

Confronting Assumptions About Our Grandmothers' Legacy and Challenges Faced by Our Female Ancestors

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Confronting our assumptions: Commentary on Reynolds' (2021) Our Grandmothers' legacy: challenges faced by female ancestors leave traces in modern women's same-sex relationships

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Reynolds' (2021) has clearly articulated the tension between cooperation and competition, wherein women's social behaviours are biased toward maintaining support from friends and lovers, while simultaneously competing with them. It is a complex game, and there are many different ways to win and lose. Particularly impressive is the paper's thorough description of myriad ways that women control the behaviours of other women, as well as their own reputations; even if a little self-deception is required. This review treats women as agentic and effective determinants of their own lives, with recognition that the social milieu and our evolved predispositions constrain choice. Further, the concrete hypotheses and description of gaps in our current understanding provide useful guidance for future research. We are not inclined to argue Reynolds' conclusions. Rather, we would like to emphasise some of the assumptions that appear implicit in this excellent review and provoke discussion about how those assumptions affect our collective interpretation and design of research about women's intra- and intersexual competition.

'Mean' girls

Humans love to take mental shortcuts in cognition. Although this evolved tendency is certainly adaptive in many situations, it puts us at a disadvantage when attempting to reconcile a broad body of research with multiple apparent contradictions. It's easy to lean on a convenient false-dichotomy about sexually selected traits when we focus on mean group differences. Reynolds has included some

information about effect sizes in her review, and has highlighted a number of important mediating variables. We're not suggesting that sex differences aren't relevant—far from it—but we encourage an approach that examines the entire distribution and does not default to an assumption that a sex difference is more predictive than effects of other factors.

To use an example from Reynolds' review, there are interesting sex differences associated with the formation and maintenance of friendships. Hall's (2011) meta-analysis provides an opportunity to examine the relative strength of those differences across a variety of age groups and research methodologies. While there were several larger effects (19 of 128 comparisons had effect sizes larger than 0.5), the weighted mean effect size in that meta-analysis was $d = 0.17$, which is small. Men and women may have average differences in their expectations about friendship, but simply knowing someone's sex will not tell you what sort of friend they will be. Of course, we all remember our stats classes (!!), and surely we don't *actually* think that sample means predict the behaviours of an entire population, but it is worth noting how these sorts of differences get reported in mass media accounts. Is it any wonder that we're misrepresented when we emphasize mean differences over measures of variance?

We know that there are factors that predict competitive behaviours better than do sex differences. Notwithstanding certain arguments that Dark Triad traits (i.e., sub-clinical narcissism, psychopathy, and Machiavellianism) are adaptive for men but not for women (e.g., Jonason, Li, Webster & Schmitt, 2009), we know that the average sex differences in Dark Triad traits do not equate to predictive utility without considering mediating variables (Semenyna & Honey, 2015). Knowing that someone is female does not allow you to accurately predict whether she will have high or low levels of a particular trait, even though knowing someone's trait scores might allow you to predict their sex at better than chance rates. Ability to predict is much stronger in one direction than the other. Further, to assume that a sex difference in a trait allows us to use sex as a proxy for that trait is to risk committing a conjunction fallacy. Consider also

that categorical sex or gender may be less predictive of women's sexual strategies than is relative femininity or masculinity (e.g., Mikach & Bailey, 1999). A woman's tendency toward instrumentality (Fink, Brewer, Fehl & Neave, 2007) is more useful in predicting lifetime number of sex partners than is her gender.

Long-term mating as the measure of success

Following from our point that the average does not necessarily tell the whole story about a distribution, we would like to emphasize the validity and utility of multiple mating strategies. The narrative in Reynolds' review, and in much of the extant literature about mating strategies, is from the perspective of women who seek long-term committed relationships with men. This mating strategy is certainly associated with reproductive success, because of access to a reproductive partner as well as the putative resource allocation that partner provides. What is conspicuously absent is an explicit discussion of the benefits of short-term or mixed mating strategies and how those strategies interact with other competitive behaviours. Even using mean scores can be misleading, given evidence that the distribution of traits like interest in uncommitted sex (sociosexuality) is bimodal in both women and men (Wlodarski, Manning, & Dunbar, 2015). While the narrative voice of Reynolds' paper may reflect a typical feminine strategy, there is merely an implicit recognition that the 'others' are a threat to that typical or preferred strategy.

Why are the 'others' perceived as threats? Because their strategies work. Women who engage in short-term mating or mate poaching can be successful in acquiring partners (including long-term partners) and in acquiring resources or protection (for a review, see Schmitt, 2015). The rate of success of such strategies depends upon availability of partners, cultural mores, and a woman's own traits, but the rate of success is greater than zero in what is often seen as a zero-sum game. Further, there may be frequency-dependent effects on the success of short-term mating strategies. If we apply Dugatkin's

(1992) game-theory model to a discussion of mate poaching or promiscuity, it stands to reason that even in environments where short-term mating is rare or risky there could be a small number of women who benefit from its rarity, and could evade detection if others are not wary about cheaters. As rates of short-term mating increase, then there is pressure on others to detect it and counteract it. The very social pressures that Reynolds' describes push many women to present themselves as long-term strategists and conceal their short-term 'success'.

Who are these threats? They may be different women entirely. Individual differences may bias some women toward 'riskier' mating strategies, and that group of women may compete directly with a separate group of women who pursue longer-term strategies. Women who engage in casual sex certainly experience 'punishment' for their actions, but they don't necessarily suffer for it. Young women with high numbers of lifetime sex partners are not typically lonely, and they are likely to have close friends, which may buffer them from the effects of discrimination that they do experience from other women (Vrangalova & Bukburg, 2015). This presents another wrinkle in distinctions between cooperation and competition: coalitions of women with short-term strategies can protect each other.

It is also important to recognize that mating strategies can change across a lifespan, such that women may pursue different strategies under different social or personal conditions, or with different partners. Let's face it; not everyone is marriage-material and we don't treat all potential partners equally. There can be benefits of acquiring a genetic contribution, or resources, from a partner who is unavailable or unsuitable for a long-term relationship. Engaging in a short-term strategy is not necessarily 'second best' to a long-term strategy, and both strategies may be active at once. A woman may recognize another woman as a threat because, as they say, it takes one to know one. Each woman not only *has* rivals; she *is* the rival.

Why is an assumption about women's long-term strategies important? There is an inherently moralistic tone to discussions of sexual strategies that echoes what we know about benevolent sexism

(Glicke & Fiske, 2001) and 'women are wonderful' effects (Eagley & Mladinic, 1994). We, as a society, tend to downplay women's agency and diminish their capacity for behaviours that are seen as immoral (e.g., Pearson, 1997). While this benevolent sexism may benefit women who do engage in under-the-radar behaviour (see Honey, 2017), we as researchers should recognize that our own biases may lead us to underestimate the importance or occurrence of women's behaviours that we don't consider 'feminine'.

WEIRD, young, and straight

We're all aware of the limitations of generalizing from samples that are western, educated, industrialized, rich, and democratic (e.g., Henrich, Heine, & Norenzayan, 2010). Oversampling from university campuses also biases our samples toward young adults, with relatively small variance in age, health, and reproductive status. Most non-recent mate choice literature in Psychology also presumed that participants were cisgender and heterosexual, without actually asking participants to identify anything beyond binary sex. More recent studies have revealed those presumptions to be flawed, and that there may be more noise in those datasets than previously thought. Data about gender identity suggest that less than 1% of the population (or 3-8% of the LGBT population) are transgender (Gates, 2011; Conron, 2020), information that is missed when only asking about binary sex or gender, but not both. Estimates vary, and change over time as societal acceptance shifts, but large-scale surveys suggest that 3-10% of the U.S. population is not heterosexual, that the proportion is higher among women than men (see Bailey et al., 2016), and that among women the number who are ambiphilic is larger than the number who are exclusively gynephilic (see Gates, 2011, but also Conron, 2020 for estimates among teens). In some of our own recent work, which explicitly solicited responses from non-heterosexual participants, we have found a similar pattern even though the proportions are intentionally shifted. While the proportion of *exclusively* gynephilic women is relatively low in our samples (less than 1%), the

proportion of women who are ambiphilic or at least occasionally gynephilic is substantial (30% in Semenyina, Belu, Vasey & Honey, 2017; 39% in Semenyina, Vasey & Honey, 2019).

How does competition shift when rivals may also be potential partners? There is limited research, so far, but it indicates that sexual orientation is an important factor in mate retention tactics (VanderLaan & Vasey, 2008; Brewer & Hamilton, 2014) and denigration of rivals (Hughes, Champion, Hesse, Brown, & Pederson, 2020). We cannot presume that competition and cooperation among women is devoid of attraction, or that competition is always for partners who are men.

Under what conditions?

Reynolds' (2021) review is a welcome addition to the literature, and it skillfully presents complex and seemingly-contradictory evidence in a rich context. We look forward to research that will build on this foundation, and test some of the hypotheses that Reynolds lays out. In fact, we hope to contribute to that work ourselves! We feel that it is important to hold multiple realities in mind when we interpret new data about women's competitive strategies. Like Reynolds, we want to go beyond asking *whether* women are competitive or cooperative, or whether women and men use *different* strategies, to exploring the conditions under which particular strategies for competition are adaptive. By broadening our sampling and analysis, and recognizing our assumptions about heterosexuality and gender expression, we can work toward a more nuanced understanding of our field.

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