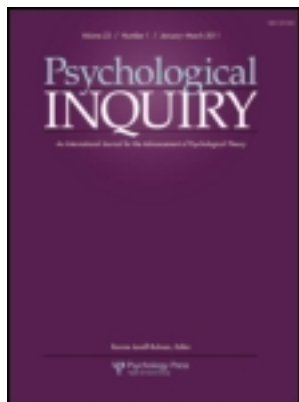


This article was downloaded by: [University of New Mexico]

On: 03 September 2013, At: 16:15

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Psychological Inquiry: An International Journal for the Advancement of Psychological Theory

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/hpli20>

### Mutual Mate Choice Models as the Red Pill in Evolutionary Psychology: Long Delayed, Much Needed, Ideologically Challenging, and Hard to Swallow

Geoffrey F. Miller<sup>a</sup>

<sup>a</sup> Department of Psychology, University of New Mexico, Albuquerque, New Mexico

Published online: 02 Sep 2013.

To cite this article: Geoffrey F. Miller (2013) Mutual Mate Choice Models as the Red Pill in Evolutionary Psychology: Long Delayed, Much Needed, Ideologically Challenging, and Hard to Swallow, Psychological Inquiry: An International Journal for the Advancement of Psychological Theory, 24:3, 207-210

To link to this article: <http://dx.doi.org/10.1080/1047840X.2013.817937>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

## Mutual Mate Choice Models as the Red Pill in Evolutionary Psychology: Long Delayed, Much Needed, Ideologically Challenging, and Hard to Swallow

Geoffrey F. Miller

*Department of Psychology, University of New Mexico, Albuquerque, New Mexico*

I agree with 90% of Stewart-Williams and Thomas's (SWT's; this issue) brilliant target article, and the 10% I don't agree with isn't important right now. So, I won't repeat SWT's compelling case for switching from the males-compete/females-choose (MCFC) model to the mutual mate choice (MMC) model as the main framework that we should use for understanding human sexual evolution. I also won't nitpick the few errors or exaggerations that other commentators will, no doubt, address.

Instead, I'd like to provide some intellectual and historical context that might help our field of evolutionary psychology (EP) swallow SWT's bittersweet pill. At the risk of mixing metaphors from Big Pharma and *The Matrix*, SWT is not a little Blue Pill that lets us carry on indulging our youthful sexual paleo-fantasies in our aging science. Rather, it is a big Red Pill that requires a deep rethinking of our worldview, a reprogramming of our research priorities, and a new level of ideological maturity. But it is a pill that could help to cure us of our slightly stale focus on sex differences, and move forward in a healthier condition as the world's most fascinating, progressive, and applicable science.

Once we acknowledge SWT's key point—that sexual selection could have played a central role in human evolution without either requiring or producing large sex differences—we can have all the benefits of using sexual selection theory to understand human nature, without the scientific costs of downplaying male mate choice and female competition, or the professional risks of sounding sexist and simplistic when we talk about human mating.

As SWT emphasize repeatedly, our field's leading mating theorist—David Buss—has been using a fruitful combination of MCFC and MMC for more than 25 years. He was a pioneer in applying Darwin's standard MCFC logic to explain sex differences in sexual desires, mating tactics, mate preferences, status seeking, risk taking, aggression, jealousy, and derogation of rivals. His dozens of studies using MCFC logic were crucial in challenging the blank slate dogma; in proving the utility of sexual selection theory in the human sciences; and in building bridges between psychology, anthropology, biology, genetics, and the social sciences. Yet Buss was also been a pioneer in advocating the

importance of MMC, and in researching paternal investment, male mate preferences, female competition, assortative mating, sexual conflict, and long-term commitment.

The problem was that many other evolutionary psychologists didn't share Buss's panoramic understanding of human mating from both the MCFC and MMC perspectives. It was easy to use MCFC logic as our Darwinian secret weapon to slay blank-slate dragons and to harvest low-hanging empirical fruit about sex differences. Some of us grew lazy and complacent as a result. We didn't follow Buss's lead, and we didn't integrate MCFC and MMC into a more coherent, nuanced, systematic theory of human mating.

One costly side effect of MCFC's dominance is that the mating chapters in current EP textbooks make rather confusing reading, and are awkward to assign if you want to include MMC logic in your lectures. We all know this if we teach EP, though we rarely admit it. At this basic pedagogical level, SWT are correct that EP overemphasizes MCFC logic and sex differences, and we have not yet figured out how to teach the combination of MMC and MCFC that would best introduce our students to the complexities of human mating. Likewise, when we talk with science journalists, we tend to fall back on MCFC logic in pitching our science's unique consilience and its superiority over social-constructivist models of gender roles.

Another costly side effect of the MCFC focus has been more personal and led to some persistent misunderstandings of my own work. In my dissertation, I advocated an MCFC “runaway brain” model of human mental evolution (Miller, 1993). In that model, female choice for male mental ornaments was a major selection pressure favoring more costly, complex forms of art, music, creativity, language, and altruism; females acquired these abilities by riding on the genetic coattails of males to better assess male displays. So, for a while in the early 1990s, I was indeed “an ape that thought it was a peacock.” However, after the dissertation, I spent several years giving talks about these ideas; getting feedback; and learning more about mutual choice, costly signaling theory, and fitness indicators. I gradually switched from an MCFC model to an MMC model; Miller (1998) was a halfway point

where the two perspectives jostled uneasily side by side.

By the time I wrote *The Mating Mind* (Miller, 2000) in 1998 and 1999, I had rejected that MCFC runaway model as inconsistent with the low dimorphism in human intelligence and brain size, and as incapable of explaining male mate choice for female mental traits, or female competition to display attractive mental traits to favored males. At the end of Chapter 3 in that book, after considering and rejecting the runaway brain model, I emphasized my change of heart as bluntly as I could:

I think mutual mate choice in humans is so important that the pure runaway brain theory just cannot be right. This chapter started by praising it, but has ended by burying it. I do not think that female creative intelligence is a genetic side-effect of male creative intelligence, or arose simply as a way of assessing male courtship displays. I think female creative intelligence evolved through male mate choice as much as male creative intelligence evolved through female mate choice. (p. 98)

Throughout the rest of *The Mating Mind*, I advocated the MMC-based “healthy brain” model rather than the MCFC-based “runaway brain” model, and I argued that certain mental traits in both sexes evolved partly as reliable, hard-to-fake signals of genetic quality, phenotypic condition, and brain efficiency. Most of my work since 2000 has been explicitly based on the MMC model, especially mutual choice for mental fitness indicators such as general intelligence, personality traits, moral virtues, mental health, creativity, humor, linguistic complexity, artistic and musical virtuosity, and conspicuous consumption. Realizing that MCFC runaway sexual selection was not very applicable to our rather romantic, pair-bonded species, I tried to make some more connections between mate choice research, costly signaling theory, mutation-selection balance theory, evolutionary behavior genetics, individual differences research, and consumer culture (Arden, Gottfredson, & Miller, 2009; Geher & Miller, 2008; Keller & Miller, 2006; Miller, 2007, 2009, 2010, 2012; Pierce, Miller, Arden, & Gottfredson, 2009; Prokosch, Yeo, & Miller, 2005). I also tried to show how sexual selection can drive costly ornamentation even under perfect monogamy, given reasonable assumptions about persistent mutation load and assortative mating (Hooper & Miller, 2008).

Unfortunately, *The Mating Mind* was often cited without being read, and was often misunderstood—as SWT point out—as advocating an MCFC model. I did sometimes use MCFC reproductive skew arguments to predict that males would invest a bit more mating effort to “broad-cast” public creative displays to attract multiple short-term mates, whereas females would invest a bit more mating effort to “narrow-cast” lower risk,

more private displays to attract and retain longer term mates, and to avoid sexual harassment by undesired males (the “Scheherezade strategy”). That argument fit with the classic EP strategy of using MCFC findings to challenge blank slate models, so it led to some interesting work, mostly by others, on sex differences in creative abilities and cultural output.

However, my main point about MMC often got lost in the rush to Darwinize human culture using sexual selection theory. I was pleased by the number of people who said they’d read my work but baffled by their lack of follow-up research on MMC models. For the rest of this commentary, I suggest three reasons for EP’s continued focus on MCFC sex differences research, and the relative lack of MMC-oriented research; then I consider some distinctive ideological challenges that the MMC perspective raises.

1. *Theoretical and empirical ease of sex differences research.* The MCFC model is simple to understand (just read any pop science summary of Darwin, Trivers, Symons, and Buss) and simple to research (just run surveys on undergrad psych subject pools with large-enough samples to yield *t*-test significance). Most mainstream psychologists are uncomfortable analyzing sex differences, so they left the field wide open to EP. We had a whole dark continent of sex differences to explore for years before anybody else was willing to fight over it. The competing non-Darwinian theories were so post hoc, biologically naïve, and anthropocentric that we quickly populated our new intellectual econiche with easy research, both good and bad. We were both the primary producers and the top predators. It was a thrilling time of high adventure, great comrades, and premature triumphalism. We had no serious intellectual rivals, so we grew complacent, and we usually didn’t have the maturity or perspective to recognize our own inconsistencies—as SWT have now done.
2. *Lack of relevant MMC models in evolutionary biology.* The MMC view will require a new level of theoretical sophistication and leadership in EP. Given the MCFC view, we could coast along comfortably in evolutionary biology’s slipstream, citing the usual Darwin (1871) and Trivers (1972), with an occasional nod to more recent sexual selection modeling papers if we were feeling scholarly. However, biology has been slow to develop models of mutual mate choice that integrate relevant ideas about costly signaling, fitness indicators, mutation load, or evolutionary genetics (Hooper & Miller, 2008), or that apply in socially monogamous species with extended courtship, long-term pair-bonding, and periodic mate-switching (Geher & Miller, 2008). We have hardly any models of mutual mate choice in hypersocial species with multimale, multifemale

groups that incorporate gossip, reputational effects, sexual advice from friends and families, or group-level equilibrium selection among different mating strategies and signaling systems (Miller, 2007). We could develop such models by collaborating with evolutionary theorists who are already skilled in proving theorems about evolutionary equilibria or in programming evolutionary simulations. EP should start setting a new theoretical agenda for MMC-oriented sexual selection research in evolutionary biology, rather than just citing their “greatest hits” MCFC papers.

3. *Lack of role models for sophisticated theory in psychology.* Psychologists aren’t used to complex theories with many component parts, convergent evidence from many fields, and a cumulative tradition of intellectual refinement. Historically, what we have called “theories” (e.g., “dual process theory,” “terror management theory,” “cognitive dissonance theory”) were mostly simplistic dichotomies, warmed-over philosophy, or pretentious terms that relabeled some empirical observation without really explaining it. When EP started using MCFC sexual selection theory to guide research, it seemed orders of magnitude more powerful than any “theory” we’d encountered before. It had more than a century of progressive development in biology, and it integrated a vast range of findings across thousands of species, millennia of evolution, and dozens of fields across the biological, social, and cultural sciences. We psychologists were so unfamiliar with a genuinely consilient theory, and so worshipful of Darwin himself, that we were dazzled by the awesomeness of his MCFC model for a couple of decades, without thinking very hard about whether it really applied very well to humans. The challenge of going ever further—of doing the hard work on integrating MCFC and MCC in a realistic way—seemed so unfair. I can imagine our inner toddlers having their tantrums of frustration: “If most of psychology is miles behind us, and hasn’t even appreciated Darwin’s most basic insights, why should we have to push even further ahead, and hold ourselves to still higher standards of theoretical sophistication and empirical accuracy?” I think the answer is: Because it’s the right thing to do, regardless of the lower standards for “theory” in other behavioral sciences.

**The MMC’s ideological dark side.** At first glance, MMC sounds more romantic, sexually egalitarian, and ideologically appealing than MCFC. But at a deeper level, it is even less politically correct and challenges some basic assumptions of blank slate egalitarianism, romantic sentimentality, and Western liberal progressivism (Miller, 2003). MCFC predicts some evolved sex differences in mating-related domains, but that’s awkward only for the few people who believe

in blank-slate gender-role theories. By contrast, MMC means that costly mate choice is worth doing even under conditions of social monogamy, low reproductive skew, and high parental care in both sexes.

Thus, MMC models imply that individuals differ substantially in the “good genes,” “good resources,” “good parent,” and/or “good partner” benefits that they can bring to a relationship—and that these inequalities have persisted for thousands of generations, sustaining the incentives for mate choice. Most MMC models also yield strong assortative mating for these desired traits, which maximizes the heritable genetic variation in each trait, and the positive genetic correlations among traits (Hooper & Miller, 2008; Miller, 2007, 2010). Thus, MMC usually maximizes variance in “mutation load” across individuals, and maximizes the strength of the general genetic “fitness factor” that seems to underlie some of the variation in intelligence, personality, moral virtues, mental health, and physical health across people (Arden et al., 2009; Prokosch et al., 2005). The result of MMC is that we end up living in a species with the lowest level of genetic equality that any mating system could possibly produce (Miller, 2010). As a result, our mate preferences are likely to embody some principles of intuitive eugenics, with men assessing women (unconsciously) as egg donors, and women assessing men (unconsciously) as sperm donors. (By contrast, most MCFC models in EP have focused on mate preferences for nonheritable traits, such as youthful fertility or material resources, which raise fewer eugenic concerns.)

In my work, the MMC perspective forced me to engage more with behavior genetics, intelligence research, personality psychology, psychopathology, and other sciences of individual differences. So, jumping out of the MCFC frying pan of sex differences requires jumping into the MMC fire of heritable individual differences. This is tricky both empirically and ideologically. Empirically, good individual differences work requires bigger samples than sex differences research and often benefits from multiple measures, genetically informative samples, and more complex multivariate statistics. Ideologically, MMC models can sound like they naturalize neo-Victorian family values of slow courtship, careful mate choice, voluntary eugenics, long-term monogamy, sexual fidelity, and paternal duty. Thus, MMC threatens to impose a sort of puritanical buzzkill on the pop psychologists devoted to the MCFC “men are promiscuous, women are monogamous” mantra, and on the pop anthropologists who champion the “people are bonobos” mass-promiscuity model. They might not welcome such a stern Galtonian party-crasher.

Thus, the MMC view’s descriptive accuracy may count against it in the domains of pop psychology and college pedagogy. Instead of allowing us to indulge in MCFC paleo-fantasies of alpha male despots and

cavegirl harems, or bonobian free love cults where impulsive sex cures all social ills, MMC puts us right back where humans have been for more than a million years—struggling to find and keep the best long-term mates who will have us, in a mating market where everyone is flawed, choosy, and frustrated, so couples can collaborate in the exhausting work of raising the best children possible, so they in turn can compete effectively in the same mating game of transient love, persistent parenting, and covert eugenics. MMC is the toughest Red Pill to swallow because it leaves us stuck right here in the same old monogamous Matrix, with no sexually liberated Zion in sight, and no consolation other than a deeper understanding of how we came to be here.

### Conclusion

SWT have produced a thoughtful, sophisticated, and constructive article that aims to strengthen our great science of EP by weaning us away from MCFC models to wider use of MMC models. Some might misrepresent SWT as a profound criticism of EP that risks giving succor to social constructivists who deny evolved sex differences. But that is obviously not their aim. They want us to do our Darwinian job even better, in a way that respects the most peculiar and wonderful aspects of our species, such as MMC, extended courtship, social monogamy, romantic love, assortative mating, paternal care, and helpless-but-cute babies. This will require hard work: more research on individual differences within each sex rather than just sex differences, more integration with evolutionary behavior genetics and psychometrics, and more sophisticated theoretical models of sexual selection than psychology or biology has ever seen before. It will also require the ideological maturity to accept that heritable individual differences have been important targets of male and female choice for a very long time, that some current inequalities arose as unintended genetic consequences of our ancestors' mutual mate choices, and that such inequalities might persist as long as human mate choice remains consensual and free.

### Note

Address correspondence to Geoffrey F. Miller, Psychology Department, Logan Hall 160, MSC 03 2220, University of New Mexico, Albuquerque, NM 87131. E-mail: gfmiller65@gmail.com

### References

- Arden, R., Gottfredson, L., & Miller, G. F. (2009). Does a fitness factor contribute to the association between intelligence and health outcomes? Evidence from medical abnormality counts among 3,654 US Veterans. *Intelligence*, 37, 581–591.
- Darwin, C. (1871). *The descent of man and selection in relation to sex*. London, England: Murray.
- Geher, G., & Miller, G. F. (Eds.). (2008). *Mating intelligence: Sex, relationships, and the mind's reproductive system*. Mahwah, NJ: Erlbaum.
- Hooper, P., & Miller, G. F. (2008). Mutual mate choice can drive ornament evolution even under perfect monogamy. *Adaptive Behavior*, 16, 53–70.
- Keller, M., & Miller, G. F. (2006). Resolving the paradox of common, harmful, heritable mental disorders: Which evolutionary genetic models work best? *Behavioral and Brain Sciences*, 29, 385–404.
- Miller, G. F. (1993). *Evolution of the human brain through runaway sexual selection: The mind as a protean courtship device* (Unpublished doctoral dissertation). Stanford University, Stanford, CA.
- Miller, G. F. (1998). How mate choice shaped human nature: A review of sexual selection and human evolution. In C. Crawford & D. Krebs (Eds.), *Handbook of evolutionary psychology: Ideas, issues, and applications* (pp. 87–129). Mahwah, NJ: Erlbaum.
- Miller, G. F. (2000). *The mating mind: How sexual choice shaped the evolution of human nature*. London, England: Vintage.
- Miller, G. F. (2003). Fear of fitness indicators: How to deal with our ideological anxieties about the role of sexual selection in the origins of human culture. In *Being human: Proceedings of a conference sponsored by the Royal Society of New Zealand (Miscellaneous series 63)* (pp. 65–79). Wellington: Royal Society of New Zealand.
- Miller, G. F. (2007). Sexual selection for moral virtues. *Quarterly Review of Biology*, 82, 97–125.
- Miller, G. F. (2009). *Spent: Sex, evolution, and consumer behavior*. New York, NY: Viking.
- Miller, G. F. (2010). Are polygenic mutations and Holocene selective sweeps the only evolutionary-genetic processes left for explaining heritable variation in human psychological traits? In D. M. Buss & P. H. Hawley (Eds.), *The evolution of personality and individual differences* (pp. 376–399). New York, NY: Oxford University Press.
- Miller, G. F. (2012). Sex, evolution, and marketing. *EMBO Reports*, 13, 880–884.
- Pierce, A., Miller, G. F., Arden, R., & Gottfredson, L. (2009). Why is intelligence correlated with semen quality? Biochemical pathways common to sperm and neuron function, and their vulnerability to pleiotropic mutations. *Communicative and Integrative Biology*, 2(5), 1–3.
- Prokosch, M., Yeo, R., & Miller, G. F. (2005). Intelligence tests with higher g-loadings show higher correlations with body symmetry: Evidence for a general fitness factor mediated by developmental stability. *Intelligence*, 33, 203–213.
- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man: 1871–1971* (pp. 136–179). Chicago, IL: Aldine Press.