continue to get more elaborate. The more intense the characteristic is (i.e., the more attractive), the fewer genetic mutations (errors made during the copying process of DNA) that organism had and the better it is at fighting off parasites. The organisms that were healthier in terms of their genes were able to put more energy into producing intense secondary sexual characteristics, as opposed to fighting off disease and coping with a lot of mutations. The offspring of genetically fit females who mate with the most genetically fit males will have the best chance of surviving into the next generation and producing offspring of their own. Females who have developed preferences for certain traits that are indicative of a potential mate's health and genetic fitness will produce healthy offspring, increasing the probability that these offspring will produce healthy offspring of their own. These preferences will become commonplace among the species because of the reproductive advantages that they confer.

Amotz Zahavi (1975) built upon Fisher's theory, suggesting that the reason these secondary sexual characteristics were indicative of an individual's genetic fitness is *because* they pose a high cost to the owner in terms of survival. The costs of elaborate sexually selected traits result from the fact that they require more energy and increase the risk of predation. He called this theory the 'handicap principle,' suggesting that individuals who are able to possess the most attractive secondary sexual characteristics, in terms of shape, beauty and size must put a lot of energy into maintaining these characteristics. These characteristics however, put the owners at a disadvantage in terms of natural selection. The ever-present risks of finding enough food to sustain oneself and escape predation were increased for the individuals who possessed the most elaborate traits. "Females which choose by a sexually selected character compromise. They select a good quality male which is handicapped but they can be assured as to their mate's [genetic] quality (p. 207-208)." Individuals who exert their energy to these seemingly useless structures and still survive in terms of fighting off disease, dealing with mutations, finding enough food and escaping predation (in the case of structures which are large or colorful) are mainly the most genetically fit individuals. Zahavi's 'handicap principle' was an essential step forward toward explaining how sexual selection worked, as it gave females a self-regulating standard from which females could choose a mate. Females who mate with the most handicapped male increase their RS by producing offspring who are also likely to be handicapped, and thus more likely to be chosen by opposite sexed individuals in the next generation.

Although Zahavi's theory provided a good explanation as to why females choose their mates, it was Trivers (1972) who explained why it was females who were choosing males and in doing so challenged the very idea of 'female choice.' Trivers (1972) argued that it was not a matter of females choosing males, but rather the sex which has a larger initial investment in the offspring choosing the sex which invests less. He called this theory 'parental investment,' which he defined as, "…any investment by the parent in an individual offspring that increases the offspring's chance of surviving (and hence RS) at the cost of the parent's ability to invest in other offspring" (p. 137). The females of most sexual reproducing species tend to invest more in terms of energy, time, and effort in raising their offspring. In humans, the minimal parental investment a male can make is insemination, at which point, if there is successful impregnation and implantation, it is the female who makes the larger investment by undertaking a 9-month gestation, followed by lactation and the rearing of the offspring to adulthood. The fact that a female is burdened by a larger initial investment means that the male has the opportunity to abandon her, providing no further investment, leaving her to raise his offspring on her own. Due to this large amount of initial investment in offspring females must make, Trivers (1972) posits that they would be the more choosy sex when it comes to mate choice. Trivers (1972) noted that, due to the larger amount of time and investment a female must make in order to produce viable offspring, the maximum number of offspring she would be able to produce would be miniscule compared to the maximum number of offspring a male could produce. Trivers (1972) argues that because of the lesser amount of investment a male can make in his offspring, his RS is positively correlated with the number of copulations, as long as he is copulating with multiple females. A female's RS is not as dependent upon the number of copulations she has, but rather on the quality of the offspring's genes and/or the amount of resources she is able to procure from the male to help aid in the rearing of their offspring. Buss (1989) explains that a female's RS does not strongly relate to the number of copulations she has (as it does for males) because once she becomes pregnant, no matter how many times she has sex afterwards, she will only produce a finite number of children every few years. This sex differentiation in parental investment and variability in RS has led to increased competition between males for females, meaning a much larger percentage of males will be left mate-less than females will (Bateman, 1948).

Darwin (1871/2004) suggested that the best adapted individuals in every generation are the ones most likely to survive and if their adaptations are heritable then their offspring will be endowed with the advantages that their parents had. In line with this thinking it would be expected that over hundreds of millions of generations, all individuals would be well adapted to their environments. As Darwin noted, most individuals are well adapted to their environment, but it is the slight variations that increase the probability of survival of individuals in future generations, increasing the chance of that species' survival in subsequent generations (1859/1998). However common sense would say that in only a few generations, with all individuals in the population attempting to mate with the most attractive opposite sexed individuals, it would be expected that there would be very little genetic variation between them and that everyone would have achieved optimal attractiveness (and consequently, optimal fitness as well). This however is not the case as shown by the large amount of variation between individuals in any species that can still be seen today. This illogicality has been called the "lek paradox" (e.g., Campbell, 2002; Miller 2000) vis a vis the mating rituals of the American sage grouse. Among the American sage grouse, males will congregate in a large group outside their normal eating and nesting territory solely to copulate, an area known as a "lek." The males will gather first, finding and defending a small territory that they will use to attract females. The females arrive later and go around judging the males and copulating with the one they find most attractive. This type of mating illustrates one extreme form of sexual selection for mate choice, where the only investment the male makes is simply a donation of genes and the female chooses her mate by his ability to attract her, so it is not a long term partner the female is choosing that will provide protection, resources and care of the young, but simply a set of genes. This type of mating system means that most males will not copulate at all. The most successful 10 percent of the males will mate with 75 percent of the females (Campbell, 2002). This means that the genes of the most attractive males will quickly spread through the population, while genes that are not as attractive will quickly disappear. The theoretical problem that arises in light of the existence of this type of mating system is this: in only a few generations, one might think that all individual's of a species should be equally attractive to members of the opposite sex, however this is not the case, every year the same mating ritual takes place and every year a majority of males are left mate-less (and every year, phenotypic variability among males exists).

Campbell (2002) explains that the large energy expenditure of males in these 'leks' (i.e., finding and defending their territory and courtship displays) is analogous to the large energy expenditure that a female must invest in her offspring in order to increase the probability of their survival. This type of mating is not done at random, but requires that the female choose the male whom she is most attracted to in order for her offspring to posses the same highly attractive characteristics (Campbell, 2002). This type of mate choice in humans may result from the 'sexy son hypothesis' (Møller & Thornhill, 1998). Females who choose the most attractive males have an advantage because their sons will more than likely inherit these attractive traits that will have a positive effect on their RS in the next generation (Møller & Pomiankowski, 1994).

While the 'sexy son hypothesis' shows the benefits of mating with the most attractive individuals in the 'lek,' it does not explain why variation in a population would be maintained even if all members are choosing the most attractive mates. Hamilton (1982) and Tooby (1982) attempted to explain how variation could be maintained in a population by explaining the role parasites have played in human evolution. Parasites are small organisms that live in larger organisms called 'hosts' and are theorized to decrease an individual host's "fitness," defined by Miller (2000a) as, "…the propensity to survive and reproduce successfully (p. 103)." Every generation, individuals of one sex choose members of the opposite sex as mates based on their ability to withstand parasites, however parasites will synchronously be evolving to continuously exploit their hosts. Due to the very small size of parasites, they are able to grow and reproduce much faster than their hosts, meaning that they will go through many more generations than their host, impeding upon the host's ability to achieve optimal fitness. The more parasites an individual has, the lower his/her fitness is said to be. Hamilton and Zuk (1982) have suggested that individuals able to develop highly elaborate handicaps may be reliably showing their resistance to parasites, since only healthy individuals are able to develop extravagant sexual traits.

Although this theory provides a rationale as to why fitness should be heritable, Miller (2000a) suggests that the environments our ancestors were in varied from one another in terms of weather, geology, flora, fauna, predators, and parasites. No individual could optimally be fit to his/her environment as long as some of our ancestors continued to migrate each generation. He further suggests that parasites tend to be more detrimental to one's body and immune system and generally do not have much effect on one's mental fitness. He argues that this theory is only good at explaining why physical fitness and health have remained heritable, and does not adequately explain why mental fitness has also remained heritable.

Miller's Theory of Sexual Selection

Miller (2000a) argues that mental adaptations did not evolve to signal a resistance to parasites, but rather, to a resistance of genetic mutations. According to Eyre-Walker and Keightley (1999), each individual has, on average, about 1.6 new mutations that his/her parents did not. According to Miller (2000a), if a population has been in the same environment for many generations, the average genome is probably optimally adapted to the environment. Any deviation from this optimal genome is suggested to be a deviation from optimality in the environment. Mutations are hypothesized to be deviations from the optimum genome, thereby eroding the individual's fitness. Miller (2000a) hypothesizes that any individual able to develop an elaborate handicap is actually signaling his/her freedom from genetic mutations, which, if left unchecked in the environment, have the capacity to erode the fitness of the entire population, leading to extinction.

Miller (2000a) used this understanding of mutations and sexual selection theory to develop his theory of mental abilities acting as "fitness indicators." A "fitness indicator" is, "…a biological trait that evolved specifically to advertise an animal's fitness" (p. 103). More specifically, Andersson (1994) defines fitness indicators as traits that specifically evolved to advertise good genes, good health, and/or psychological functioning. Miller (2000a) suggests that the human brain is a very complex organ that is the result of many genes contributing to the final product. Due to the large amount of genes responsible for the development of the brain, it is highly susceptible to mutations, making it a good "fitness indicator." From this perspective, the human brain is used to reveal an individual's fitness (the ability to survive and reproduce) through courtship behavior that takes the form of humor, language ability and creative intelligence. The more mutations an individual has, the less likely he/she are able to produce these elaborate mental abilities that a member of the opposite sex will find attractive. Based on the large amount of variation between people in terms of these mental abilities, Miller (2000a) proposes that these mental traits act as fitness indicators because their quality is largely determined by the individual's genes, which in turn are largely impacted by the individual's mutation load (number of mutations a person has). Miller (2000a) suggests that mutations are a primary reason for variations in fitness, with highly fit individuals having few mutations. Furthermore, Miller (2000b) suggests that because these fitness indicators are all doing the same thing (i.e., displaying the individual's fitness), these traits should all positively correlate with one another, a construct known as the 'positive manifold principle.' The individual with superior language, humor, and artistic abilities is displaying his/her low mutation load, which is attractive to potential mates, not only because they can be assured of their partners' healthy genes, but also because these traits are heritable, thereby endowing their offspring with these healthy genes that will be attractive in the next generation (Miller, 2000a). Miller (2000a) argues that because these mental traits are heritable, females will continue to mate with males that display these elaborate traits because of the reproductive advantage it will give her offspring.

Miller (2000a) says that while these fitness indicators are evolved traits in themselves, they do not contribute directly to fitness by promoting survival and reproduction like other evolved traits such as those involved in hunting or socializing. Instead, these fitness indicators use already evolved traits (e.g., hunting, language, tool making, etc.) to simply advertise the genetic quality of the owner. Although individuals with a high mutation load will be able to possess these traits, their capabilities will be mediocre compared to their contemporaries with fewer mutations. According to Miller's (2000a) fitness indicator theory, certain mental attributes evolved because they were deemed as attractive by the opposite sex precisely because they advertised the low mutation load of the owner. According to this theory, certain mental attributes that show differential variation between individuals may have evolved through sexual selection by mate choice.

Miller (2000b) posits that there are a number of traits which should positively influence an individual's mating success. His 'Positive Manifold Theory' suggests that every fitness indicator an individual has which is strong (i.e., it is attractive), should have a positive effect on that individual's mating success, in that, individuals with a lot of fitness indicators should be much more successful than individuals with far less.

Intersexual vs. Intrasexual Competition

Sexual selection, however, does not only operate by members of one sex attempting to attract members of the opposite sex; now termed *intersexual competition*. Darwin (1871/2004) also noted that members of the same sex tend to compete with one another for access to members of the opposite sex; what is known as *intrasexual competition*. Two bucks locking antlers with one another are not fighting for access to food or resources, but for an increased chance to reproduce. The characteristics that lead to an increase in RS evolved precisely because the victors are able to mate more often, with more females, therefore leaving more genes in the subsequent generation (Buss, 1994). Due to the heritability of these traits, the offspring of these successful individuals will also tend to inherit these benefits. As Darwin (1859/1998; 1871/2004) showed, the males of many sexually reproducing species tend to compete against one another in order to gain access to females (e.g., two bucks locking antlers), while, in other species, the competition is between members of one sex (usually males) attempting to entice a member of the opposite sex (usually females) with their display (e.g., a male peacock showing off his large, brightly colored, symmetrical tail). These two types of competition likely have produced different evolved adaptations for each sex in the realm of mate choice (Buss, 1994).

Buss (1994), while commenting on the lack of research on human mating, noted that these two types of competition may help explain mating behavior, more precisely, how evolutionary change can occur: preference for a mate and competition for a mate. In a cross cultural study, Buss (1989) found that men and women have different preferences when it comes to mate choice and that these differences are can be understood using Trivers' (1972) parental investment theory. Buss (1989) found that females, more than males, value ambition and industriousness, implying high status in a man, meaning that women are looking for men who will, at some future point, be able to provide resources for her and her children. Buss (1989) also found that males value physical attractiveness and youth in a potential partner much more than females do, implying that these features are somehow related to the female's fecundity, or her ability to reproduce.

Mating Strategies

Based on these differences between men and women, there have been many attempts at trying to explain the strategies men and women use when looking for a potential mate. The first of these theories, developed by Buss and Schmitt (1993) is called the "Sexual Strategies Theory." According to this theory, men and women, throughout evolutionary history, have both desired long-term and short-term mates, but for different reasons. A male's optimal mating strategy is hypothesized to be a short-term one since that is the most efficient way to spread his genes throughout the population. A female's optimal mating strategy is hypothesized to be a long-term one due to the amount of resources she can procure from a man in a long-term relationship. However, the authors also note that females desiring a long-term relationship and males desiring a short-term relationship are not universal norms and members of both sexes may choose to adopt the opposite sex's most advantageous mating strategy. Buss and Schmitt (1993) suggest that males who take part in long-term relationships are garnishing benefits that cannot be secured with short-term mating. Men who utilize long-term mating get the benefits of monopolizing a woman's reproductive capacity, which seems to have the benefit of paternal certainty, but at the same time severely limits the total number of children the man can sire. Buss and Schmitt (1993) also hypothesize that short-term mating should represent a larger portion of a male's mating effort than females, although females are also expected to take part in short-term mating. The benefits for females who take part in short-term mating seem to be immediate access to resources (although this access is time-sensitive), an ability to evaluate the male as a prospective long-term mate, and better genes, however long-term resource procurement and parental investment on the part of the male are lost (Buss & Schmitt, 1993). Although these authors suggest that short-term mating should be the strategy of choice for males, the fact that human males invest more in their offspring than any other primate suggests that this mating strategy is not the only type that positively affected the RS of males throughout evolutionary history.

Gangestad and Simpson (2000) explain that according to "Sexual Strategies Theory" all men should have a desire for short-term mates, meaning that they will put a lot of effort into this type of mating, however, they also argue that a male's success at short-term mating should depend, at least partially, on traits that women find attractive. According to sexual selection theory, variation between individuals of one sex allows members of the opposite sex to choose the best possible partner they can. This variation means that many males will not possess the traits deemed attractive by females, and thus the costs of trying to continuously take part in short-term mating will have outweighed the benefits. Gangestad and Simpson (2000) suggest that due to this variation in attributes that are deemed desirable by the opposite sex, the typical male may be more reproductively successful by attempting to invest in one mate's offspring as opposed to attempting to take part in many short-term relationships. This insight led Gangestad and Simpson (2000) to develop their "Strategic Pluralism Theory" to explain the mating strategies of men and women. According to this theory, men with 'good genes' are in high demand and therefore these men will be very successful implementing a short-term sexual strategy. Males who do not possess the same 'good genes' can not be as successful with short-term mating and therefore, in order to increase their RS, will instead divert their energy to investing resources and care to one mate's offspring. Females on the other hand tend to benefit from long-term mating because of the amount of resource investment she can procure from her mate, but Gangestad and Simpson (2000) suggest that females may also benefit from short-term mating by gaining 'good genes' from other highly desirable males. The authors reason that the environment plays a large part in the strategies men and women utilize when it comes to mating. Females who live in an area with a lot of parasites will raise more offspring to adulthood if they mate with males with 'good genes'. Females who live in an area that does not have an abundance of food and resources will most likely raise more offspring to adulthood if they are able to acquire investment from their male partners. According to "Strategic Pluralism Theory" mating strategies are conditional, and depend upon the environment. More specifically, the environment should influence female's mating strategies; genetic quality will be important where there are many pathogens and bi-parental care will be important, particularly when females do not have access to their own resources. Gangestad and Simpson (2000) go on to say that men's mating strategies will depend upon women's mating strategies due to males being the less choosy of the two sexes.

Another explanation for the diversity of sexual strategies used by females has been developed by Haselton and Gangestad (2006) which suggests that a female's sexual strategy is dependent upon the menstrual cycle. According to the authors, a female's sexual desires fluctuate across the menstrual cycle, specifically when they are paired with a less desirable partner. More interestingly, it was noted that their male partner's intensity of "mate guarding" increased during the ovulation phase of the menstrual cycle, suggesting an evolved male ability to distinguish between females who are fecund and those that are not. While this theory is very new and requires further study, it does imply that the mating strategies used by females may vary much more widely than previously thought, which should be taken into account when studying human mating strategies.

Another novel theory, Mating Intelligence Theory (Geher, Camargo, & O'Rourke, 2007), also attempts to explain the vast array of mating strategies used by individuals in terms of mental adaptations. According to this theory, mating intelligence entails any cognitive process that has influence on mating-relevant outcomes. This includes courtship displays, potential mate evaluation mechanisms, mechanisms for making context-specific decisions concerning mating strategies and cross-sex mind-reading mechanisms, just to name a few. This theory suggests that there may be an intellectual component to mating that has been overlooked. An individual who is successful at accurately assessing potential mates given some set of criteria, able to interpret information from the environment about the best possible mating strategy to use and able to accurately infer mental states of potential mates, will most likely leave behind more descendants than someone who is deficient in these areas. This theory asserts that there may be dissimilarities between mating-relevant cognitive domains that relate to courtship displays (e.g., humor, creative intelligence, etc.), which seem to act as fitness indicators and those that relate to mating mechanisms (e.g., cross-sex mind-reading), which do not act primarily as fitness indicators. This theory suggests that humans may have evolved the ability to incorporate mating-relevant information from the environment which would assist individuals in increasing their RS.

The purpose of this thesis will be to create a valid measure of mating success (a modern proxy for RS; see *Mating Success* section below), as well as empirically test many of the hypotheses presented by Miller (2000a) concerning the evolution of our seemingly unnecessary mental abilities. If Miller (2000a) is correct in asserting that many uniquely human mental qualities evolved due to the information they convey about genetic fitness in the mating domain, these factors should all positively relate to an individual's RS, as per the positive manifold principle. A major goal of this thesis is to provide evidence that there are some evolved psychological mechanisms that have increased the RS of our ancestors in the evolutionary past and that these traits relate to an individual's genetic fitness. For this thesis, a number of psychological variables will be measured and the relationship between these traits and an individual's RS will be assessed. The variables in this study are delineated below:

Fluctuating Asymmetry

Developmental stability is the ability of bilateral traits (those that develop on both sides of the body) to form symmetrical qualities, despite environmental factors or genetic mutations that may disrupt this development in vitro (Thornhill & Møller, 1997). Developmental instability is usually approximated by measures of fluctuating asymmetry (FA), which is defined as occurring when the normal state of a bilateral trait is symmetrical and there is no tendency for one side to have a larger character trait than the other (Møller & Pomiankowski, 1994; Thornhill & Møller, 1997). FA has been suggested to be one marker (i.e., a distinct indicator) of genetic and phenotypic fitness (Thornhill &

Gangestad, 1999), meaning the more symmetrical a trait, the larger amount of fitness the individual possesses. Livshits and Kobyliansky (1991) found that certain bilateral traits (e.g., ear width, ear length, wrist width, ankle width) appear to be influenced by environmental factors, and show a genetic component. Low levels of FA have been associated with genetic, physical and mental health in both males and females (Thornhill & Møller, 1997), number of sexual partners (Thornhill & Gangestad, 1994) and extra-pair copulations (Gangestad & Thornhill, 1997). Males with low levels of FA tend to have a relatively masculine face (Gangestad & Thornhill, 2003), more attractive body scents (Gangestad & Thornhill, 1998), more attractive faces (Gangestad, Thornhill, & Yeo, 1994), lower metabolic rates (Manning, Koukourakis, & Brodie, 1997), more attractive voices (Hughes, Harrison, & Gallup, 2002) and higher scores on measures of general intelligence (Prokosch, Yeo, & Miller, 2005). Females with low levels of FA tend to have higher fertility (Jasienska, Lipson, Ellison, Thune, & Ziomkewicz, 2006; Manning, et al., 1997) and more attractive faces (Perrett, Burt, Penton-Voak, Lee, Rowland, & Edwards, 1999).

While the correlations presented above show support for the validity of FA as a marker of genetic fitness and therefore sexual selection, there is still much controversy surrounding this type of measurement. Montgomerie (2000) suggests that the measurement of FA is often biased, with different researchers measuring different traits and attributing them all to FA. Another criticism made by Montgomerie (2000) is that the sample sizes used in many of these studies tend to be small, further complicating the interpretations of these results. Mueller (2000) suggests that FA is not a distinct indicator of genetic fitness, but rather, a crude estimate, or “signal.” Evidence to support this argument lies in the tendency of FA to be a much stronger indicator (i.e., it correlates stronger with hypothesized fitness indicators) in males than in females. Mueller (2000) reasons that females and males probably do not differ in terms of genetic fitness and due to the pressures sexual selection exerts on males to compete for females, FA may be used as one of many signals of genetic quality, as opposed to a direct marker of genetic fitness. These criticisms suggest that the results of any study using FA should find a stronger relationship in males than in females, but that these results should not be interpreted as meaning a difference in genetic fitness.

Although there is no one agreed-upon set of traits that may be said to accurately represent genetic fitness, this study will attempt to replicate other studies that have found correlations between FA and certain mental abilities (e.g., intelligence) as well as for other mental abilities that have not been studied with FA (e.g., self-esteem). It is hypothesized that FA will be negatively associated with mental abilities that are hypothesized to increase RS.

Mating Success

Many studies that have addressed traits that may have been sexually selected have used FA as a proxy for genetic fitness, which is hypothesized to be negatively related to one's RS (e.g., Hughes, et al., 2002; Manning, et al., 1997; Prokosch, et al., 2005). Thornhill and Gangestad (1994) found that FA was negatively related to the number of sexual partners both men and women had. It seems that researchers interested in studying traits that may have evolved through sexual selection view FA as being analogous to sexual selection. However, as shown previously, FA seems to be a much stronger index in males than in females (Mueller, 2000). This suggests that FA may not be as good an index of sexual selection as many researchers believe it to be and instead may only be one of many indicators of genetic fitness.

If variation in reproductive success propels evolution, why does current research ignore this construct? According to Trivers (1972), in a review of a study conducted by Bateman, (1948: see Trivers, 1972) the RS of male fruit flies is positively related to the number of copulations they take part in. Indeed, in the “animal” world, number of copulations and RS are strongly related in the lesser investing sex (Trivers, 1972). This suggests that measuring the number of copulations an individual human male takes part in would provide a reasonable index of his RS; research in Canada on the other hand suggests that Homo sapiens in industrial societies have severed the tie between number of copulations and RS with the institution of both monogamy and the use of contraceptives (Pérruse, 1993). According to Buss (1989) females will value status in a potential partner, meaning that males with higher status will be more attractive to females than males who are not high in status. Pérruse (1993) found that men who had obtained high status were *less* reproductively successful than men with lower status (i.e., poorer men are siring more children than richer ones). Although this finding contradicts the evolutionary theory of mate choice, Pérusse (1993) also found that while men high in status were not having more children, they did have *more sex partners* and were having sex more often with their partners. Kanazawa (2003) repeated these findings, adding that while men high in status did have more sex partners and had more copulations, these differences were not due to these men buying prostitutes, suggesting that women were choosing men high in status as a sex partner more often than men lower in status positions were being chosen.

Based on these findings, Pérruse (1993) tried to remedy this rift between number of copulations and RS for males by creating a new construct called "mating success," which is hypothesized to have been strongly related to RS before the advent of contraceptives. Pérruse (1993) developed an equation based on number of coital acts, number of different partners and the low probability of successful impregnation that attempted to predict the number of offspring a male could sire. (For a more complete review of mating success see Geher et al., 2007). While it has been stated that taking into account number of copulations and the low probability of impregnation with any given copulation is extremely important when calculating mating success for a male (Linton & Wiener, 2001), many studies simply measure the number of sexual partners both men and women have had in order to determine mating success (e.g., Gangestad & Simpson, 1990) or measure sexual behavior that consists of myriad variables including first copulation, number of total sex partners and extra-pair copulations (e.g., Hughes, Dispenza, & Gallup, 2004; Rhodes, Simmons, & Peters, 2005). For females, the research on mating success has been, at best, scarce. However Putz, Gaulin, Sporter, and McBurney (2004) developed an equation that attempts to measure female mating success by taking into account the probability of conception per copulations and the number of copulations since last conception.

A major drawback to these measurements of mating success is that they do not take into account the mating strategies of the people involved, nor do they incorporate other variables that would have led to an increase in RS such as resource procurement or the attractiveness of the sex partner(s). A major drawback to the Putz et al. (2004) equation, which attempts to predict the mating success of females, is that a lot of the subjects who take part in research studies are college students, most of whom have not had any children. As Pérruse (1993) pointed out, the RS of men in monogamous relationships is limited by their partner's ability and the time it takes to produce offspring. In Homo sapiens, the world record for number of children sired by a male has been estimated to be in the thousands, while for women the world record is 69 (Campbell, 2002). This extremely large difference in variance between the sexes has led to different psychological mechanisms that would have increased the RS of each sex, respectively. In an attempt to develop a mating success scale that does not take into account number of partners, Landolt, Lalumière, and Quinsey (1995) developed a self-perceived mating success scale that measures an individual's self-perceived ability to attract mates. Although this measure does not provide an estimate of RS, it was shown to be positively correlated with the, "…approximate number of sexual invitations received over the past year…" and, "…over the past three years" (Landolt et al., 1995, p. 13). There are a number of drawbacks to this type of measurement: 1) it relies on self-report data, which may be influenced by lapses in memory or social desirability effects (Nisbett & Wilson, 1977), 2) simply because someone received a sexual invitation does not mean that a copulation occurred, meaning that this measure may not provide a valid index of RS and, 3) with a variable as dependent upon behavior as mating success is, any measure of mating success should incorporate behavioral components.

This thesis will attempt to create a new measure of mating success based on evolutionary principles that not only takes into account differences in parental investment between the sexes, but also the different mating strategies used by individuals. Due to the different mating strategies utilized by members of each sex, it is hypothesized that the mating success of males who utilize a short-term mating strategy should be based on the attractiveness and sexual receptivity of their partner as well as the number of partners they have had. The more successful of these males will be able to mate with younger, more attractive females. The mating success of males who utilize a long-term mating strategy should be based on their partner's fidelity and parental care-qualities. For females who utilize a short-term mating strategy, mating success should be based on the genetic quality of their partner; for females who utilize a long-term strategy, mating success should be based on their ability to procure time, energy, effort and resources from their long-term mate. This measure will ask participants to describe the behavior of their partner in their most recent long-term and short-term relationship. According to Geher, Bloodworth, Mason, Downey, Renstrom, and Romero (2005), when participants are asked to describe previous partners as compared to current ones, there seems to be motivational pressures leading to current partners being described more favorably than previous partners. This finding suggests that it may be important to know whether the participant is describing a current or previous partner. Due to the importance of RS on evolution, it is hypothesized that any trait which benefits the owner in terms of natural or sexual selection will positively correlate with mating success. It is also noted that depending on the participant's preferred mating strategy, "success" may mean something different for dissimilar participants.

Intelligence

Cosmides and Tooby (2002) presented a modular view of the human brain which suggests that all mental abilities evolved as an adaptive mechanism to solve a specific problem. One area of evolutionary psychology in which this view has sparked debate has been in the study of intelligence. Cosmides and Tooby (2002) identified two types of intelligence, *dedicated intelligence* and *improvisational intelligence*. Dedicated intelligence is an evolved set of mechanisms that are used when solving, "…a predefined, target set of problems (p. 146)." This type of intelligence has been viewed as a domain-specific psychological mechanism and is analogous with a computer program, meaning that it in order to solve a problem, this type of intelligence can only apply rules or procedures to a situation, which are based on a generalized categorization of solutions that were successful in the past (Cosmides, & Tooby, 2002). Cosmides and Tooby (2002) argue that this type of intelligence evolved because of specific, recurring problems our ancestors faced throughout our evolutionary history. Improvisational intelligence on the other hand is the ability to come up with new solutions to novel problems, what many evolutionary psychologists now call "general intelligence" or 'g' (Kanazawa, 2004). Cosmides and Tooby (2002) argue that this type of intelligence could have evolved due to the advantages it gave individuals who were able to exploit unique opportunities from rare situations. Kanazawa (2004) argues that this explanation for the evolution of improvisational intelligence is lacking because of the consistency of the environment over the past 1.5 million years or so. Gottfredson (1997) suggests that 'g' is a very important facet of modern life, which Kanazawa (2004) says is due to the evolutionary novelty of our current environment. Most of the things we encounter today (e.g., cars, books, computers, etc.) were nonexistent during most of our evolutionary history; therefore any adaptation that allowed our ancestors to solve novel problems would be of utmost importance in our completely novel environment.

One interesting, although controversial, (for a review see Shi, 2004) correlate of intelligence is creativity. Kuncell, Hezlett, and Ones (2004) found a moderate (.36) correlation between scores on a general cognitive ability test and subjects' creativity. Miller (2000a) argues that measures of general cognitive ability or 'g' may actually be measures of genetic fitness. In fact, Prokosch, et al. (2005) found a relationship between measures of 'g' and FA, suggesting that 'g' may be a valid cue of biological fitness. Buss (1989) found that one of the most desired attributes in a potential mate was intelligence, which Miller (2000a) uses to support his theory. Miller (2000a) argues that 'g' could have evolved as a fitness indicator and that creativity, while a fitness indicator in and of itself, could also play on an innate human desire for neoteny, or the preservation of child-like traits into adulthood. The value of desiring a mate who possesses child-like traits seems to be an increased certainty of fertility and thus RS. According to this theory, measures of intelligence should not only relate to measures of genetic fitness and creativity, but also RS.

For this thesis, it is hypothesized that intelligence will negatively correlate with FA and positively correlate with mating success mediated by the participant's mating strategy. Intelligence is also expected to positively correlate with other mental abilities that are hypothesized to have evolved due to the information they convey about an individual's genetic fitness. One mental trait that has been hypothesized to not only relate to genetic fitness and intelligence, but also to creativity, is humor.

Humor

According to Miller's (2000a) thesis, creative intelligence evolved solely for the purpose of reproduction. Miller (2000a) suggests that the ability to produce humor is simply one way that members of one sex can advertise their genetic fitness to potential mates. He supports this claim by remarking, "…this is one of the few human traits important enough to have its own abbreviation (GSOH) in personal ads (p. 415)." Although there have been no studies that directly relate humor to genetic fitness or RS, there have been studies that have found that the ability to produce humor positively relates to a person's quality of life and mental health (e.g., Boyle & Joss-Reid, 2004; Martin, 2004; Thorson, Powell, Sarmany-Schuller, & Hampes, 1997).

The ability to produce humor is unique to Homo sapiens (Bressler & Balshine, 2006). Many studies have found that people prefer to be around and date others with a good sense of humor (e.g., Apte, 1987; Goodwin, 1990; Hansen, 1977). Apte (1987) found that people with a good sense of humor are more sociable, easier to get along with, and tend to be better able to cope with stressful situations. Goodwin (1990) found that both men and women prefer someone with a good sense of humor as a sex partner; however kindness, consideration, and honesty were deemed more important in the most highly desired mates.

One problem with all of the above studies presented on humor is that there seems to be a general consensus that the meaning of a "good sense of humor" is different for various people (Storey, 2003). Bressler and Balshine (2006), while attempting to study the mechanisms that may have supported the evolution of humor, found that men and women tend to have a different understanding of what a "good sense of humor" is. According to Bressler and Balshine (2006), when men desire a "good sense of humor," what they actually mean is that they desire someone who will appreciate *their* humor, while women tend to view a "good sense of humor" as meaning someone who produces humor effectively. The authors hypothesize that due to differential parental investment in our evolutionary past, men may have increased their RS by finding humor appreciation attractive. They suggest that if humor is a signal of genetic fitness, then females who failed to notice high-quality humor failed to mate with the most genetically fit males and males who failed to find the appreciation of that humor attractive (through laughter or smiling) also failed to mate with the most genetically fit females, hindering their RS.

Miller (2000a) suggests that both men and women should be attracted to funny mates. However, the study by Bressler and Balshine (2006) found that women, more than men desired a funny partner. In another study of the evolutionary origins of humor, Bressler, Martin, and Balshine (2006) found that while both men and women valued a "good sense of humor" in a prospective mate as well as their partner's receptivity to their own humor, only women valued their partner's ability to produce humor. These authors also found that while women valued their partner's "sense of humor" more than men, there were no differences between the sexes in the degree of value placed on their partner's receptivity to their own humor. These findings suggest that while women value humor in males more than males do in females, both sexes have a desire for their partners to appreciate their humor. It seems that a male's definition of a "good sense of humor" in a partner refers simply to their ability to appreciate their own humor, while a female's definition of a "good sense of humor" refers not only to the ability to produce humor, but also to appreciate their own humor. Bressler et al. (2006) conclude that humor may have evolved through sexual selection because it was preferred by females in sexual relationships. Subsequently, Robinson and Smith-Lovin (2001) found that while men tend to use humor more than women and tend to engage in higher rates of successful humor production, findings consistent with sexual selection and fitness indicator theory, women tend to engage in humor much more when men are not present and men are less likely to engage in humor when women are absent, suggesting that there may be other "cultural" factors that influence someone's use of humor.

For this thesis, it is hypothesized that humor, operationally defined as scores on self-report measure which attempts to quantify both humor receptivity and humor production, as well as humor appreciation and use of humor as a coping mechanism (see Köhler and Ruch, 2003), will negatively correlate with FA, while positively correlating with mating success and intelligence. Another variable that should have a positive relationship with humor, or at least an individual's perception of his/her own humor ability, is extraversion.

Extraversion

Extraversion has been shown to be related to an interest in mating and a desire for mate diversity (Eysenck, 1976). One interesting aspect of extraversion seems to be a heightened desire for risk, hypothesized to have had positive effects on an individual's RS (Buss, 1991; Nettle, 2005). Wilson, Clark, Coleman, and Dearstyne (1994) suggest that all individuals fall somewhere along a shy-bold continuum, constantly making tradeoffs between fitness-enhancing activities (i.e., activities that will positively influence an individual's reproductive success, but will hinder his/her ability to survive) and survival. Due to the greater variation in male RS, and the lower initial parental investment, evolution should have supported males being more inclined to taking risks in order to increase their RS, while females who have much less variation in RS should be more risk-averse (Campbell, 2002). Nettle (2005) found that extraversion had positive effects on the number of sex partners each sex had, however the effects were manifested in different ways. Men who were high in extraversion had an increased number of extra-pair copulations, while women who were high in extraversion tended to be the ones who terminated their relationships, usually resulting in children by more than one father (Nettle, 2005). Furthermore, Nettle (2005) found that the levels of extraversion for men and women were essentially identical, not supporting Campbell's (2002) theory, although it should be noted that extraversion may just be one facet of what makes someone more inclined to take risks.

While Nettle (2005) showed a positive relationship between extraversion and number of sex partners for both sexes (one measure of mating success), this thesis will look at the relationship between extraversion and this new measure of mating success, which is hypothesized to be positive, as well as the relationship between extraversion and FA, which is hypothesized to be a negative correlation.

Self-Esteem

Self-esteem has been defined as an attitude towards oneself (Rosenberg, 1965). Rosenberg (1979) suggests that a person's self-esteem may be due, in part, to the judgments of significant people in that person's life. These definitions suggest that self-esteem is a social construct, rooted in experience, attitudes towards oneself, and the feelings of others towards the person. As suggested by Buss (1994), mating is a very social activity, suggesting that self-esteem may play a part in a person's mating repertoire. Walsh and Balazs (1990) found that a person's self-esteem may be mediated by the amount of love he/she receives from significant people in his/her life, showing support for self-esteem as a social construct. Walsh (1991) found that self-esteem had a positive affect on the number of sexual partners both men and women had, however the relationship was stronger in men. This study also found that men who were virgins had a significantly lower self-esteem than men who were not (this trend was not noted in women) suggesting that low self-esteem may be an obstacle to taking part in sexual activity.

It seems that self-esteem may play a large role when it comes to mating, specifically in relation to the quality or quantity of partners desired. One interesting hypothesis posited is that short-term mating is the result of low self-esteem; however Schmitt (2005) found no relationship between a person's participation in short-term mating and his/her self-esteem, although a trend was noted in young men that actually showed a positive association between number of sex partners and self-esteem, supporting Walsh (1991). For this thesis it is predicted that self-esteem will be related to an individual's mating success. It is also hypothesized that self-esteem will have a negative correlation with FA.

Theory of Mind

Theory of mind (TOM) is defined as the ability to attribute mental states to oneself and others (Premack & Woodruff, 1978). Dennett (1978) suggests that this type of mental process is by far the easiest way to understand an organism's complex behavior and predicting what he/she will do next. Baron-Cohen (1995) suggests that an ability to rapidly comprehend and predict another organism's behavior, what he has termed "mind-reading," has many benefits that relate to natural selection and RS. The ability to anticipate whether another organism is going to attack, share food, or mate with you could have indeed evolved because of the advantages to RS. Baron-Cohen (1995) says that due to the very social nature of our species, anything that would have influenced an individual's social intelligence should have evolved.

Chisholm (2003) suggests that a TOM may have developed from an earlier 'contingency detection module' (CDM) which afforded organisms the ability to predict the future behaviors of an organism based on the contingency that certain behaviors have a high probability of occurring after other behaviors. According to Chisholm (2003), this ability to predict the future behaviors of others probably developed right after vertebrates developed eyes (some 400 million years ago), which, in both cases, are used for detecting movement. Chisholm (2003) proposes that in humans, this CDM developed into a TOM through the mother-child attachment process.

Chisholm (2003) posits that infants who were better able to elicit investment from their parents probably had a better chance of surviving into adulthood and producing offspring than infants who were not as good at eliciting investment from his/her parents. In order for the child to better understand what he/she has to do in order to get the investment from his/her parents, that child must be able to predict, with great certainty, what behaviors will elicit certain reactions. Chisholm (2003) suggests that a TOM is actually an adult-specific version of the CDM, which developed (during the individual's lifetime) through over-learning and, in essence, is a by-product of the CDM adaptation, which is a necessary aspect of the parent-child relationship. Chisholm (2003) furthers his argument by noting that the human TOM ability, "…is for controlling an agent's behavior by solving problems of contingency analysis (p. 133)…" illustrating the similarities between CDM and TOM.

One area of psychology in which TOM has gained prestige has been in research conducted on autism, which may help shed some light on the role TOM has in mating (Baron-Cohen, 1995). Autism is a pervasive developmental disorder that is characterized by impairments in social interaction, mental retardation and restrictive, repetitive patterns of behavior (American Psychiatric Association, 2000). A separate disorder, Asperger's syndrome, named after its identifier Hans Asperger (Asperger, 1944/1991), is a very similar disorder to autism, however mental retardation is not necessary for a diagnosis (APA, 2000). Although the distinction between autism and Asperger's syndrome has created much debate (e.g., see Frith, 1991; Howlin, 2003; Mayes, Calhoun, & Crites, 2001), one area in which individuals afflicted with both of these disorders seem to be deficient concerns TOM abilities. Ozonoff, Rogers, and Pennington (1991) tested individuals with high functioning autism and Asperger's syndrome and their level of success on tasks involving TOM. While a difference on the actual task was found between the two groups, the researchers noted that during conversations with the Asperger group, they were not able to apply a TOM, suggesting that this group was using other strategies to complete the task and did not accurately reflect their ability to apply a TOM. While these results are interesting in and of themselves, one pressing fact about people with autism and Asperger's syndrome is their lack of success with intimate relationships. Baron-Cohen (1995) suggests that intimacy does not only require physical closeness, but also the ability to, "…really know the other person's thoughts (p. 142)." This is evident in the ability of lovers to "take the words out of their partner's mouth," which seems to be strongly related to TOM (Baron-Cohen, 1995). The relationship between TOM abilities, autism and Asperger's syndrome, and intimacy suggests that mind-reading abilities have played a large part in the mate choices of our ancestors. For this thesis, TOM is hypothesized to be negatively correlated with FA and positively correlated with mating success, mediated by the participant's preferred mating strategy, meaning that the more developed an individual's TOM ability is, the more successful that person will be at implementing the mating strategy of his/her choice, whether it be a short-term mating strategy or long-term one.

Summary

For this thesis, a number of different hypotheses have been made concerning the variables being measured. While the major aim of this thesis is to create a valid measure of mating success for industrialized, post-contraceptive societies, another objective of this thesis is to test many of the hypotheses put forth by 'fitness indicator theory' (Miller, 2000a), as well as other mental traits that may have positively affected an individual's RS in the evolutionary past. The hypotheses associated with this study are reiterated below:

Hypothesis 1: Hypothesized fitness indicators should be related to mating success and genetic fitness

Hypothesis 2: The different predictor variables should all be inter-correlated, creating a "Positive manifold."

Hypothesis 3: Theory of Mind should independently predict mating success and FA

Hypothesis 4: Self-esteem should independently predict mating success and FA

Hypothesis 5: People high in Theory of Mind should be able to implement their preferred mating strategy

Hypothesis 6: Measures of general intelligence should be positively correlated with mating success. Are they better able to implement their preferred mating strategy (Mating intelligence) OR are they just more attractive (fitness indicator)?

METHOD

Participants

A total of 51 males and 202 females participated in this study, which was approved by the State University of New York at New Paltz's Institutional Review Board. Only those participants who reported being "Heterosexual" or "Mostly Heterosexual" were used for the analysis of this study. The majority of the sample was made up of Caucasian individuals (78.3%), with the remainder being Hispanic (8.7%), African American (4.3%), Asian American (2.8%), and Other (5.9%). The sample had a mean age of 22.85 (SD = 6.69) and a range of 18.0 years to 54.0 years. Participants in this study were recruited through the SUNY New Paltz subject pool, and received credit for their participation, an all-campus email that was sent to registered students at SUNY New Paltz, and websites that host internet-based research studies.

The data collected on FA was obtained from a subset of the total sample. There were 19 males and 49 females, recruited from SUNY New Paltz, who provided data on this variable. Preliminary analyses revealed that this sub-sample was comparable to the entire sample in terms of ethnicity and age.

Measures

Fluctuating Asymmetry. FA was measured using a NESCO (NM9560) electronic digital caliper accurate to .01mm. Four morphological traits were used in this study: the length of the index, middle, ring and pinky fingers (from the basal ridge to the tip of the finger). Although only one study known to this researcher has used solely these 4 traits to measure FA (Jasienska, Lipson, Ellison, Thune, & Ziomkewicz, 2006), some studies (e.g., Hughes, et al., 2002) have used them in conjunction with others. Any person who has ever broken any of these bones, *or* sustained a sprain within the past six months was excluded from the study as these injuries may cause measurement error (Hughes, et al., 2002). Participants had an image of their hands scanned with their four fingers closed together, and their thumb pointing away from their hand, in order to get an accurate measure of the length of their fingers. These traits were measured twice independently of one another as to ensure accuracy, and an average of the two measurements was taken. Any trait that was found to exhibit an asymmetry greater than .03mm was measured again, as this is seen as extreme asymmetry (S. M. Hughes, personal communication, March 7, 2006). The left and right sides of each bilateral trait were then averaged independently and FA was calculated as follows:

$$FA = |R - L| \, / \, [0.5 \cdot (R + L)] \text{ (Palmer, 1994)}$$

The higher the FA score, the more asymmetrical an individual is for that specific trait. The FA of each trait was then correlated with overall FA. Only those traits which were significantly, positively correlated with overall FA were used in the final analysis (see Hughes, et al., 2002). These separate FA measurements were summed together to provide a composite FA index.

Mating Success. Mating success was measured using a number of different techniques due to the ambiguity involved with measuring this variable. Trivers (1972) suggests that in sexually reproducing species, the sex which invests the least in offspring should have a positive relationship between the number of copulations that individual takes part in and his/her reproductive success. Although number of partners has been shown to be a less-than-accurate measure of contemporary RS for human males (Pérruse, 1993), it undoubtedly was positively correlated with RS in our evolutionary past and was used in this study as an index of mating success (the total number of partners a female has had will also be measured). This measurement is expected to provide a better index of RS for males than for females, as per Trivers' (1972) theory of parental investment. Age was also measured due to the fact that an individual's number of sexual partners tends to increase with age (Thornhill & Gangestad, 1994). This measure was conceived of as "actual" mating success and was operationally defined as the number of short-term (less than 1 month) and long-term (more than 1 year) sexual relationships within someone's lifetime (Rhodes et al., 2005). This operational definition allowed the diverse mating strategies used by participants to be taken into account.

The second measure of mating success was the "Self-perceived Mating Success Scale" (Landolt et al., 1995), which uses an 8-item scale that asks individuals how effective they are at attracting members of the opposite sex (e.g., "Members of the opposite sex notice me" and "I can have as many sexual partners as I choose"). This scale uses a 7-point Likert-type response format (1 = strongly disagree, 7 = strongly agree), with scores ranging from 8 to 56; higher scores meaning higher mating success. This scale was shown to have a Cronbach's alpha of 0.83 by Landolt et al. (1995) and will be conceived of as "perceived" mating success.

The final index of mating success was a new measure of mating success that is based on evolutionary principles, which are hypothesized to have increased the RS of our ancestors in the evolutionary past. This measure not only takes into account traits and behaviors that are relevant to mating throughout evolutionary history in terms of parental investment (e.g., providing food, protection, care, etc.) and good genes (e.g., being attractive, humorous, intelligent, etc.), but also evolutionary novel behaviors that may be associated with parental investment (e.g., buying an expensive gift, spontaneously calling or text messaging, etc.). This measure asks for the participants' number of long-term and short-term partners and whether they are describing current relationships or former relationships (see Geher et al., 2005). The first subscale (designated the 'MSS-1 short/long-term') asks about behaviors one might perform while in a sexual relationship (e.g., Wrote you a love note, hit you, insulted you, etc.). Participants are asked if their partner has *ever* done the activities on the scale and answers are recorded with a dichotomous, Yes/No format. The second subscale (designated the 'MSS-2 short/long-term') asks individuals how much they either agree or disagree (1 = strongly disagree, 5= strongly agree) with statements about certain physical and mental characteristics of their most recent short-term and long-term sexual relationships (e.g., "He/She is intelligent" and "He/She is attractive"), as well as questions that pertain to the financial status of the individual (e.g., He/She drives a nice car") (See Appendix A).

Sense of Humor. The Multi-dimensional Sense of Humor Scale (MSHS), developed by Thorson and Powell (1993), was used to assess an individual's sense of humor. This 24-item scale asks individuals to rate the degree to which they agree with statements pertaining to humor (e.g., "I dislike comics" and "I'm regarded as somewhat of a wit by my friends") on a 5-point Likert-type response scale (1 = strongly disagree, 5 = strongly agree), with scores ranging from 24 to 120; higher scores meaning a better sense of humor. The authors (Thorson & Powell, 1993) found this scale to be reliable, reporting a Cronbach's alpha of 0.92. Although Storey (2003) suggests that there are no sense-of-humor scales that are valid (implying that this scale may not be the absolute best choice for this study), Thorson, Powell, Sarmany-Schuller and Hampes (1997) have tested this scale in multiple cultures, with very large sample sizes and found that this scale has shown acceptable psychometric properties, high reliability, and construct validity. These authors also state that scores on the MSHS positively correlate with traits such as dominance, warmth, gregariousness, positive emotions, extraversion and cheerfulness and negatively correlate with neuroticism, pessimism, avoidance, negative self-esteem, aggression, depression, and seriousness.. This evidence, coupled with the fact that there are a variety of studies that have used the MSHS (e.g., Kelly, 2002; Boyle & Joss-Reid, 2004), suggest that the use of this scale is acceptable for this study.

General Intelligence. Intelligence was measured using the vocabulary subtest of the Army Alpha IQ test (Yerkes, 1921). This test is 30 questions long, with a reliability coefficient of 0.88 (Mayer, Salovey, & Caruso, 1999). This test provides participants with a target word and asks them to identify its synonym out of four possible answers. For each correct answer, participants will be given one point, which will be summed together and used as a proxy for IQ. Total scores on this scale can range from 0 to 30. Although this measure is more indicative of an individual's verbal intelligence and should not be interpreted as a complete measure of intelligence, it should provide a useful index of an individual's IQ, as vocabulary skills are particularly good predictors of general intelligence.

Extraversion. Extraversion was measured using a shortened version of a personality questionnaire developed by Fossum, Weyant, Etter and Feldman Barrett (1998), called the Simple Rating Scale for Personality-Revised. This 35-item scale is a shortened version of longer personality measurement scales which measures all 5 dimensions of personality (i.e., Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism). Each dimension of this scale was found to have a reliability coefficient ranging from 0.89 to 0.92. The authors also found that this test demonstrated convergent and discriminant validity. For this study, only the extraversion subscale will be used which consists of 7 questions (e.g., "I am an assertive person" and "I enjoy the company of other people"). This subscale uses ratings from 1 (strongly disagree) to 5 (strongly agree), total scores will range from 7 to 35.

Self-Esteem. Self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). The Rosenberg Self-esteem scale is meant to measure general self-esteem, with higher numbers corresponding to a more positive self-esteem and lower numbers meaning a more negative self-esteem. This 10-item scale uses ratings from 1 (strongly disagree) to 4 (strongly agree), that asks participants to about their feelings about themselves (e.g., I take a positive attitude towards myself). Total scores can range from 10 to 40. Rosenberg (1979) found test-retest reliabilities ranging from 0.80 to 0.85. Demo (1985) also found that this scale showed convergent validity.

Theory of Mind. Theory of Mind was measured using the revised version of the "Reading the Mind in the Eyes" test, developed by Baron-Cohen, Wheelwright, Hill, Raste and Plumb (2001). This test consists of 36 questions and uses cut-outs of people's eye region making different emotional grimaces. Participants were asked to choose the correct emotion from a list of four and the total number of correct responses were summed to provide their composite score. This revised version was tested using people from the general population, college students, and people with autism and Asperger's syndrome (Baron-Cohen, et al., 2001). The test showed a normal distribution, with no ceiling effects for any group. Due to individual differences in the number of descriptor words known, a list of all words used in this test with a definition and example were provided.

While this test was used as a proxy for TOM, Baron-Cohen et al. (2001) point out that this test is only looking at the first stage of TOM, compassion, suggesting that while this test is not an accurate measure of the entire construct of TOM, it is a measure of one important aspect of it.

Procedures

Pearson's r correlations were computed for the first and second measurement of each trait in order to assess measurement error. Each trait was then averaged across both measurements and the right and left side of each trait was combined using the FA equation (Palmer, 1994). Each of the 4 dimensions of FA were then correlated with overall FA independent of one another, in order to confirm that these traits are inter-correlated (see Table 1). Any trait that was not inter-correlated with the rest was excluded as this is most likely due to measurement error (S. M. Hughes, personal communication, March 7, 2006), those that are inter-correlated will be summed together to form an index of FA.

To assess this new measure of mating success, first a Cronbach's alpha was performed for the 'MSS-1 short/long-term' and 'MSS-2 short/long-term' for males and females separately, in order to assess how well individual items inter-correlate with one another, only those questions (and scales) with an alpha above .70 will be used in the analysis. Next, scores for men and women on the 'MSS-1 short/long-term' and 'MSS-2 short/long-term' were inter-correlated, in order to assess how well these subscales correlate with one another. Finally, the three measures of mating success ("perceived" mating success, "actual" mating success and the 'MSS-1 short/long-term' and 'MSS-2 short/long-term,' for males and females) were inter-correlated using Pearson's r correlations.

FA was then correlated with the hypothesized psychological fitness indicators (e.g., sense of humor, extraversion, self-esteem, IQ and theory of mind) to assess the extent to which these traits demonstrate a positive manifold and, as such, potentially load onto a general fitness factor (as per Miller's theory of sexual selection).

Twenty-eight multiple regression analyses were used in this study. Because FA was only collected from a portion of the participants, half the multiple regression analyses only included data from the participants who provided this information in order to accurately evaluate the relationship between FA and the hypothesized psychological genetic fitness indicators. The other 14 multiple regression analyses include all participants' data. Besides this difference, all analyses were computed for each sex separately and included age, IQ, sense of humor, extraversion, self-esteem, theory of mind and preference for either long-term or short-term sexual relationships. Each multiple regression had its own outcome variable. These variables included: 1) Actual number of short-term partners 2) Actual number of long-term partners 3) Self-perceived mating success 4) MSS-1 Short-term 5) MSS-1 Long-term 6) MSS-2 Short-term 7) MSS-2 Long-term.

RESULTS

First, Pearson r correlations were computed between the FA measurements for both the left and right sides of each trait independently, in order to assessment the measurement reliability. Correlations revealed that there was strong agreement between the first and second measurement of each trait (measurement reliability = 1.00, $p < .05$). Second, the measurements of each morphological trait were then averaged and the left and right sides of each trait were combined using the FA equation (Palmer, 1994). All FA measurements were then summed together to create a composite FA index. As per Hughes et al. (2002) only those independent FA measurements that significantly, positively correlated with the total FA composite score were used (see Table 1).

Miller's 'Positive Manifold Theory'

To assess Miller's (2000b) 'Positive Manifold Theory,' 4 Pearson r correlations were computed between all variables that are hypothesized to load onto a general fitness factor (e.g., FA, humor, intelligence, self-esteem, extraversion and theory of mind). Males and females were assessed separately, as were individuals whose FA was measured and those whose FA was not measured (see Tables 2 and 3 for males whose FA was measured and not measured, respectively; see Tables 4 and 5 for females whose FA was measured and not measured, respectively). The results suggest that there is no relationship between any of the potential fitness factors with one another. These correlations, however, suggest that there are a number of significant relationships between variables that were hypothesized to load onto a general fitness factor. Theory of

Mind and IQ are significantly, positively related for males ($r(48) = .41$, $p < .01$) and females ($r(189) = .27$, $p < .01$), suggesting that this measure of theory of mind is a good predictor of 'g.' For males, the relationship between mating preference (higher numbers mean *more* of a preference for long-term sexual relationships) and IQ approached significance ($r(51) = .24$, $p = .09$), while the relationship between mating preference and theory of mind was significant ($r(48) = .37$, $p < .01$), suggesting that males high in these traits prefer long-term relationships (or they unable to procure short-term relationships). For females, extraversion was significantly, positively related to both humor ($r(201) = .27$, $p < .01$) and self-esteem ($r(202) = .46$, $p < .01$).

Reliability of the 'Mating Success Scale-1' and 'Mating Success Scale-2'

A Cronbach's alpha was computed to assess the reliability of the 'MSS-1 short/long-term' (which measures whether the participant's partner(s) have ever performed certain behaviors) and 'MSS-2 short/long-term' (which asks participants to rate their partner(s) in terms of physical attractiveness, personality attributes and financial status) subscales for both men and women. This analysis showed that the 'MSS-1 short/long-term' was highly reliable for all four conditions, with the Cronbach's alpha ranging from .90 to .94. The 'MSS-2 short/long-term' subscale was shown not to be as reliable, with reliably coefficients ranging from .45 to .76. Four independent-group t-tests were also performed to assess whether there were significant differences between current partners and past partners on this new measure of mating success. Only the results for women on the 'MSS-2 long-term' approached significance ($t(105) = -1.79$, $p = .08$), however it was not in the predicted direction (as per Geher et al., 2005), with current partners ($M = 39.37$; $SD = 11.12$) rated lower than previous partners ($M = 43.25$; $SD =$

10.27), suggesting that these women were treated better in previous long-term relationships as opposed to current ones. These results suggest that there are no differences between how people rate their current and previous partners on this new scale of mating success.

Relationship between Mating Success Measures

All dependent variables were then inter-correlated to examine the relationship between these variables. These analyses were done for each sex independent of one another and for the presence or absence of the FA measurement. For males, (see Table 6), the actual number of short-term partners was significantly, positively correlated with the actual number of long-term partners ($r(49) = .31$, $p < .05$), 'MSS-1 short-term' ($r(31) = .38$, $p < .05$), and 'MSS-2 short-term' ($r(41) = .38$, $p < .05$). Self-perceived mating success was significantly, positively correlated with the 'MSS-2 short-term' ($r(43) = .36$, $p < .05$), and the 'MSS-2 long-term' ($r(43) = .42$, $p < .01$). The 'MSS-2 long-term' was also significantly positively correlated with the 'MSS-2 short-term' ($r(43) = .92$, $p < .01$).

For females (see Table 7), the actual number of short-term partners was significantly, positively related to the actual number of long-term partners ($r(200) = .23$, $p < .01$), Self-perceived mating success ($r(200) = .19$, $p < .01$), 'MSS-2 short-term' ($r(126) = .29$, $p < .01$), and 'MSS-2 long-term' ($r(126) = .21$, $p < .05$). Actual number of long-term partners was significantly, positively correlated with self-perceived mating success ($r(201) = .19$, $p < .01$). Finally, the 'MSS-2 short-term' was significantly, positively related to the 'MSS-2 long-term' ($r(127) = .90$, $p < .01$).

Multiple Regression Analyses

Multiple regression analyses were then performed in order to assess which variables are most predictive of an individual's mating success. Twenty-eight such regression analyses were performed. Each analysis included all of the following predictor variables (age, humor, extraversion, self-esteem, mating preference, IQ, and Theory of Mind), and half included FA as a predictor variable. The outcome variables for these analyses included all of the following (actual number of short-term partners, actual number of long-term partners, self-perceived mating success, MSS-1 short/long-term and MSS-2 short/long-term). Fourteen regression analyses were performed for men and fourteen for women. See Table 8 for the information regarding men, excluding the FA measurement. See Table 9 for information regarding men, including the FA measurement. See Table 10 for the information regarding females, excluding the FA measurement. See Table 11 for the information regarding females, including the FA measurement.

To address whether the predictor variables are related to the outcome variables, zero-order correlations were computed. Four correlation tables are presented, one for males whose FA was measured (see Table 2), one for males whose FA was not measured (see Table 3), one for females whose FA was measured (see Table 4), and one for females whose FA was not measured (see Table 5). To examine the overall amount of variability in each of the measures of mating success accounted for by the predictor variables, multiple regression analyses were then conducted.

For males, only the regression analyses which did not include FA as a predictor variable (i.e., number of participants was increased) were significantly predictive of the actual number of long-term partners and self-perceived mating success. For the analysis using actual number of long-term partners as the outcome variable, only age significantly predictive in the positive direction ($R^2 = .45$, $F(7, 36) = 4.16$, $p < .01$), suggesting that about 45% of the variability in the number of actual long-term partners is accounted for by the predictor variables. The semi-squared partial correlations, which are computed to address the unique amount of variability in the outcome variable accounted for by each of the predictor variables, were then calculated. As can be seen from this table, age uniquely accounts for a significant amount of variability in the number of actual long-term partners ($sr^2 = .26$, $p < .01$), while no other variable accounts for a significant amount of variable in this outcome variable. For the analysis using self-perceived mating success as the outcome variable, only extraversion was significantly predictive in the positive direction ($R^2 = .36$, $F(7, 38) = 3.08$, $p < .05$), suggesting that about 36% of the variability in self-perceived mating success is accounted for by the predictor variables. As can be seen from this table, extraversion uniquely accounts for a significant amount of variability in self-perceived mating success ($sr^2 = .21$, $p < .01$), while no other variable accounts for a significant amount of variability in this outcome variable.

For females, 8 of the 14 regression analyses were significant. Regression equations which included FA as a predictor variable were significantly predictive of actual number of short and long-term partners, self-perceived mating success and 'MSS-1 long-term.' For the equation predicting actual number of short-term partners, age was significantly predictive in the positive direction, mating preference (higher numbers mean *more* preference for long-term sexual relationships) was significantly predictive in the negative direction, with self-esteem approaching significance in the negative direction

($R^2 = .41$, $F(8, 39) = 3.32$, $p < .01$), suggesting that about 41% of the variability in the actual number of short-term partners for females is accounted for by the predictor variables. As can be seen from this table, age uniquely accounts for a significant amount of variability in the number of actual short-term partners ($sr^2 = .13$, $p < .01$), mating preference also accounts for a unique amount of variability ($sr^2 = .12$, $p < .01$), and self-esteem approached significance ($sr^2 = .06$, $p = .06$). For the equation predicting actual number of long-term partners, age was significantly predictive in the positive direction and humor was significantly predictive in the negative direction ($R^2 = .45$, $F(8, 39) = 3.91$, $p < .01$), suggesting that about 45% of the variability in the number of actual long-term partners is accounted for by the predictor variables. As can be seen from this table, age uniquely accounts for a significant amount of variability in the number of actual long-term partners ($sr^2 = .20$, $p < .01$), humor also accounts for a unique amount of variability ($sr^2 = .13$, $p < .01$). For the equation predicting self-perceived mating success, age was significantly predictive in the negative direction and self-esteem was significantly predictive in the positive direction, with extraversion approaching significance in the positive direction ($R^2 = .52$, $F(8, 39) = 5.38$, $p < .01$), suggesting that about 52% of the variability in self-perceived mating success is accounted for by the predictor variables. As can be seen from this table, age uniquely accounts for a significant amount of variability in self-perceived mating success ($sr^2 = .06$, $p < .05$), self-esteem also accounts for a unique amount of variability ($sr^2 = .17$, $p < .01$), and extraversion approached significance ($sr^2 = .04$, $p = .08$). For the equation predicting 'MSS-1 long-term,' FA was significantly predictive in the negative direction, meaning that females who are more symmetrical reported more positive behaviors from their most recent long-term sexual partner. Theory of mind and mating preference were both significantly predictive in the positive direction ($R^2 = .51$, $F(8, 28) = 3.66$, $p < .01$), implying that females who scored high in TOM and preferred long-term relationships reported more positive behaviors for their partners. These results suggest that about 51% of the variability in 'MSS-1 long-term' is accounted for by the predictor variables. As can be seen from this table, FA uniquely accounts for a significant amount of variability in MSS-1 long-term ($sr^2 = .19$, $p < .01$), theory of mind also accounts for a unique amount of variability ($sr^2 = .09$, $p < .05$), as does mating preference ($sr^2 = .08$, $p < .05$).

Regression equations which did not use FA as a predictor variable were significantly predictive of actual number of short and long-term partners, self-perceived mating success and 'MSS-2 long-term.' For the equation predicting actual number of short-term partners, age was significantly predictive in the positive direction and mating preference was significantly predictive in the negative direction ($R^2 = .14$, $F(7, 178) = 4.17$, $p < .01$), meaning that age positively influences the number of short-term sexual relationships females will have, and that a preference for short-term partners will also positively influence the number of short-term partners a female has. These results suggest that about 14% of the variability in the actual number of short-term partners is accounted for by the predictor variables. As can be seen from this table, age uniquely accounts for a significant amount of variability in the number of actual short-term partners ($sr^2 = .05$, $p < .01$), and mating preference accounts for a unique amount of variability ($sr^2 = .09$, $p < .01$). For the equation predicting actual number of long-term partners, only age significantly predicted the dependent variable in the positive direction, with self-esteem approaching significance in the positive direction and humor approaching significance in the negative direction ($R^2 = .23$, $F(7, 178) = 7.48$, $p < .01$), suggesting that about 23% of the variability in the number of actual long-term partners is accounted for by the predictor variables. As can be seen from this table, age uniquely accounts for a significant amount of variability in the number of actual long-term partners ($sr^2 = .17$, $p < .01$), self-esteem approached significance ($sr^2 = .16$, $p = .06$), as did humor ($sr^2 = .15$, $p = .06$). For the equation predicting self-perceived mating success, self-esteem positively predicted this measure of mating success, with extraversion approaching significance in the positive direction and mating preference approaching significance in the negative direction ($R^2 = .26$, $F(7, 179) = 9.19$, $p < .01$), suggesting that about 26% of the variability in self-perceived mating success is accounted for by the predictor variables. As can be seen from this table, self-esteem uniquely accounts for a significant amount of variability in self-perceived mating success ($sr^2 = .11$, $p < .01$), extraversion approached significance ($sr^2 = .01$, $p = .06$), as did mating preference ($sr^2 = .01$, $p = .10$). For the equation predicting 'MSS-2 long-term,' extraversion positively predicted this measure, self-esteem negatively predicted this measure and humor was approaching significance in the negative direction ($R^2 = .12$, $F(7, 116) = 2.21$, $p < .05$), suggesting that about 12% of the variability in 'MSS-2 long-term' is accounted for by the predictor variables. As can be seen from this table, extraversion uniquely accounts for a significant amount of variability in 'MSS-2 long-term' ($sr^2 = .08$, $p < .01$), as does self-esteem ($sr^2 = .04$, $p < .05$), with humor approaching significance ($sr^2 = .03$, $p = .07$).

Factorial ANOVA Analyses

To assess whether IQ and theory of mind significantly influence someone's mating success, depending on his/her mating preference, 20, 2*2 factorial ANOVAs were performed. Each analysis included mating preference (short-term and long-term), as judged by a median split of the data, and either IQ (high and low) or theory of mind (high or low) as the fixed-factor, independent variables. Five dependent variables were used in these analyses; actual short-term mating success, actual long-term mating success, self-perceived mating success, MSS-1 Short-term, and MSS-1 Long-term. Analyses were run separately for males and females.

For males, the results showed a significant interaction between IQ and mating preference for self-perceived mating success ($F(1, 47) = 4.22, p < .05$) and theory of mind and mating preference for the same dependent variable ($F(1, 44) = 5.36, p < .05$) (See tables 12 and 13, respectively). These interactions are represented in Figures 1 and 2. Two post-hoc one-way ANOVAs were conducted to see which specific groups were significantly different from one another, both ANOVAs revealed that there was not a significant difference between any of the groups when looking at IQ ($F(3, 47) = 2.15, p > .05$) and theory of mind ($F(3, 44) = 2.49, p > .05$).

For females, the results show a significant interaction between IQ and mating preference for Self-perceived mating success ($F(1, 197) = 5.17, p < .05$) (See table 14) (See Figure 3 for the interaction); however the post-hoc one-way ANOVA revealed that no single group was significantly different from any other in this analysis ($F(3, 197) = 2.23, p > .05$). The results also reveal that there was a significant main effect for mating preference in both the IQ ($F(1, 195) = 4.36, p < .05$) and theory of mind ($F(1, 195) = 4.24, p < .05$) analyses for actual short-term mating success, supporting the results of the regression analyses (see Tables 15 and 16). In other words, only mating preference (either for a short or long-term sexual relationship) had a significant effect on the actual number of short-term sexual partners females in this study have had. There was also a significant main effect for mating preference in the analysis looking at 'MSS-1 Long-term,' ($F(1, 165) = 6.83$, $p < .05$), suggesting that females who reported preferring long-term relationships, reported more positive behaviors in those relationships, further supporting the regression analyses (see Table 17). The factorial ANOVAs also revealed significant interactions between IQ and mating preference ($F(1, 196) = 8.50$, $p < .05$) and theory of mind and mating preference ($F(1, 196) = 4.79$, $p < .05$) for the actual number of long-term partners measure (See Tables 18 and 19, respectively). The interactions are clearly represented in Figures 4 and 5. The post-hoc one-way ANOVAs revealed a significant difference for individuals who had a high IQ and long-term mating preference ($M = 1.95$, $SD = 1.31$) and those who have a low IQ and long-term mating preference ($M = 1.16$, $SD = .95$), ($F(3, 196) = 3.34$, $p < .05$). No significant differences were noted in the post-hoc one-way ANOVA analysis for the interaction between theory of mind and mating preference ($F(3, 196) = 3.14$, $p > .05$). Finally, the factorial ANOVA revealed a significant interaction between mating preference and IQ for the MSS-1 Long-term scale ($F(3, 165) = 5.62$, $p < .05$) and a significant main effect for mating preference ($F(3, 165) = 9.18$, $p < .05$) (See Table 20), this interaction is clearly represented in Figure 6. The post-hoc one-way ANOVA analysis revealed that there were significant differences between specific groups ($F(3, 165) = 4.46$, $p < .05$), with significant differences between high IQ and short-term preference ($M = 27.17$, $SD = 9.35$) and low IQ and long-term preference ($M = 31.84$, $SD = 7.10$) and high IQ and long-term preference ($M = 33.94$, $SD = 2.87$). These results suggest that a person's IQ level and mating preference (either for a short or long-term sexual relationship) significantly influences that person's perception of his/her sexual desirability. Furthermore, it appears that individuals with high IQ levels seem to perceive themselves as more desirable when they also prefer long-term relationships, and individuals with low IQ levels seem to perceive themselves as more desirable when they prefer short-term relationships.

DISCUSSION

The major goal of this thesis was to create a valid scale of mating success that can be used in modern, post-contraceptive societies, which measures the quality of the relationship a person is able to have, as opposed to number of partners and one's perception of their desirability. The results of the Cronbach's alpha suggest that only the MSS-1 is reliable for all temporal conditions and as such, should be the sole scale of this new measure of mating success. One potential reason for the MSS-2 having poor reliability is that there were only 13 questions, whereas if there were more, the alpha would have most likely been increased (Warner, 2007). For females, the 'MSS-1 long-term' was significantly, positively related to actual number of long-term partners, and for males, the 'MSS-1 short-term' was significantly, positively related to actual number of short-term partners. These results may be interesting according to "Sexual Strategies Theory" in that each sex enjoys better quality relationships in their 'preferred' mating strategy. This relationship may also be explained by simple logic; the fact that one is more successful in one relationship over another may explain why one would have more of that particular relationship. Besides this relationship, the MSS-1 short/long-term scale was not significantly related to any other measure of mating success. These results may be promising in that one argument of this thesis is that these other measures of mating success are somewhat problematic. However, while the MSS-1 demonstrated both reliability and validity in the current study, more research needs to be completed before the 'MSS-1 short/long-term' scale can be definitively accepted or rejected.

The second objective of this thesis was to test the 'Positive Manifold Theory' put forth by Miller (2000b), which suggests that for every fitness indicator an individual has which is strong (i.e., it is attractive), that individual's mating success should be increased. The results of this study suggest that hypothesized fitness indicators are *not* related to mating success or one measure of genetic fitness (i.e., FA), which does not support hypothesis 1. The second hypothesis of this study was that the different predictor variables should all be inter-correlated creating a "Positive Manifold." The results do not support this theory in that measures of hypothesized genetic fitness indicators were not significantly inter-correlated for males (See Table 2) or females (See Table 3), which does not support hypothesis 2. These results suggest that the psychological traits hypothesized to increase one's mating success (e.g., IQ, humor, etc.) do not create a positive manifold and instead show a trend which seems to lend its support to the 'Trade-off Theory' of mating success, which suggests that individuals must make 'trade-offs' between how much energy to invest in different, costly, signaling behaviors (Nettle & Clegg, 2007).

The third hypothesis tested by this thesis concerned TOM's ability to influence one's mating success and it was suggested that TOM would independently predict mating success and FA. Baron-Cohen (2005) suggests that TOM may be a necessary psychological trait when it comes to intimacy, suggesting that TOM may be an integral part in determining someone's mating success. The results of this study do not support this hypothesis, and instead suggest that there is no relationship between an individual's

TOM abilities and his/her mating success, as measured by a number of currently accepted measures.

The fourth hypothesis stated that self-esteem should independently predict mating success and FA. According to Walsh (1991), self-esteem positively correlates with the actual number of partners an individual has had. However, Schmitt (2005), suggests that a larger number of partners seems to be negatively correlated with self-esteem. The results of this study do not support the hypothesis that self-esteem would independently predict mating success and FA and, instead, suggest that there is no relationship. It should be noted that for actual number of short-term and long-term partners, although the relationship was not significant, there was a negative correlation, lending some support to Schmitt's (2005) findings.

The fifth hypothesis stated that people who are high in TOM should be able to implement their preferred mating strategy, and thus report more success in that desired temporal mating condition. The results suggest that TOM abilities are not significantly related to an individual's mating success. However, the interaction between mating preference and TOM for the actual number of long-term partners for females was significant, suggesting that success in terms of actual number of partners is dependent both on mating preference and TOM abilities. The same goes for self-perceived mating success in males.

The sixth hypothesis of this thesis was that general intelligence should be positively correlated with measures of mating success. The results of this study do not support this hypothesis in that general intelligence seems to have no relationship with indices of mating success. Furthermore, general intelligence does not seem to assist people in more successfully implementing their preferred mating strategy, and in fact, the results show a trend which suggests that people lower in general intelligence actually have more partners. These results show support for Kanazawa's (2003) argument, which suggests that 'g' evolved to help our ancestors solve novel problems and since mating has been a constant in our species' evolution for millions of years, there should be no relationship between 'g' and mating success, which the results of this thesis suggest is the case.

Other findings of this thesis which were not anticipated, but shed light on certain evolutionary hypotheses and assumptions were found. These findings are broken into 4 main sections below.

IQ and TOM

The measure of general intelligence was significantly, positively correlated with the measure of TOM for males ($r(48) = .41, p < .01$) and females ($r(189) = .27, p < .01$), suggesting that this measure of TOM (or more specifically, compassion) is related to general intelligence. These results seem to coincide with findings by Mayer, et al. (1999), which suggest that emotional intelligence, defined as the ability to recognize the meanings of emotions and their relationships, and to reason and problem solve on the basis of them, may be one aspect of general intelligence. However, Kanazawa (personal communication, June 9, 2007) suggests that the strong correlation may have been found due to the novelty of the actual test used (i.e., The "Reading the Mind in the Eyes" test). This test uses 2 dimensional pictures of just eyes, not the whole face. Since, in ancestral conditions, individuals would have judged an individual's emotions on a 3 dimensional image of that individual's whole face, this test is not really measuring an individual's ability to infer compassion from an individual's face. So, Kanazawa predicts that more intelligent people should be no more successful than less intelligent people when it comes to judging the emotions of others in naturalistic settings (i.e., 3 dimensional image of whole face), but, that when judging emotions in some evolutionarily novel setting, the more intelligent people may have an advantage.

Mating Intelligence as a Self-inflator

Another interesting finding of this thesis is the strong relationship between self-esteem, extraversion and self-perceived mating success. Generally, self-report measures have a self-enhancement component to them (Kenny, 1994), suggesting that people who report themselves high on one trait tend to do the same on other traits. Self-perceived mating success, which by its very nature is measuring how an individual *perceives* his/her desirability, was also significantly, positively correlated with self-esteem and extraversion, suggesting that individuals may benefit reproductively from perceiving themselves to be more desirable than they actually are. An individual who generally seems him/her-self in a positive light (high self-esteem) and is outgoing (extroverted), may perceive him/her-self to be highly desirable, which may have positive reproductive benefits for that individual.

Furthermore, it was found that there were significant interactions between IQ and mating preference for males and females on the self-perceived mating success scale. A significant interaction was also found between TOM and mating preference for males on this measure as well. These results suggest that people who prefer short-term relationships perceive themselves as being more successful if they have low IQs and low TOM abilities and people who prefer long-term relationships perceive themselves as more successful if they have high IQs and high TOM abilities. These results imply that mating intelligence, which suggests that there may be an intellectual component to mating, may be made up of, at least in part, an individual's ability to 'inflate' his/her actual abilities as a means of display. In other words, an individual who believes his/her desirability to be higher than what it actually is, may benefit reproductively since this individual is probably going to be much more willing to pursue a mate. Although not everyone this person pursues will mate with him/her, that individual will still probably have more mating opportunities than someone who does not think that he/she is at all desirable, and hence, does not pursue as many mates. The results of this study suggest that individuals, high in IQ and TOM, who are not as successful in the mating domain as other, less gifted individuals, may compensate for this fact by preferring long-term relationships and perceiving themselves to be much more successful in this area.

Validity of FA as a fitness indicator

The utility of FA as one measure of genetic fitness seems to be in question based on the results of this study. Thornhill and Gangestad (1994) found that FA was negatively correlated with number of sexual partners, a finding that was not replicated in this study, Futhermore, Prokosch, Yeo, and Miller (2005) found FA to be negatively correlated with scores on measures of general intelligence, a finding which again was not supported by the data. It seems that FA is not a consistent marker of genetic fitness and only sometimes shows significant, negative correlations with hypothesized sexually selected traits. One limitation of the current study is that only the four fingers on each hand were measured, whereas in other studies, other measures, such as the width of the hand, elbow, ear, are also taken into account (e.g., Hughes, et al. 2002). Additionally, in a presentation at the inaugural meeting of the North-Eastern Evolutionary Psychology Society (NEEPS) by Michael Frederick, a graduate student at The State University of New York at Albany, it was suggested that finger asymmetry tends not to be inter-correlated with one another. The results of this study clearly do not support this assertion (see Table 1), further muddying the validity of FA as one valid measure of genetic fitness. The fact that FA seems to be very labile when it comes to significant correlations for hypothesized genetic fitness indicators suggests that FA may not be as definitive as much of the current literature suggests. The results of this thesis suggest that more research is needed in order to understand the full utility of FA as a measure of genetic fitness and whether or not it is a valid measure.

Utility of Fingers as a measure of FA

Although this study did not find support for the relationship between FA and a number of hypothesized genetic fitness indicators, it should be noted that the measure of FA used in this thesis was significantly, negatively correlated with the MSS short-term ($r(29) = -.471$, $p < .05$) and long-term ($r(37) = -.477$, $p < .05$) scale for females, suggesting that females who are more symmetrical are treated better by their short and long-term male partners. These results suggest that finger FA may be a reliable indicator, although it is not completely understood what FA is actually indicating. The fact that FA was so strongly, negatively correlated with the MSS, suggests that FA definitely has an influence on something, especially in terms of the quality of a short and long-term relationship for females, however more research is needed in order to definitively assert that FA is in fact a marker of genetic fitness. It may simply be that FA is a good indicator of attractiveness and that females who are attractive are treated better by their short and long-term partners.

The results of this study are very interesting in that not much research has been done to assess these currently accepted measures of mating success. This study suggests that there may be inherent flaws in the assumptions currently being made about what the total number of partners or an individual's perceived mating success actually represents. This new measure of mating success (see Appendix A) is, instead, interested in assessing the *quality* of the relationship. It seems that, especially for females, the way an individual is treated in a relationship may have much more to say about an individual's reproductive capabilities than simply the number of people he/she is able to mate with, since human babies generally require the presence of two parents. This new measure of mating success may prove to be a useful measure when attempting to approximate an individual's reproductive success in a modern, post-contraceptive society. Further, Miller's (2000b) prediction that hypothesized genetic fitness indicators would increase an individual's mating success was not supported by any of the measures of mating success used in this study. This suggests that these psychological traits may have evolved for some purpose other than mating. However more research is needed to determine the evolutionary origins of these traits.

There were many limitations associated with this study. First, only 19 males provided measurements of their fingers to be used in the analyses including FA. This very small sample size may have been the reason for the lack of significance between FA and the hypothesized genetic fitness indicators. Furthermore, the number of variables being looked at in this study required many more participants than were recruited, this is particularly true for the male sample. One argument that can be made is that the sample involved in this study is representative of the population where this study took place (SUNY New Paltz), and thus these results may only be generalized to a certain portion of the general population.

Summary

The major aim of this thesis was to create a valid scale of mating success which does not rely on actual number of partners, or one's self-perceived desirability. The scale developed for this thesis (The 'MSS') seems promising in that the long-term version for females seemed to demonstrate both reliability and validity. Further, taking into account Trivers' (1972) 'parental investment theory,' it seems that measuring the actual number of partners a male has may be indicative of his mating success since he would have had the opportunity to impregnate each of these women, which may explain why this new scale did not show the same reliability and validity for males as it did for females.

Another interesting finding of this study was the lack of support for Miller's (2000a) 'fitness-indicator theory,' which hypothesizes that certain mental traits may have been sexually selected (e.g., humor, IQ, etc.). This thesis tested this theory by correlating these traits with indices of mating success. No relationship was found, suggesting that these traits may not have evolved due to sexual selection. Furthermore, Miller's (2000b) 'Positive Manifold Theory' was also not supported in that certain traits (e.g., humor and IQ) seemed to have the opposite effect of what was hypothesized

Finally, another interesting finding of this study concerns the interaction between IQ and mating preference in terms of an individual's self-perceived desirability. It seems that individuals who have high IQ levels rate themselves as more desirable when they prefer long-term sexual relationships and that individuals who have low IQ levels rate themselves as more desirable when they prefer short-term sexual relationships. These results are very interesting in that intelligence seems to have an effect on one's perceptions of his/her own mate value. It is possible that there may be cultural reasons for this, in that, people with high IQs may feel more successful if they conform to social norms, however more research is needed in order to begin to understand why this relationship exists.

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TABLES

Table 1
Pearson r correlations for total Fluctuating Asymmetry and independent measures of Fluctuating Asymmetry

	SUM FA	FA Index	FA Middle	FA Ring	FA Pinky
FA Index					
Pearson r	.719**	-			
P	.000				
FA Middle					
Pearson r	.557**	.142	-		
P	.000	.249			
FA Ring					
Pearson r	.616**	.265*	.291*	-	
P	.000	.029	.016		
FA Pinky					
Pearson r	.663**	.347**	.153	.092	-
P	.000	.004	.212	.458	

* Correlation significant at the .05 level (2-tailed)
** Correlation significant at the .01 level (2-tailed)
N = 68 for all cells

Table 2

Pearson r correlations for all Predictor and Outcome variables for Males (including FA)

	FA	Age	Humor	Extraversion	Self-Esteem	Mating Preference[1]	IQ	Theory of Mind
FA								
Pearson r	-							
P								
N								
Age								
Pearson r	-.079	-						
P	.748							
N	19							
Humor								
Pearson r	.010	-.438	-					
P	.966	.061						
N	19	19						
Extraversion								
Pearson r	.007	-.326	.018	-				
P	.977	.173	.942					
N	19	19	19					
Self-Esteem								
Pearson r	.148	-.006	-.386	.508*	-			
P	.545	.981	.102	.026				
N	19	19	19	19				
Mating Preference								
Pearson r	-.133	-.203	-.002	.008	.137	-		
P	.587	.403	.994	.975	.576			
N	19	19	19	19	19			
IQ								
Pearson r	-.028	-.339	.237	-.110	-.260	.665**	-	
P	.911	.155	.329	.655	.283	.002		
N	19	19	19	19	19	19		
Theory of Mind								
Pearson r	-.348	-.114	.090	.196	.253	.475*	.314	-
P	.157	.653	.722	.437	.311	.046	.205	
N	18	18	18	18	18	18	18	

	FA	Age	Humor	Extraversion	Self-Esteem	Mating Preference	IQ	Theory of Mind
Actual ST[2]								
Pearson r	.007	.044	-.144	-.083	-.073	-.044	-.020	-.467
P	.980	.867	.582	.751	.781	.867	.939	.068
N	17	17	17	17	17	17	17	16
Actual LT[3]								
Pearson r	-.362	.503*	.020	-.300	-.436	-.325	-.085	-.142
P	.154	.040	.938	.241	.080	.203	.747	.601
N	17	17	17	17	17	17	17	16
Perceived Mating Success[4]								
Pearson r	.273	-.272	.157	.315	.206	-.109	-.085	-.279
P	.257	.260	.521	.189	.397	.657	.729	.262
N	19	19	19	19	19	19	19	18
MSS-1 ST[5]								
Pearson r	.214	.307	-.154	-.006	.004	-.230	-.226	-.388
P	.504	.332	.632	.985	.991	.472	.480	.239
N	12	12	12	12	12	12	12	11
MSS-1 LT								
Pearson r	.004	.063	-.005	.028	.169	.597**	.362	.107
P	.986	.803	.985	.913	.502	.009	.140	.683
N	18	18	18	18	18	18	18	17
MSS-2 ST[6]								
Pearson r	-.206	.138	-.004	.101	-.093	-.149	.117	-.130
P	.413	.586	.986	.689	.714	.555	.643	.618
N	18	18	18	18	18	18	18	17
MSS-2 LT								
Pearson r	.009	.103	.059	.287	.018	-.140	.037	-.194
P	.971	.684	.818	.248	.944	.581	.883	.455
N	18	18	18	18	18	18	18	17

* Correlation significant at the .05 level (2-tailed)
** Correlation significant at the .01 level (2-tailed)

ST = short-term sexual relationship (less than one month)
LT = long-term sexual relationship (more than one year)

[1]Lower numbers mean *more* preference for short-term sexual relationships and higher numbers mean *more* preference for long-term sexual relationships.
[2]Actual number of short-term (less than one month) partners
[3]Actual number of long-term (more than one year) partners
[4]A participant's perception of his/her own desirability as a sexual partner
[5]MSS-1 = Behavioral version of scale
[6]MSS-2 = Perceptions of partner

Table 3

Pearson r correlations for all Predictor and Outcome variables for Males (excluding FA)

	Age	Humor	Extraversion	Self-Esteem	Mating Preference[1]	IQ	Theory of Mind
Age							
Pearson r	-						
P							
N							
Humor							
Pearson r	-.265	-					
P	.066						
N	49						
Extraversion							
Pearson r	-.326*	.139	-				
P	.022	.331					
N	49	51					
Self-Esteem							
Pearson r	.102	-.175	.243	-			
P	.486	.220	.086				
N	49	51	51				
Mating Preference							
Pearson r	-.122	-.085	.041	.220	-		
P	.405	.554	.777	.120			
N	49	51	51	51			
IQ							
Pearson r	-.062	.203	-.113	-.180	.240	-	
P	.671	.153	.429	.205	.089		
N	49	51	51	51	51		
Theory of Mind							
Pearson r	-.023	.122	.148	.068	.374**	.405**	-
P	.877	.408	.316	.646	.009	.004	
N	46	48	48	48	48	48	
Actual ST[2]							
Pearson r	.219	-.196	-.113	-.008	-.080	-.081	-.258
P	.140	.178	.439	.956	.587	.582	.084
N	47	49	49	49	49	49	46

	Age	Humor	Extraversion	Self-Esteem	Mating Preference	IQ	Theory of Mind
Actual LT[3]							
Pearson r	.115	-.389**	.030	.138	.105	-.192	-.151
P	.440	.006	.836	.344	.472	.185	.317
N	47	49	49	49	49	49	46
Perceived Mating Success[4]							
Pearson r	-.066	-.010	.511**	.237	.036	-.271	-.157
P	.653	.946	.000	.094	.804	.055	.286
N	49	51	51	51	51	51	48
MSS-1 ST[5]							
Pearson r	.279	.018	-.084	-.011	-.312	-.118	-.322
P	.135	.922	.652	.952	.087	.526	.082
N	30	31	31	31	31	31	30
MSS-1 LT							
Pearson r	.163	.266	.138	.117	.221	.030	.350*
P	.308	.085	.377	.454	.155	.849	.025
N	41	43	43	43	43	43	41
MSS-2 ST[6]							
Pearson r	.022	.145	.219	.051	-.071	-.225	-.211
P	.889	.354	.158	.748	.651	.146	.185
N	41	43	43	43	43	43	41
MSS-2 LT							
Pearson r	.047	.176	.304*	.082	-.088	-.267	-.276
P	.773	.259	.047	.602	.575	.084	.081
N	41	43	43	43	43	43	41

* Correlation significant at the .05 level (2-tailed)
** Correlation significant at the .01 level (2-tailed)

ST = short-term sexual relationship (less than one month)
LT = long-term sexual relationship (more than one year)

[1]Lower numbers mean *more* preference for short-term sexual relationships and higher numbers mean *more* preference for long-term sexual relationships.
[2]Actual number of short-term (less than one month) partners
[3]Actual number of long-term (more than one year) partners
[4]A participant's perception of his/her own desirability as a sexual partner
[5]MSS-1 = Behavioral version of scale
[6]MSS-2 = Perceptions of partner

Table 4

Pearson r correlations for all Predictor and Outcome variables for Females (including FA)

	FA	Age	Humor	Extraversion	Self-Esteem	Mating Preference[1]	IQ	Theory of Mind
FA								
Pearson r	-							
P								
N								
Age								
Pearson r	.213	-						
P	.147							
N	48							
Humor								
Pearson r	-.011	.025	-					
P	.940	.864						
N	48	48						
Extraversion								
Pearson r	.031	-.252	.082	-				
P	.832	.084	.582					
N	48	48	48					
Self-Esteem								
Pearson r	.138	-.003	-.124	.325*	-			
P	.351	.986	.400	.024				
N	48	48	48	48				
Mating Preference								
Pearson r	.191	.085	.263	-.217	-.085	-		
P	.192	.567	.071	.138	.568			
N	48	48	48	48	48			
IQ								
Pearson r	.183	.123	.138	-.276	.014	.166	-	
P	.212	.404	.350	.058	.927	.258		
N	48	48	48	48	48	48		
Theory of Mind								
Pearson r	.067	-.023	.134	-.310*	.033	.160	.289*	-
P	.650	.879	.363	.032	.823	.278	.046	
N	48	48	48	48	48	48	48	

	FA	Age	Humor	Extraversion	Self-Esteem	Mating Preference	IQ	Theory of Mind
Actual ST[2]								
Pearson r	-.049	.305*	-.243	.091	-.157	-.430**	-.124	-.229
P	.741	.035	.095	.540	.288	.002	.402	.117
N	48	48	48	48	48	48	48	48
Actual LT[3]								
Pearson r	.025	.476**	-.407**	-.202	.081	-.166	.127	-.072
P	.864	.001	.004	.169	.585	.258	.391	.625
N	48	48	48	48	48	48	48	48
Perceived Mating Success[4]								
Pearson r	-.064	-.348*	-.123	.488*	.549**	-.314*	-.098	-.086
P	.667	.015	.404	.000	.000	.030	.506	.562
N	48	48	48	48	48	48	48	48
MSS-1 ST[5]								
Pearson r	-.471**	-.281	.156	.238	-.069	-.044	-.251	-.268
P	.010	.140	.419	.215	.723	.820	.189	.159
N	29	29	29	29	29	29	29	29
MSS-1 LT								
Pearson r	-.477**	-.308	-.014	.020	.001	.270	-.314	.155
P	.003	.064	.932	.908	.996	.106	.059	.359
N	37	37	37	37	37	37	37	37
MSS-2 ST[6]								
Pearson r	-.106	-.234	-.229	.262	.126	-.241	-.020	.069
P	.549	.182	.192	.135	.476	.170	.912	.697
N	34	34	34	34	34	34	34	34
MSS-2 LT								
Pearson r	-.073	-.242	-.213	.319	.082	-.179	-.029	-.022
P	.680	.169	.227	.066	.645	.312	.873	.904
N	34	34	34	34	34	34	34	34

* Correlation significant at the .05 level (2-tailed)
** Correlation significant at the .01 level (2-tailed)

ST = short-term sexual relationship (less than one month)
LT = long-term sexual relationship (more than one year)

[1]Lower numbers mean *more* preference for short-term sexual relationships and higher numbers mean *more* preference for long-term sexual relationships.
[2]Actual number of short-term (less than one month) partners
[3]Actual number of long-term (more than one year) partners
[4]A participant's perception of his/her own desirability as a sexual partner
[5]MSS-1 = Behavioral version of scale
[6]MSS-2 = Perceptions of partner

Table 5

Pearson r correlations for all Predictor and Outcome variables for Females (excluding FA)

	Age	Humor	Extraversion	Self-Esteem	Mating Preference[1]	IQ	Theory of Mind
Age							
Pearson r	-						
P							
N							
Humor							
Pearson r	-.056	-					
P	.434						
N	199						
Extraversion							
Pearson r	-.136	.268**	-				
P	.055	.000					
N	200	201					
Self-Esteem							
Pearson r	.057	.058	.459**	-			
P	.420	.416	.000				
N	200	201	202				
Mating Preference							
Pearson r	.088	.049	-.088	-.024	-		
P	.217	.492	.213	.730			
N	200	201	202	202			
IQ							
Pearson r	.075	.101	-.034	.064	.045	-	
P	.295	.152	.630	.366	.525		
N	199	201	201	201	201		
Theory of Mind							
Pearson r	.039	.148*	-.031	-.056	-.038	.272**	-
P	.595	.042	.670	442	.600	.000	
N	187	189	189	189	189	189	
Actual ST[2]							
Pearson r	.141*	-.019	.063	.075	-.266**	.046	.080
P	.048	.786	.372	.289	.000	.515	.276
N	198	199	200	200	200	199	188

	Age	Humor	Extraversion	Self-Esteem	Mating Preference	IQ	Theory of Mind
Actual LT[3]							
Pearson r	.438**	-.143*	-.029	.145*	-.068	.066	.052
P	.000	.043	.681	.040	.334	.350	.475
N	199	200	201	201	201	200	188
Perceived Mating Success[4]							
Pearson r	-.132	.007	.331**	.428**	-.167*	-.089	-.007
P	.063	.924	.000	.000	.017	.208	.927
N	200	201	202	201	202	201	189
MSS-1 ST[5]							
Pearson r	-.002	.160	.126	.006	-.210*	-.092	-.060
P	.978	.066	.148	.942	.015	.290	.491
N	131	133	133	133	133	133	133
MSS-1 LT							
Pearson r	-.027	-.087	.052	.001	.189*	.004	-.041
P	.728	.262	.502	.989	.014	.960	.601
N	167	169	169	169	169	169	167
MSS-2 ST[6]							
Pearson r	-.055	-.048	.182*	.014	-.158	-.052	.006
P	.539	.596	.041	.876	.076	.562	.949
N	125	127	127	127	127	127	126
MSS-2 LT							
Pearson r	-.119	-.073	.216*	-.046	-.102	-.037	-.036
P	.186	.416	.015	.611	.252	.676	.693
N	125	127	127	127	127	127	126

* Correlation significant at the .05 level (2-tailed)
** Correlation significant at the .01 level (2-tailed)

ST = short-term sexual relationship (less than one month)
LT = long-term sexual relationship (more than one year)

[1]Lower numbers mean *more* preference for short-term sexual relationships and higher numbers mean *more* preference for long-term sexual relationships.
[2]Actual number of short-term (less than one month) partners
[3]Actual number of long-term (more than one year) partners
[4]A participant's perception of his/her own desirability as a sexual partner
[5]MSS-1 = Behavioral version of scale
[6]MSS-2 = Perceptions of partner

Table 6

Pearson r correlations for all indices of Mating Success (All DV's) for Males (excluding FA)

	Actual ST[1]	Actual LT[2]	Perceived Mating Success[3]	MSS-1 ST[4]	MSS-1 LT	MSS-2 ST[5]	MSS-2 LT
Actual ST							
Pearson r	-						
P							
N							
Actual LT							
Pearson r	.306*	-					
P	.032						
N	49						
Perceived Mating Success							
Pearson r	.253	.103	-				
P	.080	.483					
N	49	49					
MSS-1 ST							
Pearson r	.381*	-.054	.267	-			
P	.034	.771	.146				
N	31	31	31				
MSS-1 LT							
Pearson r	-.014	.133	.108	-.023	-		
P	.928	.406	.489	.905			
N	41	41	43	30			
MSS-2 ST							
Pearson r	.379*	.054	.355*	.321	-.100	-	
P	.015	.737	.019	.084	.527		
N	41	41	43	30	42		
MSS-2 LT							
Pearson r	.308	.079	.418**	.306	-.027	.923**	-
P	.050	.621	.005	.100	.863	.000	
N	41	41	43	30	42	43	

* Correlation significant at the .05 level (2-tailed)

** Correlation significant at the .01 level (2-tailed)

ST = short-term sexual relationship (less than one month)
LT = long-term sexual relationship (more than one year)

[1] Actual number of short-term (less than one month) partners
[2]Actual number of long-term (more than one year) partners
[3]A participant's perception of his/her own desirability as a sexual partner
[4]MSS-1 = Behavioral version of scale
[5]MSS-2 = Perceptions of partner

Table 7

Pearson r correlations for all indices of Mating Success (All DV's) for Females (excluding FA)

	Actual ST[1]	Actual LT[2]	Perceived Mating Success[3]	MSS-1 ST[4]	MSS-1 LT	MSS-2 ST[5]	MSS-2 LT
Actual ST							
Pearson r	-						
P							
N							
Actual LT							
Pearson r	.231**	-					
P	.001						
N	200						
Perceived Mating Success							
Pearson r	.189**	.191**	-				
P	.007	.006					
N	200	201					
MSS-1 ST							
Pearson r	.025	.068	.132	-			
P	.774	.438	.129				
N	132	132	133				
MSS-1 LT							
Pearson r	.010	.159*	.144	.124	-		
P	.893	.039	.062	.167			
N	168	168	169	125			
MSS-2 ST							
Pearson r	.294**	.102	.165	.097	.009	-	
P	.001	.256	.063	.346	.922		
N	126	126	127	97	122		
MSS-2 LT							
Pearson r	.207*	.120	.110	.173	.108	.899**	-
P	.020	.180	.220	.089	.238	.000	
N	126	126	127	97	122	127	

* Correlation significant at the .05 level (2-tailed)

** Correlation significant at the .01 level (2-tailed)

ST = short-term sexual relationship (less than one month)
LT = long-term sexual relationship (more than one year)

[1] Actual number of short-term (less than one month) partners
[2]Actual number of long-term (more than one year) partners
[3]A participant's perception of his/her own desirability as a sexual partner
[4]MSS-1 = Behavioral version of scale
[5]MSS-2 = Perceptions of partner

Table 8

Means and Standard Deviations for all predictor and outcome variables For Multiple Regression predicting 'Actual Short-term Mating Success' for Males (including FA)

	Mean	SD	N
FA	.00	.00	16
Age	29.25	11.64	16
Humor	95.00	13.04	16
Extraversion	36.75	5.47	16
Self-Esteem	32.25	4.37	16
Mating Preference	41.13	6.76	16
IQ	22.06	3.87	16
Theory of Mind	24.06	4.40	16
Actual-ST	5.06	12.23	16

Multiple Regression Predicting 'Actual Short-term Mating Success' for Males from Predictor Variables (including FA)

Criterion Variable: Actual Short-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
FA	-16061.60	-.21	.02	-.50	
Age	-.12	-.12	.01	-.27	
Humor	-.08	-.09	.01	-.23	
Extraversion	.02	.01	.00	.02	
Self-Esteem	.11	.04	.00	.09	
Mating Preference	.17	.09	.00	.16	
IQ	.33	.11	.00	.19	
Theory of Mind	-1.83	-.66	.25	-1.59	
					R^2 = .31
					Adj. R^2 = -.49

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Long-term Mating Success' for Males (including FA)

	Mean	SD	N
FA	.00	.00	16
Age	29.25	11.64	16
Humor	95.00	13.04	16
Extraversion	36.75	5.47	16
Self-Esteem	32.25	4.37	16
Mating Preference	41.13	6.76	16
IQ	22.06	3.87	16
Theory of Mind	24.06	4.40	16
Actual-LT	1.94	1.06	16

Multiple Regression Predicting 'Actual Long-term Mating Success' for Males from Predictor Variables (including FA)

Criterion Variable: Actual Long-term Mating Success

Predictor Variables	b	B	sr²	t-score	
FA	-2939.43	-.43	.11	-1.32	
Age	.03	.32	.06	.96	
Humor	.01	.11	.01	.35	
Extraversion	-.01	-.04	.00	-.14	
Self-Esteem	-.01	-.06	.00	-.15	
Mating Preference	-.10	-.61	.11	-1.34	
IQ	.10	.37	.04	.84	
Theory of Mind	-.03	-.10	.01	-.32	
					$R^2 = .57$
					Adj. $R^2 = .07$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Self-Perceived Mating Success' for Males (including FA)

	Mean	SD	N
FA	.00	.00	18
Age	30.06	12.69	18
Humor	94.11	12.81	18
Extraversion	37.33	5.51	18
Self-Esteem	32.72	4.42	18
Mating Preference	41.44	6.64	18
IQ	21.44	4.09	18
Theory of Mind	24.17	4.20	18
Self-Perceived Mating Success	38.56	6.65	18

Multiple Regression Predicting 'Self-Perceived Mating Success' for Males from Predictor Variables (including FA)

Criterion Variable: Self-Perceived Mating Success

Predictor Variables	b	B	sr^2	t-score
FA	8485.00	.20	.03	.63
Age	-.09	-.16	.02	-.48
Humor	.11	.21	.03	.61
Extraversion	.24	.20	.02	.59
Self-Esteem	.28	.19	.01	.43
Mating Preference	.10	.10	.00	.25
IQ	.06	.04	.00	.09
Theory of Mind	-.62	-.39	.09	-1.14

$R^2 = .36$
Adj. $R^2 = -.21$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Short-term' for Males (including FA)

	Mean	SD	N
FA	.00	.00	11
Age	32.45	12.87	11
Humor	95.55	10.71	11
Extraversion	37.36	5.54	11
Self-Esteem	32.09	3.94	11
Mating Preference	40.00	7.48	11
IQ	21.64	4.46	11
Theory of Mind	23.64	4.59	11
MSS-1 Short-term	20.18	10.36	11

Multiple Regression Predicting 'MSS-1 Short-term' for Males from Predictor Variables (including FA)

Criterion Variable: MSS-1 Short-term

Predictor Variables	b	B	sr²	t-score	
FA	48625.73	.79	.12	.67	
Age	.03	.03	.00	.03	
Humor	-.41	-.43	.05	-.44	
Extraversion	-.11	-.06	.00	-.07	
Self-Esteem	-.55	-.21	.01	-.14	
Mating Preference	.87	.63	.10	.60	
IQ	-.17	-.07	.00	-.07	
Theory of Mind	-.39	-.17	.00	-.13	
					R^2 = .47
					Adj. R^2 = -1.65

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Long-term' for Males (including FA)

	Mean	SD	N
FA	.00	.00	17
Age	30.53	12.92	17
Humor	95.88	10.70	17
Extraversion	37.00	5.49	17
Self-Esteem	32.47	4.42	17
Mating Preference	41.29	6.82	17
IQ	21.35	4.20	17
Theory of Mind	24.12	4.33	17
MSS-1 Long-term	32.29	5.32	17

Multiple Regression Predicting 'MSS-1 Long-term' for Males from Predictor Variables (including FA)

Criterion Variable: MSS-1 Long-term

Predictor Variables	b	B	sr^2	t-score	
FA	-952.10	-.03	.00	-.08	
Age	.16	.39	.07	1.03	
Humor	.15	.31	.03	.66	
Extraversion	.03	.04	.00	.10	
Self-Esteem	.28	.23	.02	.54	
Mating Preference	.55	.70	.20	1.80	
IQ	.12	.09	.00	.24	
Theory of Mind	-.41	-.33	.06	-.95	
					$R^2 = .50$
					Adj. $R^2 = -.01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Short-term' for Males (including FA)

	Mean	SD	N
FA	.00	.00	17
Age	30.53	12.92	17
Humor	95.88	10.70	17
Extraversion	37.00	5.49	17
Self-Esteem	32.47	4.42	17
Mating Preference	41.29	6.82	17
IQ	21.35	4.20	17
Theory of Mind	24.12	4.33	17
MSS-2 Short-term	39.59	12.77	17

Multiple Regression Predicting 'MSS-2 Short-term' for Males from Predictor Variables (including FA)

Criterion Variable: MSS-2 Short-term

Predictor Variables	b	B	sr^2	t-score	
FA	-29749.79	-.37	.07	-.88	
Age	.39	.39	.01	.88	
Humor	.25	.21	.01	.37	
Extraversion	.44	.19	.02	.47	
Self-Esteem	.61	.21	.01	.41	
Mating Preference	-.77	-.41	.07	-.89	
IQ	1.87	.61	.16	1.34	
Theory of Mind	-1.01	-.34	.06	-.83	
					$R^2 = .30$
					Adj. $R^2 = -.41$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Long-term' for Males (including FA)

	Mean	SD	N
FA	.00	.00	17
Age	30.53	12.92	17
Humor	95.88	10.70	17
Extraversion	37.00	5.49	17
Self-Esteem	32.47	4.42	17
Mating Preference	41.29	6.82	17
IQ	21.35	4.20	17
Theory of Mind	24.12	4.33	17
MSS-2 Long-term	32.29	5.32	17

Multiple Regression Predicting 'MSS-2 Long-term' for Males from Predictor Variables (including FA)

Criterion Variable: MSS-2 Long-term

Predictor Variables	b	B	sr²	t-score	
FA	-12954.98	-.16	.01	-.38	
Age	.44	.44	.09	1.00	
Humor	.30	.25	.02	.46	
Extraversion	96	.41	.09	1.03	
Self-Esteem	.45	.16	.01	.30	
Mating Preference	-.43	-.23	.02	-.50	
IQ	1.32	.43	.08	.95	
Theory of Mind	-1.14	-.39	.08	-.94	
					R^2 = .30
					Adj. R^2 = -.40

Table 9

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Short-term Mating Success' for Males (excluding FA)

	Mean	SD	N
Age	26.36	9.55	44
Humor	94.20	11.26	44
Extraversion	36.14	5.91	44
Self-Esteem	30.64	5.07	44
Mating Preference	41.34	6.06	44
IQ	22.40	4.37	44
Theory of Mind	24.41	4.90	44
Actual-ST	3.61	8.31	44

Multiple Regression Predicting 'Actual Short-term Mating Success' for Males from Predictor Variables (excluding FA)

Criterion Variable: Actual Short-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
Age	.19	.21	.03	1.17	
Humor	-.03	-.04	.00	-.21	
Extraversion	.02	.01	.00	.07	
Self-Esteem	-.05	-.03	.00	-.19	
Mating Preference	.00	.00	.00	.01	
IQ	.20	.10	.01	.56	
Theory of Mind	-.40	-.24	.04	-1.29	
					R^2 = .10
					Adj. R^2 = -.08

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Long-term Mating Success' for Males (excluding FA)

	Mean	SD	N
Age	26.36	9.55	44
Humor	94.20	11.26	44
Extraversion	36.14	5.91	44
Self-Esteem	30.64	5.07	44
Mating Preference	41.34	6.06	44
IQ	22.40	4.37	44
Theory of Mind	24.41	4.90	44
Actual-LT	3.61	8.31	44

Multiple Regression Predicting 'Actual Long-term Mating Success' for Males from Predictor Variables (excluding FA)

Criterion Variable: Actual Long-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
Age	.09	.58	.26	4.08**	
Humor	.00	.02	.00	.15	
Extraversion	-.00	-.01	.00	-.09	
Self-Esteem	.03	.11	.01	.80	
Mating Preference	-.03	-.10	.01	-.73	
IQ	.07	.21	.03	1.47	
Theory of Mind	-.07	-.23	.04	-1.60	
					R^2 = .45**
					Adj. R^2 = .34**

** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Self-Perceived Mating Success' for Males (excluding FA)

	Mean	SD	N
Age	26.80	10.25	46
Humor	93.89	11.24	46
Extraversion	36.39	5.94	46
Self-Esteem	30.89	5.13	46
Mating Preference	41.46	6.04	46
IQ	22.15	4.46	46
Theory of Mind	24.43	4.81	46
Self-Perceived Mating Success	35.59	8.80	46

Multiple Regression Predicting 'Self-Perceived Mating Success' for Males from Predictor Variables (excluding FA)

Criterion Variable: Self-Perceived Mating Success

Predictor Variables	b	B	sr^2	t-score	
Age	.07	.08	.00	.53	
Humor	.02	.02	.00	.15	
Extraversion	.77	.52	.21	3.57**	
Self-Esteem	.13	.08	.00	.53	
Mating Preference	.11	.08	.00	.53	
IQ	-.26	-.13	.01	-.88	
Theory of Mind	-.35	-.19	.03	-1.26	
					R^2 = .36*
					Adj. R^2 = .24*

* $p < .05$
** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Short-term' for Males (excluding FA)

	Mean	SD	N
Age	27.41	11.10	29
Humor	94.69	9.35	29
Extraversion	37.14	6.31	29
Self-Esteem	31.17	4.66	29
Mating Preference	40.86	6.58	29
IQ	21.83	4.23	29
Theory of Mind	24.31	4.53	29
MSS-1 Short-term	17.62	7.88	29

Multiple Regression Predicting 'MSS-1 Short-term' for Males from Predictor Variables (excluding FA)

Criterion Variable: MSS-1 Short-term

Predictor Variables	b	B	sr^2	t-score	
Age	.24	.33	.07	1.33	
Humor	.13	.16	.02	.75	
Extraversion	.19	.15	.02	.64	
Self-Esteem	-.05	-.03	.00	-.12	
Mating Preference	-.09	-.07	.00	-.32	
IQ	.08	.04	.00	.19	
Theory of Mind	-.20	-.11	.01	-.50	
					R^2 = .14
					Adj. R^2 = -.14

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Long-term' for Males (excluding FA)

	Mean	SD	N
Age	27.49	10.89	39
Humor	94.92	10.01	39
Extraversion	36.62	6.13	39
Self-Esteem	31.56	4.69	39
Mating Preference	41.69	6.25	39
IQ	22.23	4.36	39
Theory of Mind	24.87	4.54	39
MSS-1 Long-term	30.08	7.22	39

Multiple Regression Predicting 'MSS-1 Long-term' for Males from Predictor Variables (excluding FA)

Criterion Variable: MSS-1 Long-term

Predictor Variables	b	B	sr^2	t-score	
Age	.27	.41	.12	2.24*	
Humor	.33	.45	.16	2.58*	
Extraversion	.06	.05	.00	.29	
Self-Esteem	.16	.10	.01	.61	
Mating Preference	.30	.26	.05	1.51	
IQ	-.08	-.05	.00	-.27	
Theory of Mind	.25	.16	.02	.89	
					$R^2 = .27$
					Adj. $R^2 = .10$

* $p < .05$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Short-term' for Males (excluding FA)

	Mean	SD	N
Age	27.41	10.91	39
Humor	95.03	9.88	39
Extraversion	36.44	6.13	39
Self-Esteem	31.31	4.71	39
Mating Preference	41.74	6.21	39
IQ	22.26	4.37	39
Theory of Mind	25.26	4.03	39
MSS-2 Short-term	40.46	11.72	39

Multiple Regression Predicting 'MSS-2 Short-term' for Males from Predictor Variables (excluding FA)

Criterion Variable: MSS-2 Short-term

Predictor Variables	b	B	sr^2	t-score	
Age	.12	.11	.01	.54	
Humor	.17	.14	.01	.73	
Extraversion	.45	.24	.04	1.25	
Self-Esteem	-.05	-.02	.00	-.12	
Mating Preference	.05	.03	.00	.14	
IQ	-.19	-.07	.00	-.33	
Theory of Mind	-.49	-.17	.02	-.83	
					R^2 = .13
					Adj. R^2 = -.06

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Long-term' for Males (excluding FA)

	Mean	SD	N
Age	27.41	10.91	39
Humor	95.03	9.88	39
Extraversion	36.44	6.13	39
Self-Esteem	31.31	4.71	39
Mating Preference	41.74	6.21	39
IQ	22.26	4.37	39
Theory of Mind	25.26	4.03	39
MSS-2 Long-term	42.92	11.67	39

Multiple Regression Predicting 'MSS-2 Long-term' for Males from Predictor Variables (excluding FA)

Criterion Variable: MSS-2 Long-term

Predictor Variables	b	B	sr^2	t-score	
Age	.19	.18	.02	.97	
Humor	.19	.16	.02	.91	
Extraversion	.67	.35	.10	1.98	
Self-Esteem	-.00	-.00	.00	-.01	
Mating Preference	.02	.01	.00	.07	
IQ	-.20	-.08	.00	-.38	
Theory of Mind	-.63	-.22	.03	-1.14	
					R^2 = .25
					Adj. R^2 = .08

Table 10

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Short-term Mating Success' for Females (including FA)

	Mean	SD	N
FA	.00	.00	48
Age	21.25	5.87	48
Humor	92.08	15.39	48
Extraversion	36.90	5.87	48
Self-Esteem	30.23	5.25	48
Mating Preference	45.83	6.72	48
IQ	20.56	4.74	48
Theory of Mind	25.06	4.45	48
Actual-ST Mating Success	1.67	2.57	48

Multiple Regression Predicting 'Actual Short-term Mating Success' for Females from Predictor Variables (including FA)

Criterion Variable: Actual Short-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
FA	-323.52	-.03	.00	-.20	
Age	.17	.39	.13	2.95**	
Humor	-.03	-.19	.03	-1.43	
Extraversion	.08	.19	.02	1.22	
Self-Esteem	-.13	-.27	.06	-1.96	
Mating Preference	-.15	-.38	.12	-2.79**	
IQ	-.00	-.00	.00	-.02	
Theory of Mind	-.04	-.06	.00	-.45	
					R^2 = .41**
					Adj. R^2 = .28**

** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Long-term Mating Success' for Females (including FA)

	Mean	SD	N
FA	.00	.00	48
Age	21.25	5.87	48
Humor	92.08	15.39	48
Extraversion	36.90	5.87	48
Self-Esteem	30.23	5.25	48
Mating Preference	45.83	6.72	48
IQ	20.56	4.74	48
Theory of Mind	25.06	4.45	48
Actual-LT Mating Success	1.13	1.08	48

Multiple Regression Predicting 'Actual Long-term Mating Success' for Females from Predictor Variables (including FA)

Criterion Variable: Actual Long-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
FA	-460.70	-.09	.01	-.70	
Age	.09	.48	.20	3.73**	
Humor	-.03	-.39	.13	-3.01**	
Extraversion	-.01	-.06	.00	-.41	
Self-Esteem	.01	.06	.00	.42	
Mating Preference	-.02	-.11	.01	-.86	
IQ	.04	.15	.02	1.17	
Theory of Mind	-.01	-.05	.00	-.38	
					R^2 = .45**
					Adj. R^2 = .33**

** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Self-Perceived Mating Success' for Females (including FA)

	Mean	SD	N
FA	.00	.00	48
Age	21.25	5.87	48
Humor	92.08	15.39	48
Extraversion	36.90	5.87	48
Self-Esteem	30.23	5.25	48
Mating Preference	45.83	6.72	48
IQ	20.56	4.74	48
Theory of Mind	25.06	4.45	48
Self-Perceived Mating Success	39.08	9.71	48

Multiple Regression Predicting 'Self-Perceived Mating Success' for Females from Predictor Variables (including FA)

Criterion Variable: Self-Perceived Mating Success

Predictor Variables	b	B	sr^2	t-score	
FA	-2332.67	-.05	.00	-.43	
Age	-.43	-.26	.06	-2.20*	
Humor	-.02	-.04	.00	-.31	
Extraversion	.41	.25	.04	1.79	
Self-Esteem	.84	.45	.17	3.71**	
Mating Preference	-.27	-.19	.03	-1.54	
IQ	.09	.04	.00	.35	
Theory of Mind	-.01	-.00	.00	-.03	
					R^2 = .52**
					Adj. R^2 = .43**

* p < .05
** p < .01

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Short-term' for Females (including FA)

	Mean	SD	N
FA	.00	.00	29
Age	21.24	5.83	29
Humor	88.76	15.98	29
Extraversion	37.34	6.79	29
Self-Esteem	30.31	5.29	29
Mating Preference	43.38	7.06	29
IQ	20.00	5.16	29
Theory of Mind	24.52	4.20	29
MSS-1 Short-term	16.17	7.45	29

Multiple Regression Predicting 'MSS-1 Short-term' for Females from Predictor Variables (including FA)

Criterion Variable: MSS-1 Short-term

Predictor Variables	b	B	sr^2	t-score	
FA	-14657.05	-.41	.10	-1.85	
Age	-.31	-.24	.03	-1.04	
Humor	.08	.17	.02	.89	
Extraversion	-.03	-.03	.00	-.09	
Self-Esteem	-.20	-.01	.00	-.06	
Mating Preference	.04	.04	.00	.21	
IQ	-.14	-.10	.01	-.46	
Theory of Mind	-.40	-.23	.03	-1.01	
					R^2 = .41
					Adj. R^2 = .17

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Long-term' for Females (including FA)

	Mean	SD	N
FA	.00	.00	37
Age	21.51	6.56	37
Humor	89.81	16.35	37
Extraversion	36.54	6.34	37
Self-Esteem	30.19	5.46	37
Mating Preference	45.81	7.36	37
IQ	20.51	5.00	37
Theory of Mind	24.84	4.23	37
MSS-1 Long-term	32.05	6.32	37

Multiple Regression Predicting 'MSS-1 Long-term' for Females from Predictor Variables (including FA)

Criterion Variable: MSS-1 Long-term

Predictor Variables	b	B	sr^2	t-score	
FA	-15051.24	-.49	.19	-3.33**	
Age	-.19	-.20	.03	-1.41	
Humor	-.01	-.03	.00	-.23	
Extraversion	.15	.15	.01	.81	
Self-Esteem	-.00	-.00	.00	-.02	
Mating Preference	.26	.31	.08	2.09*	
IQ	-.32	-.25	.04	-1.57	
Theory of Mind	.56	.38	.10	2.28*	
					R^2 = .51**
					Adj. R^2 = .37**

* $p < .05$
** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Short-term' for Females (including FA)

	Mean	SD	N
FA	.00	.00	34
Age	20.82	5.47	34
Humor	90.26	15.04	34
Extraversion	37.35	6.27	34
Self-Esteem	30.44	5.26	34
Mating Preference	45.09	7.49	34
IQ	19.85	4.82	34
Theory of Mind	24.38	4.26	34
MSS-2 Short-term	38.32	11.35	34

Multiple Regression Predicting 'MSS-2 Short-term' for Females from Predictor Variables (including FA)

Criterion Variable: MSS-2 Short-term

Predictor Variables	b	B	sr^2	t-score	
FA	-4400.48	-.08	.00	-.41	
Age	-.33	-.16	.02	-.75	
Humor	-.23	-.30	.07	-1.52	
Extraversion	.71	.39	.08	1.60	
Self-Esteem	-.24	-.11	.01	-.56	
Mating Preference	-.20	-.13	.01	-.70	
IQ	.26	.11	.01	.57	
Theory of Mind	.75	.28	.05	1.33	
					$R^2 = .25$
					Adj. $R^2 = .02$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Long-term' for Females (including FA)

	Mean	SD	N
FA	.00	.00	34
Age	20.82	5.47	34
Humor	90.26	15.04	34
Extraversion	37.35	6.27	34
Self-Esteem	30.44	5.26	34
Mating Preference	45.09	7.49	34
IQ	19.85	4.82	34
Theory of Mind	24.38	4.26	34
MSS-2 Long-term	39.21	11.44	34

Multiple Regression Predicting 'MSS-2 Long-term' for Females from Predictor Variables (including FA)

Criterion Variable: MSS-2 Long-term

Predictor Variables	b	B	sr^2	t-score	
FA	-2661.83	-.05	.00	-.24	
Age	-.39	-.19	.02	-.86	
Humor	-.24	-.32	.08	-1.60	
Extraversion	.79	.43	.12	1.75	
Self-Esteem	-.39	-.18	.02	-.89	
Mating Preference	-.10	-.07	.00	-.35	
IQ	.30	.13	.01	.63	
Theory of Mind	.51	.19	.02	.90	
					R^2 = .24
					Adj. R^2 = .00

Table 11

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Short-term Mating Success' for Females (excluding FA)

	Mean	SD	N
Age	21.67	4.94	186
Humor	92.73	12.89	186
Extraversion	36.52	6.21	186
Self-Esteem	29.94	4.77	186
Mating Preference	46.40	6.22	186
IQ	20.17	4.41	186
Theory of Mind	24.90	4.23	186
Actual-ST	2.01	3.12	186

Multiple Regression Predicting 'Actual Short-term Mating Success' for Females from Predictor Variables (excluding FA)

Criterion Variable: Actual Short-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
Age	.14	.23	.05	3.19**	
Humor	-.01	-.04	.00	-.54	
Extraversion	.02	.03	.00	.41	
Self-Esteem	-.04	-.05	.00	-.66	
Mating Preference	-.15	-.31	.09	-4.30**	
IQ	.01	.02	.00	.28	
Theory of Mind	.02	.03	.00	.38	
					$R^2 = .14$**
					Adj. $R^2 = .11$**

** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Actual Long-term Mating Success' for Females (excluding FA)

	Mean	SD	N
Age	21.67	4.94	186
Humor	92.73	12.89	186
Extraversion	36.52	6.21	186
Self-Esteem	29.94	4.77	186
Mating Preference	46.40	6.22	186
IQ	20.17	4.41	186
Theory of Mind	24.90	4.23	186
Actual-LT	1.45	1.31	186

Multiple Regression Predicting 'Actual Long-term Mating Success' for Females from Predictor Variables (excluding FA)

Criterion Variable: Actual Long-term Mating Success

Predictor Variables	b	B	sr^2	t-score	
Age	.11	.42	.17	6.24**	
Humor	-.01	-.13	.02	-1.86	
Extraversion	-.00	-.00	.00	-.05	
Self-Esteem	.04	.14	.02	1.90	
Mating Preference	-.02	-.08	.01	-1.18	
IQ	.00	.01	.00	.14	
Theory of Mind	.02	.06	.00	.79	
					$R^2 = .23$**
					Adj. $R^2 = .20$**

** $p < .01$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'Self-Perceived Mating Success' for Females (excluding FA)

	Mean	SD	N
Age	21.67	4.93	187
Humor	92.74	12.86	187
Extraversion	36.51	6.20	187
Self-Esteem	29.93	4.76	187
Mating Preference	46.39	6.21	187
IQ	20.12	4.45	187
Theory of Mind	24.90	4.22	187
Self-Perceived Mating Success	37.70	9.29	187

Multiple Regression Predicting 'Self-Perceived Mating Success' for Females from Predictor Variables (excluding FA)

Criterion Variable: Self-Perceived Mating Success

Predictor Variables	b	B	sr^2	t-score	
Age	-.20	-.11	.01	-1.63	
Humor	-.05	-.07	.00	-.96	
Extraversion	.22	.15	.01	1.91	
Self-Esteem	.76	.39	.11	5.25**	
Mating Preference	-.16	-.11	.01	-1.66	
IQ	-.23	-.11	.01	-1.61	
Theory of Mind	.13	.06	.00	.90	
					R^2 = .26**
					Adj. R^2 = .24**

** p < .01

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Short-term' for Females (excluding FA)

	Mean	SD	N
Age	21.84	5.24	131
Humor	92.12	13.17	131
Extraversion	37.00	6.20	131
Self-Esteem	30.05	4.62	131
Mating Preference	45.33	6.72	131
IQ	20.00	4.45	131
Theory of Mind	24.81	4.31	131
MSS-1 Short-term	16.41	7.97	131

Multiple Regression Predicting 'MSS-1 Short-term' for Females from Predictor Variables (excluding FA)

Criterion Variable: MSS-1 Short-term

Predictor Variables	b	B	sr^2	t-score	
Age	-.02	-.01	.00	-.12	
Humor	.10	.17	.03	1.87	
Extraversion	.12	.10	.01	.90	
Self-Esteem	-.16	-.09	.01	-.88	
Mating Preference	-.23	-.19	.03	-2.17*	
IQ	-.05	-.03	.00	-.30	
Theory of Mind	-.14	-.08	.00	-.80	
					$R^2 = .08$
					Adj. $R^2 = .03$

* $p < .05$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-1 Long-term' for Females (excluding FA)

	Mean	SD	N
Age	21.86	5.18	165
Humor	92.17	13.17	165
Extraversion	36.47	6.28	165
Self-Esteem	30.01	4.74	165
Mating Preference	46.56	6.35	165
IQ	19.89	4.41	165
Theory of Mind	24.79	4.14	165
MSS-1 Long-term	31.17	8.03	165

Multiple Regression Predicting 'MSS-1 Long-term' for Females from Predictor Variables (excluding FA)

Criterion Variable: MSS-1 Long-term

Predictor Variables	b	B	sr^2	t-score	
Age	-.07	-.04	.00	-.54	
Humor	-.08	-.13	.02	-1.62	
Extraversion	.21	.16	.02	1.73	
Self-Esteem	-.18	-.11	.01	-1.17	
Mating Preference	.24	.19	.03	2.38*	
IQ	-.05	-.03	.00	-.36	
Theory of Mind	.04	.02	.00	.25	
					$R^2 = .06$
					Adj. $R^2 = .02$

* $p < .05$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Short-term' for Females (excluding FA)

	Mean	SD	N
Age	21.74	5.21	124
Humor	91.80	12.86	124
Extraversion	26.39	6.36	124
Self-Esteem	29.95	4.87	124
Mating Preference	46.05	6.61	124
IQ	20.06	4.15	124
Theory of Mind	24.46	4.10	124
MSS-2 Short-term	39.55	11.39	124

Multiple Regression Predicting 'MSS-2 Short-term' for Females from Predictor Variables (excluding FA)

Criterion Variable: MSS-2 Short-term

Predictor Variables	b	B	sr^2	t-score	
Age	-.06	-.03	.00	-.29	
Humor	-.11	-.12	.01	-.17	
Extraversion	.45	.25	.05	2.38*	
Self-Esteem	-.27	-.11	.01	-1.11	
Mating Preference	-.21	-.12	.01	-1.33	
IQ	-.07	-.03	.00	-.28	
Theory of Mind	.04	.01	.00	.15	
					$R^2 = .08$
					Adj. $R^2 = .02$

* $p < .05$

Means and Standard Deviations for all predictor and outcome variables for Multiple Regression predicting 'MSS-2 Long-term' for Females (excluding FA)

	Mean	SD	N
Age	21.74	5.21	124
Humor	91.80	12.86	124
Extraversion	26.39	6.36	124
Self-Esteem	29.95	4.87	124
Mating Preference	46.05	6.61	124
IQ	20.06	4.15	124
Theory of Mind	24.46	4.10	124
MSS-1 Long-term	40.88	10.73	124

Multiple Regression Predicting 'MSS-2 Long-term' for Females from Predictor Variables (excluding FA)

Criterion Variable: MSS-2 Long-term

Predictor Variables	b	B	sr^2	t-score	
Age	-.19	-.09	.01	-1.06	
Humor	-.15	-.17	.03	-1.86	
Extraversion	.58	.34	.08	3.32**	
Self-Esteem	-.48	-.22	.04	-2.15*	
Mating Preference	-.10	-.06	.00	-.72	
IQ	.04	.01	.00	.16	
Theory of Mind	-.06	-.02	.00	-.26	
					R^2 = .12*
					Adj. R^2 = .07*

* $p < .05$
** $p < .01$

Table 12

Descriptive Statistics for 'Self-Perceived Mating Success' across levels of IQ and Mating Preference for Males

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		IQ		
		Low	High	Total
Mating Preference	Short-term	38.45 (7.78) [20]	31.00 (6.52) [9]	36.14 (8.10) [29]
	Long-term	32.22 (12.17) [9]	34.92 (7.14) [13]	33.82 (9.35) [22]
	Total	36.52 (9.59) [29]	33.32 (7.01) [22]	35.14 (8.65) [51]

Table 13

Descriptive Statistics for 'Self-Perceived Mating Success' across levels of TOM and Mating Preference for Males

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		TOM		
		Low	High	Total
Mating Preference	Short-term	39.06 (7.34) [18]	32.20 (6.97) [10]	36.61 (7.83) [28]
	Long-term	30.75 (11.45) [8]	35.50 (8.35) [12]	33.60 (9.71) [20]
	Total	36.50 (9.42) [26]	34.00 (7.76) [22]	35.35 (8.70) [48]

Table 14

Descriptive Statistics for 'Self-Perceived Mating Success' across levels of IQ and Mating Preference for Females

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		IQ		
		Low	High	Total
Mating Preference	Short-term	39.76 (8.15) [59]	35.49 (8.92) [49]	37.82 (8.73) [108]
	Long-term	36.57 (10.55) [51]	38.24 (9.14) [42]	37.32 (9.92) [93]
	Total	38.28 (9.43) [110]	36.76 (9.07) [91]	37.59 (9.28) [201]

Table 15

Descriptive Statistics for 'Actual Short-term Mating Success' across levels of IQ and Mating Preference for Females

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		IQ		
		Low	High	Total
Mating Preference	Short-term	2.71 (4.04) [58]a	2.69 (4.05) [48]a	2.70 (4.03) [106]
	Long-term	1.25 (2.09) [51]b	1.86 (4.79) [42]b	1.53 (3.56) [93]
	Total	2.03 (3.34) [109]	2.30 (4.41) [90]	2.15 (3.85) [199]

Table 16

Descriptive Statistics for 'Actual Short-term Mating Success' across levels of TOM and Mating Preference for Females

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		TOM		
		Low	High	Total
Mating Preference	Short-term	2.71 (3.32) [52]a	2.69 (4.64) [54]a	2.70 (4.03) [106]
	Long-term	1.25 (1.84) [53]b	1.90 (5.01) [40]b	1.53 (3.56) [93]
	Total	1.97 (2.77) [105]	2.35 (4.79) [94]	2.15 (3.85) [199]

Table 17

Descriptive Statistics for 'MSS Long-term' across levels of IQ and Mating Preference for Females

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		IQ		
		Low	High	Total
Mating Preference	Short-term	31.02 (9.91) [53]	27.17 (9.35) [36]	29.46 (9.82) [89]
	Long-term	31.84 (7.10) [45]	33.94 (2.87) [35]	32.76 (5.72) [80]
	Total	31.40 (8.70) [98]	30.51 (7.70) [71]	31.02 (8.28) [169]

Table 18

Descriptive Statistics for 'Actual Long-term Mating Success' across levels of IQ and Mating Preference for Females

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		IQ		
		Low	High	Total
Mating Preference	Short-term	1.59 (1.57) [58]	1.31 (1.25) [49]	1.46 (1.43) [107]
	Long-term	1.16 (.95) [51]	1.95 (1.31) [42]	1.52 (1.19) [93]
	Total	1.39 (1.33) [109]	1.60 (1.31) [91]	1.49 (1.32) [200]

Table 19

Descriptive Statistics for 'Actual Long-term Mating Success' across levels of TOM and Mating Preference for Females

(Standard Deviations are in Parentheses) [N for each cell are in brackets]

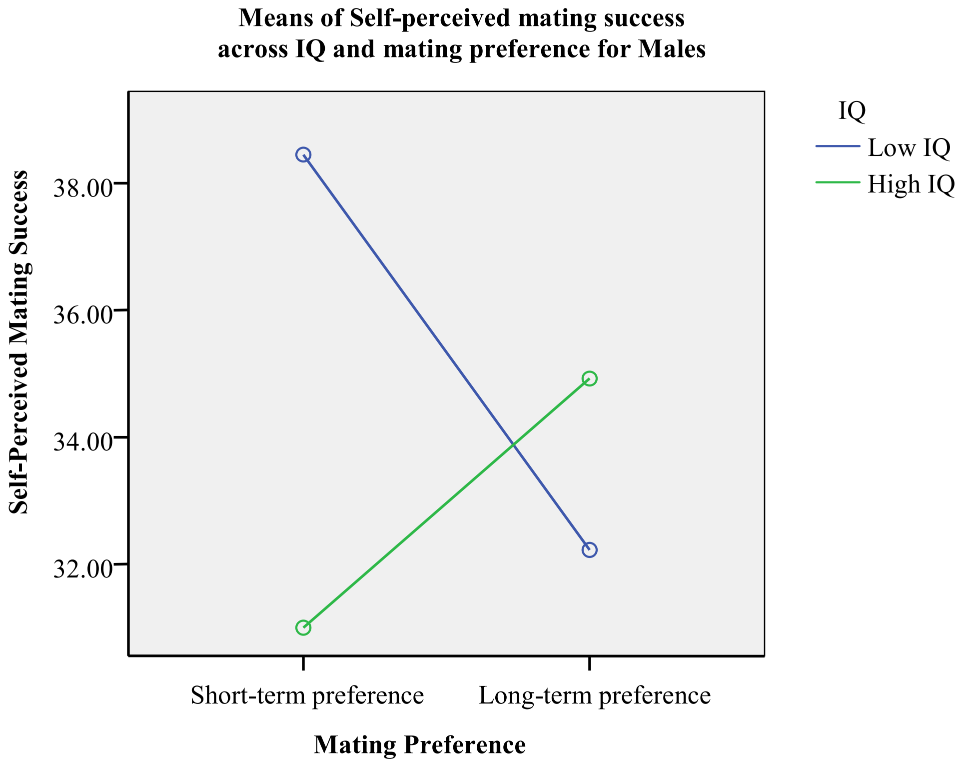
		TOM		
		Low	High	Total
Mating Preference	Short-term	1.58 (1.55) [52]	1.35 (1.31) [55]	1.46 (1.43) [107]
	Long-term	1.26 (.95) [53]	1.85 (1.35) [40]	1.52 (1.19) [93]
	Total	1.42 (1.30) [105]	1.56 (1.34) [95]	1.49 (1.32) [200]

Table 20

Descriptive Statistics for 'MSS Long-term' across levels of TOM and Mating Preference for Females
(Standard Deviations are in Parentheses) [N for each cell are in brackets]

		TOM		
		Low	High	Total
Mating Preference	Short-term	39.60 (9.33) [45]a	39.32 (10.40) [44]a	29.46 (9.82) [89]
	Long-term	32.65 (6.55) [48]b	32.94 (4.29) [32]b	32.76 (5.72) [80]
	Total	31.17 (8.12) [93]	30.84 (8.54) [76)	31.02 (8.28) [169]

Figure 1



Means of Self-perceived mating success
across IQ and mating preference for Males
IQ
Low IQ
High IQ
Self-Perceived Mating Success
38.00
36.00
34.00
32.00
Short-term preference
Long-term preference
Mating Preference

Figure 2

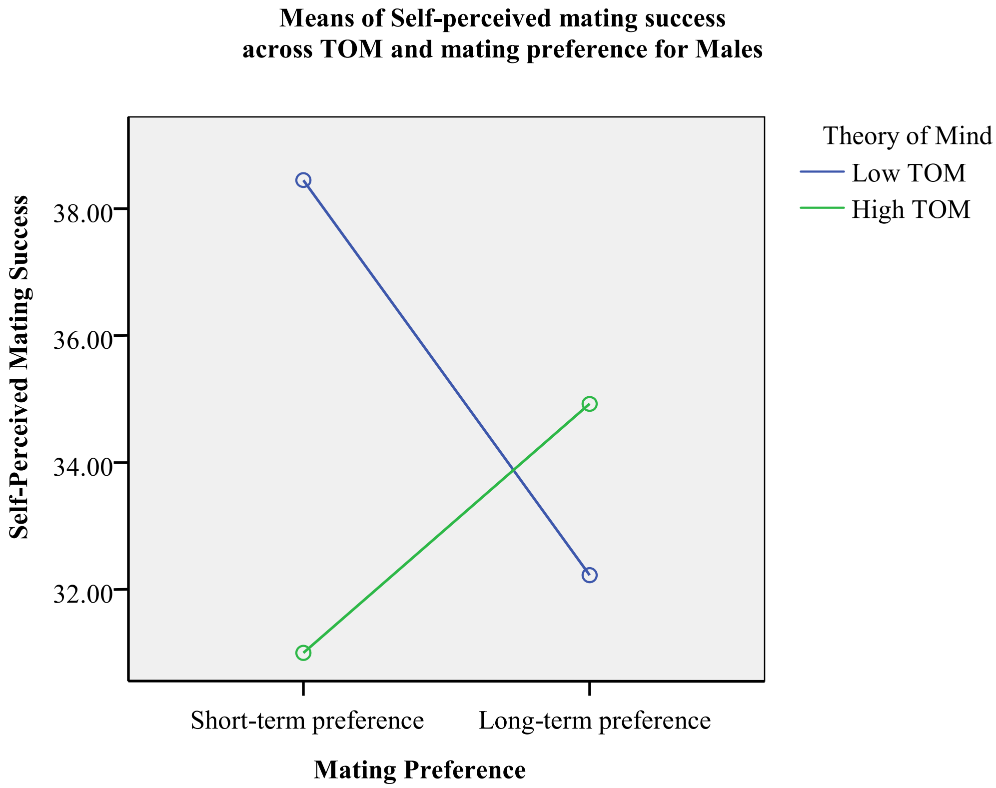

Means of Self-perceived mating success
across TOM and mating preference for Males
Self-Perceived Mating Success
38.00
36.00
34.00
32.00
Short-term preference
Long-term preference
Mating Preference
Theory of Mind
Low TOM
High TOM

Figure 3

Means of Self-perceived mating success
across IQ and mating preference for Females
Self-Perceived Mating Success
40.00
38.00
36.00
IQ
Low IQ
High IQ
Short-term Preference
Long-term Preference
Mating Preference

Figure 4

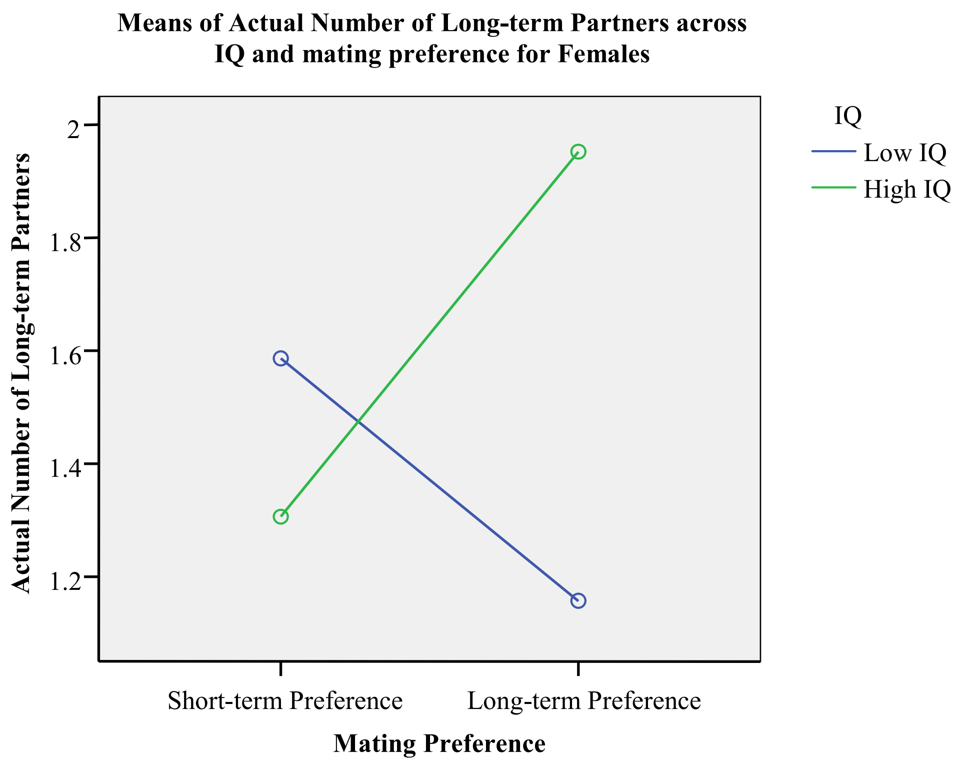

Means of Actual Number of Long-term Partners across
IQ and mating preference for Females
Actual Number of Long-term Partners
2
1.8
1.6
1.4
1.2
Short-term Preference
Long-term Preference
Mating Preference
IQ
Low IQ
High IQ

Figure 5

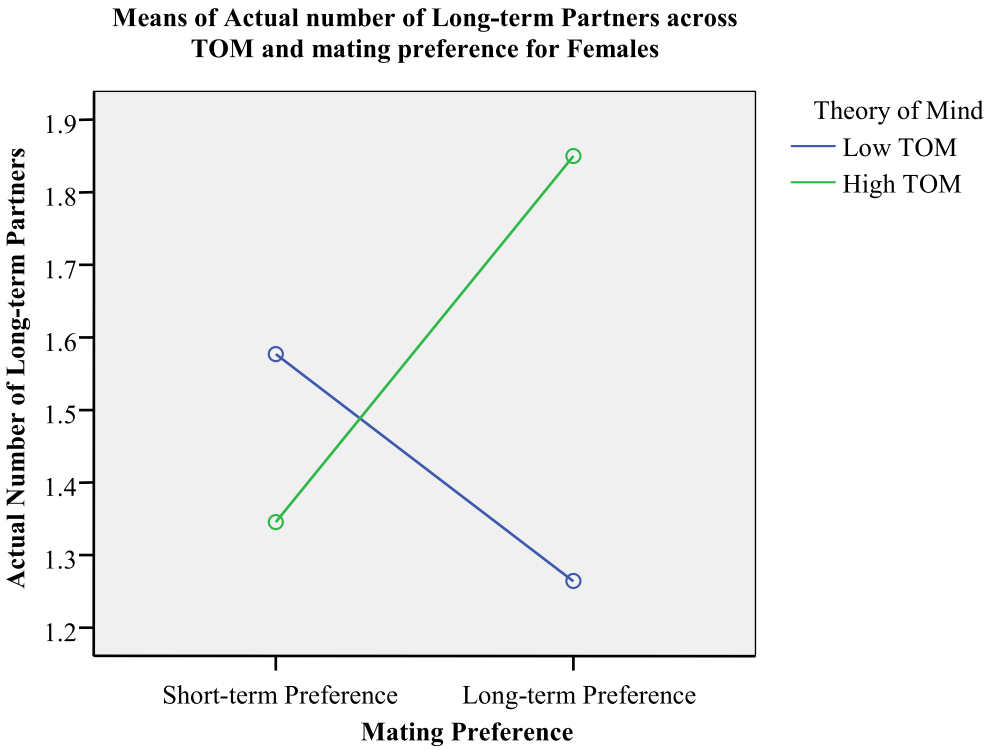
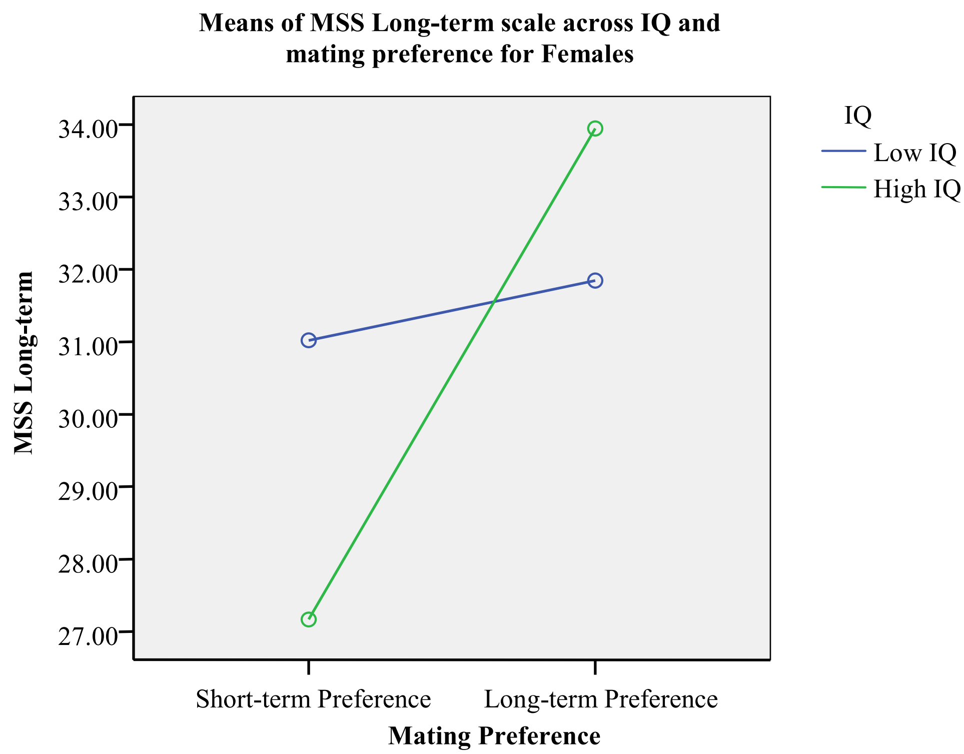

Means of Actual number of Long-term Partners across
TOM and mating preference for Females
Actual Number of Long-term Partners
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
Short-term Preference
Long-term Preference
Mating Preference
Theory of Mind
Low TOM
High TOM

Figure 6


Means of MSS Long-term scale across IQ and
mating preference for Females
MSS Long-term
34.00
33.00
32.00
31.00
30.00
29.00
28.00
27.00
Short-term Preference
Long-term Preference
Mating Preference
IQ
Low IQ
High IQ

APPENDIX A

<u>The Mating Success Scale (MSS)</u>

1. Please think of your *most recent* sexual relationship with a male lasting *LESS* than ***<u>one month</u>***
   Is this a current relationship?

   Yes No

2. Please think of your *most recent* sexual relationship with a male lasting *MORE* than ***<u>one year</u>***.
   Is this a current relationship?

   Yes No

<u>SubScale 1</u>

Below is a list of actions one might perform while in a sexual relationship.
Please indicate whether or not (Yes or No) the person in your most recent sexual relationship lasting less than one month (1-Month) and your most recent sexual relationship lasting more than one year (1-Year) has EVER done any of the following:

	1-Month		**1-Year**	
1. Let you in on a secret not many other people knew	Y	N	Y	N
2. Made you feel like you two were a team	Y	N	Y	N
3. Initiated sex with you	Y	N	Y	N
4. Enjoyed sex with you	Y	N	Y	N
5. Did what you wanted him/her to do in bed	Y	N	Y	N
6. Fulfilled your sexual desires	Y	N	Y	N
7. Cooked for you	Y	N	Y	N
8. *Listened to the music you wanted to, but he/she didn't want to	Y	N	Y	N
9. *Saw a movie that you wanted to see, but he/she didn't want to	Y	N	Y	N
10. Went somewhere with you that he/she really didn't want to go	Y	N	Y	N

	1-Month		1-Year	
11. Took care of you when you were sick, hurt, etc.	Y	N	Y	N
12. Hit you	Y	N	Y	N
13. Insulted you	Y	N	Y	N
14. Made you laugh	Y	N	Y	N
15. Gave in to a serious demand of yours	Y	N	Y	N
16. Saved you when you were in a jam	Y	N	Y	N
17. Gave you his/her undivided attention for a significant length of time	Y	N	Y	N
18. Gave you advice about a serious problem	Y	N	Y	N
19. Hung out with you and your friends	Y	N	Y	N
20. Left you to be with his/her friends	Y	N	Y	N
21. Left his/her friends to be with you	Y	N	Y	N
22. *Spontaneously called, IMed or text messaged you	Y	N	Y	N
23. Told you he/she loved you almost everyday	Y	N	Y	N
24. Wrote you "Love notes"	Y	N	Y	N
25. Traveled long distances to see you	Y	N	Y	N
26. Taken you to meet his/her mother	Y	N	Y	N

	1-Month		1-Year	
27. Taken you to meet his/her father	Y	N	Y	N
28. Introduced you to his/her best-friend(s)	Y	N	Y	N
29. Lied to you	Y	N	Y	N
30. Was able to empathize with you	Y	N	Y	N
31. Showed you that he/she cared about you	Y	N	Y	N
32. *Took you out to eat at a fancy restaurant	Y	N	Y	N
33. Spent a lot of money on you	Y	N	Y	N
34. *Spent more than $100 on a luxury item for you	Y	N	Y	N
35. Bought you a gift "just because"	Y	N	Y	N
36. Treated you specially when you two were alone	Y	N	Y	N
37. Gave you his/her sweater if you were cold	Y	N	Y	N
38. *Tipped well at a restaurant	Y	N	Y	N
39. Fought to "defend your honor"	Y	N	Y	N
40. Protected you when you were in trouble	Y	N	Y	N

SubScale 2

Below is a list of descriptions. Please use the scale below to indicate how well these statements describe the person in your most recent sexual relationship lasting less than one month and your most recent sexual relationship lasting more than one year.

1 = Strongly Disagree
2 = Disagree
3 = Neither Disagree or Agree
4 = Agree
5 = Strongly Agree

	1-Month					1-Year				
1. He/She knows what he/she wants in life and is motivated to get it	1	2	3	4	5	1	2	3	4	5
2. He/She works hard	1	2	3	4	5	1	2	3	4	5
3. He/She has above average intelligence	1	2	3	4	5	1	2	3	4	5
4. He/She is funny	1	2	3	4	5	1	2	3	4	5
5. He/She is a good singer	1	2	3	4	5	1	2	3	4	5
6. He/She has an attractive body	1	2	3	4	5	1	2	3	4	5
7. He/She has an attractive face	1	2	3	4	5	1	2	3	4	5
8. *He/She has a nice car	1	2	3	4	5	1	2	3	4	5
9. *He/She wears nice clothes	1	2	3	4	5	1	2	3	4	5
10. He/She smells nice	1	2	3	4	5	1	2	3	4	5
11. He/She is artistic	1	2	3	4	5	1	2	3	4	5
12. He/She is generous	1	2	3	4	5	1	2	3	4	5
13. He/She is moral	1	2	3	4	5	1	2	3	4	5

* = Culture Specific Variables

APPENDIX B

The Mating Success Scale (MSS)

1. Please think of your *most recent* sexual relationship with a male lasting *LESS* than ***one month***
   Is this a current relationship?

   Yes No

2. Please think of your *most recent* sexual relationship with a male lasting *MORE* than ***one year***.
   Is this a current relationship?

   Yes No

Below is a list of actions one might perform while in a sexual relationship.
Please indicate whether or not (Yes or No) the person in your most recent sexual relationship lasting less than one month (1-Month) and your most recent sexual relationship lasting more than one year (1-Year) has EVER done any of the following:

	1-Month		**1-Year**	
1. Let you in on a secret not many other people knew	Y	N	Y	N
2. Made you feel like you two were a team	Y	N	Y	N
3. Initiated sex with you	Y	N	Y	N
4. Enjoyed sex with you	Y	N	Y	N
5. Did what you wanted him/her to do in bed	Y	N	Y	N
6. Fulfilled your sexual desires	Y	N	Y	N
7. Cooked for you	Y	N	Y	N
8. *Listened to the music you wanted to, but he/she didn't want to	Y	N	Y	N
9. *Saw a movie that you wanted to see, but he/she didn't want to	Y	N	Y	N
10. Went somewhere with you that he/she really didn't want to go	Y	N	Y	N

	1-Month		1-Year	
11. Took care of you when you were sick, hurt, etc.	Y	N	Y	N
12. Hit you	Y	N	Y	N
13. Insulted you	Y	N	Y	N
14. Made you laugh	Y	N	Y	N
15. Gave in to a serious demand of yours	Y	N	Y	N
16. Saved you when you were in a jam	Y	N	Y	N
17. Gave you his/her undivided attention for a significant length of time	Y	N	Y	N
18. Gave you advice about a serious problem	Y	N	Y	N
19. Hung out with you and your friends	Y	N	Y	N
20. Left you to be with his/her friends	Y	N	Y	N
21. Left his/her friends to be with you	Y	N	Y	N
22. *Spontaneously called, IMed or text messaged you	Y	N	Y	N
23. Told you he/she loved you almost everyday	Y	N	Y	N
24. Wrote you "Love notes"	Y	N	Y	N
25. Traveled long distances to see you	Y	N	Y	N
26. Taken you to meet his/her mother	Y	N	Y	N

	1-Month		1-Year	
27. Taken you to meet his/her father	Y	N	Y	N
28. Introduced you to his/her best-friend(s)	Y	N	Y	N
29. Lied to you	Y	N	Y	N
30. Was able to empathize with you	Y	N	Y	N
31. Showed you that he/she cared about you	Y	N	Y	N
32. *Took you out to eat at a fancy restaurant	Y	N	Y	N
33. Spent a lot of money on you	Y	N	Y	N
34. *Spent more than $100 on a luxury item for you	Y	N	Y	N
35. Bought you a gift "just because"	Y	N	Y	N
36. Treated you specially when you two were alone	Y	N	Y	N
37. Gave you his/her sweater if you were cold	Y	N	Y	N
38. *Tipped well at a restaurant	Y	N	Y	N
39. Fought to "defend your honor"	Y	N	Y	N
40. Protected you when you were in trouble	Y	N	Y	N

* = Culture Specific Variables