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Neither Ape, nor Peacock, but Human

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Stewart-Williams and Thomas (this issue) present a well-written but misguided argument detailing their concerns regarding exaggerated sex differences in the evolutionary psychological literature. In this commentary, we argue that the target article (a) reviews inaccurately and incompletely the evolutionary psychological literature addressing human mating systems and strategies, (b) showcases misguided statistical interpretations to identify "exaggerated" sex differences, and (c) unfairly and inappropriately criticizes evolutionary psychology.

No Contradiction in the Literature

Stewart-Williams and Thomas (this issue) argue that the evolutionary psychological literature contains contradictions regarding human mating systems because "humans are sometimes presented as an MCFC species and sometimes presented as an MMC species" (p. 139). We disagree that this contradiction exists. Humans *contextually adjust* their mating strategy (see Sexual Strategies Theory; Buss & Schmitt, 1993). For example, men are more selective about a prospective partner's personality characteristics (e.g., intelligence, honesty) when considering a long-term partner than when considering a short-term partner (Regan, Levin, Sprecher, Christopher, & Cate, 2000). That is, sometimes men are more selective about a prospective partner's personality characteristics (i.e., mutual mate choice model), and sometimes men are less selective about these characteristics (i.e., males-compete/females-choose [MCFC] model). We disagree with Stewart-Williams and Thomas that the evolutionary psychological literature presents contradictions regarding human mating systems and strategies.

Cherry-Picking Evidence

Stewart-Williams and Thomas argue that evolutionary psychologists cherry-pick evidence to exaggerate sex differences. For example, Stewart-Williams and Thomas argue that homicide, mortality, and mate attraction displays are manifestations of extreme sexual dimorphism that do not accurately reflect the broader landscape of sex differences, and that these extreme differences present a biased picture of average sex differences because "a small difference at the mean implies a large difference at the tail" (p. 155). We agree that researchers should also investigate manifestations of smaller sex differences to understand overall sex differences. However, Stewart-Williams and Thomas cherry-pick evidence to argue that "the central tendency of the distribution of opinion in EP falls too close to the MCFC end of the spectrum" (p. 139). We disagree with this argument. There is considerable evolutionary psychological research that investigates mechanisms specific to pair-bonding and paternal investment. For example, Salmon and Shackelford (2011) edited a volume showcasing research in evolutionary family psychology. This volume contains such chapters as "The Evolutionary History of Pair-Bonding and Parental Collaboration" (Chapais, 2011) and "Family Violence: How Paternity Uncertainty Raises the Stakes" (Goetz & Romero, 2011).

Our own research lab investigates men's psychology associated with pair-bonding and paternal investment. Namely, we investigate psychological adaptations to sperm competition. Sperm competition occurs when the sperm of two or more males simultaneously occupy a female's reproductive tract and compete to fertilize the ova (Parker, 1970). Female infidelity is the most common context for sperm competition in humans (Shackelford & Goetz, 2012; Smith, 1984). Women who commit infidelity place their regular partner at risk of cuckoldry—the unwitting investment of resources into offspring to whom he is genetically unrelated.

Over human evolutionary history, men evolved counteradaptions to minimize their risk of cuckoldry. For example, men attend to various cues to estimate the risk of their regular partner's infidelity, including the proportion of time the couple spends apart since last copulation (Shackelford, Goetz, McKibbin, & Starratt, 2007; Shackelford et al., 2002), her attractiveness (Goetz et al., 2005), their perception of her past infidelity (McKibbin, Starratt, Shackelford, & Goetz, 2011), and the time she spends with other men (Pham & Shackelford, in press). In response to cuckoldry risk, men may insult their partner (Goetz, Shackelford, Schipper, & Stewart-Williams, 2006; McKibbin et al., 2007; Starratt, Goetz, Shackelford, McKibbin, & Stewart-Williams, 2008), sexually coerce her (Goetz & Shackelford, 2006; Goetz, Shackelford, & Camilleri, 2008; McKibbin et al., 2011; Starratt et al., 2008), and report greater

interest in copulating with her (Pham & Shackelford, in press; Shackelford et al., 2007; Shackelford et al., 2002; Starratt, McKibbin, & Shackelford, 2013). An evolutionary history of male pair-bonding and paternal investment is a *prerequisite* for the evolution of these male adaptations to sperm competition.

Given the broad social science audience of the target article, we are concerned that readers who are unfamiliar with evolutionary psychology may be unaware of the large body of evolutionary psychological research supporting the hypothesis that "pair-bonding has been significantly more common in the past than any other [mating] pattern" (p. 151) and may conclude that evolutionary psychologists have long overemphasized the MCFC model. We argue that a more comprehensive review of the evolutionary psychological literature will demonstrate that evolutionary psychologists disagree with the extreme stance of the MCFC model. Specifically, the MCFC model "exerts a subtle—and sometimes not-so-subtle—influence on the EP image of human nature" (p. 137) because *some elements* of the MCFC model *sometimes* manifest in human behavior and psychology.

Arbitrary Comparisons

According to Stewart-Williams and Thomas, "The sex difference in height ... can serve as a useful reference point to assess the magnitude of the SO difference" (p. 153). We agree with Stewart-Williams and Thomas that the sociosexual orientation (SO) sex difference in humans is modest compared to the SO sex difference in more polygynous species. However, Stewart-Williams and Thomas evidence the modest SO sex difference by comparing it to the sex difference in height. This comparison is problematic. Men and women differ in many ways, and the magnitude of a sex difference depends on which feature is measured. Although the SO sex difference is smaller than the sex difference in some measurements (e.g., height), the SO sex difference is larger than the sex difference in other measurements (e.g., distance perception; Jackson & Cormack, 2008). Stewart-Williams and Thomas therefore present a biased assessment of the "small" magnitude of the SO sex difference when they compare it to an arbitrary referent, the sex difference in height.

Stewart-Williams and Thomas's broader discussion of "small" and "large" effect sizes is meaningless *scientifically* because labeling the magnitudes of effect size is arbitrary: "Using this (essentially arbitrary) standard, most sex differences in psychology are rather small" (p. 153). If the standard is "essentially arbitrary," why label sex differences as small—or at all—when discussing the scientific merit of research? These labels function for conversational convenience, and not as a measure scientific significance. We disagree with Stewart-Williams and Thomas's "statistical approach" to argue that evolutionary psychologists have been exaggerating sex differences.

Conclusion: Unfair Targeting

In conclusion, Stewart-Williams and Thomas's argument that evolutionary psychologists exaggerate sex differences is an unfair assessment of evolutionary psychology. The subtitle of the target article, "Does Evolutionary Psychology Exaggerate Human Sex Differences?" subtly implies that evolutionary psychologists present misleading interpretations to fulfill an agenda. All psychologists, including evolutionary psychologists, in principle share the same agenda: to investigate scientifically the structure and function of the mind. Any psychological research that identifies a larger effect size sometimes captures the attention of other researchers and the general public because these effects often intrigue readers, and the evolutionary psychological literature on sex differences is no exception. Stewart-Williams and Thomas misinterpret sex differences within the evolutionary psychological literature and should instead ask why the sexiest articles are those that document extreme sex differences.

Note

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References

Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, *12*, 1–49.

Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 204–232.

Chapais, B. (2011). The evolutionary history of pair-bonding and parental collaboration. In C. A. Salmon & T. K. Shackelford (Eds.), *The Oxford handbook of evolutionary family psychology* (pp. 33–50). New York, NY: Oxford University Press.

Goetz, A. T., & Romero, G. A. (2011). Family violence: How paternity uncertainty raises the stakes. In C. A. Salmon & T. K. Shackelford (Eds.), *The Oxford handbook of evolutionary family psychology* (pp. 169–180). New York, NY: Oxford University Press.

Goetz, A. T., & Shackelford, T. K. (2006). Sexual coercion and forced in-pair copulation as sperm competition tactics in humans. *Human Nature*, *17*, 265–282.

Goetz, A. T., Shackelford, T. K., & Camilleri, J. A. (2008). Proximate and ultimate explanations are required for a comprehensive understanding of partner rape. *Aggression and Violent Behavior*, *13*, 119–123.

Goetz, A.T., Shackelford, T. K., Schipper, L. D., & Stewart-Williams, S. (2006). Adding insult to injury: Development and initial

validation of the Partner-Directed Insults Scale. *Violence and Victims*, *21*, 691–706.

Goetz, A. T., Shackelford, T. K., Weekes-Shackelford, V. A., Euler, H. A., Hoier, S., Schmitt, D. P., & LaMunyon, C. W. (2005). Mate retention, semen displacement, and human sperm competition: A preliminary investigation of tactics to prevent and correct female infidelity. *Personality and Individual Differences*, *38*, 749–763.

Jackson, R. E., & Cormack, L. K. (2008). Evolved navigation theory and the environmental vertical illusion. *Evolution and Human Behavior*, *29*, 299–304.

McKibbin, W. F., Goetz, A. T., Shackelford, T. K., Schipper, L. D., Starratt, V.G., & Stewart-Williams, S. (2007). Why do men insult their intimate partners? *Personality and Individual Differences*, *43*, 231–241.

McKibbin, W. F., Starratt, V. G., Shackelford, T. K., & Goetz, A. T. (2011). Perceived risk of female infidelity moderates the relationship between objective risk of female infidelity and sexual coercion in humans (Homo sapiens). *Journal of Comparative Psychology*, *125*, 370–373.

Parker, G. G. (1970). Sperm competition and its evolutionary consequences in the insects. *Biological Review*, *45*, 525–567.

Pham, M. N., & Shackelford, T. K. (in press). The relationship between objective sperm competition risk and men's copulatory interest is moderated by partner's time spent with other men. *Human Nature*.

Regan, P. C., Levin, L., Sprecher, S., Christopher, F. S., & Cate, R. (2000). Partner preferences: What characteristics do men and women desire in their short-term sexual and long-term romantic partners? *Journal of Psychology and Human Sexuality*, *12*, 1–21.

Salmon, C. A., & Shackelford, T. K. (Eds.). (2011). *The Oxford handbook of evolutionary family psychology*. New York, NY: Oxford University Press.

Shackelford, T. K., & Goetz, A. T. (Eds.). (2012). *The Oxford handbook of sexual conflict in humans*. New York, NY: Oxford University Press.

Shackelford, T. K., Goetz, A. T., McKibbin, W. F., & Starratt, V. G. (2007). Absence makes the adaptations grow fonder: Proportion of time apart from partner, male sexual psychology, and sperm competition in humans (*Homo sapiens*). *Journal of Comparative Psychology*, *121*, 214–220.

Shackelford, T. K., LeBlanc, G. J., Weekes-Shackelford, V. A., Bleske-Rechek, A. L., Euler, H. A., & Hoier, S. (2002). Psychological adaptation to human sperm competition. *Evolution and Human Behavior*, *23*, 123–138.

Smith, R. L. (1984). Human sperm competition. In R. L. Smith (Ed.), *Sperm competition and the evolution of animal mating systems* (pp. 601–659). New York, NY: Academic Press.

Starratt, V. G., Goetz, A. T., Shackelford, T. K., & Stewart-Williams, S. (2008). Men's partner-directed insults and sexual coercion in intimate relationships. *Journal of Family Violence*, *23*, 315–323.

Starratt, V. G., McKibbin, W. F., & Shackelford, T. K. (2013). Experimental manipulation of psychological mechanisms responsive to female infidelity. *Personality and Individual Differences*, *55*, 59–62.