

Toward a more domain-specific conceptualization of female traits: A commentary on Benenson et al. (2022)

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Abstract

Benenson et al. (2022) amass impressive evidence of robust sex differences as support for expanding “staying alive” theory. We argue for a broader and more domain-specific conceptualization focusing on life history tradeoffs between survival and mating success. Using three examples – women's disgust, fear of rape, and cultivation of bodyguards – we illustrate these tradeoffs and suggest a broader theoretical framework.

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Benenson, Webb, and Wrangham's (2022) expansion of "staying alive" theory (SAT; see Campbell, 1999) posits that females have evolved an array of specific adaptations as defenses against survival threats that differ from those of men. They correctly, and expertly, assemble an impressive suite of sex-differentiated phenomena directly or plausibly linked to female survival. We suggest that an adequate explanatory account must have life history tradeoffs between components tributary to reproductive success at its core, which include both survival and mating success. We discuss three examples of documented sex differences important for women's reproductive effort and survival: sexual disgust, fear of rape, and the cultivation of social bodyguards.

Sexual disgust

Women experience robustly higher levels of sexual disgust than men (Al-Shawaf, Lewis, & Buss, 2018; Crosby, Durkee, Meston, & Buss, 2020; Tybur, Lieberman, & Griskevicius, 2009). The target article attributes women's higher general disgust – which differs from more specific classes of disgust such as pathogen disgust, sexual disgust, or moral disgust – to their greater need to promote survival and avoid danger. One hypothesized function of sexual disgust, however, is mate avoidance. Importantly, this avoidance does not center around the avoidance of general danger or threats. Rather, sexual disgust motivates the avoidance of potentially harmful or sub-optimal mates (e.g., mates of lower mate value or mates unlikely to invest in a woman and her children), as well as mates who might be disease vectors (Crosby et al., 2020; Tybur et al., 2009). Sexual disgust may, therefore, protect women against death by avoiding these specific categories of mates. However, sexual disgust likely also protects women against reproductive costs including the accumulation of sexually transmitted infections or reputational damage, thus increasing her ability to secure high-quality mates in the future (e.g., Al-Shawaf et al., 2018). Together, this suggests that women's sexual disgust adaptations are at least somewhat domain-specific and contribute to components of both survival and mating success. It also highlights that a simultaneously broader and more domain-specific conceptualization – beyond the more general formulation of SAT – is needed for an adequate explanatory account of sex differences in disgust.

Fear of rape

Women face dramatically higher risks of sexual coercion and its accompanying hazards to survival and reproduction than men. Sexual conflict theory predicts that sex-specific adaptive problems create sex-specific selection pressures producing co-evolved defenses (Buss, 2017; Parker, 2009). Women's fear of rape is one hypothesized defense against sexual coercion costs.

Women's fear of rape protects against hazards associated with sexual exploitation including the circumvention of mate choice and physical damage incurred during rape (reproductive and survival costs, respectively; Perilloux, Duntley, and Buss, 2012). Women's fear of rape tracks the age at which victimization is most likely. For example, women between the ages of 19 and 35 express more rape fear than older women (Warr, 1985). Conversely, older women are more fearful of being mugged than being raped (Buss, 2021). Formidability mediates women's fear of rape such that women who perceive they could successfully escape an attack display less rape fear (Gordon & Riger, 1989; Pryor & Hughes, 2013).

While women's rape fear was not discussed in the target article, the authors reviewed several findings on women's greater levels of fear responding to social threats compared to men – a domain-general conceptualization. The specificity of findings of women's greater rape fear, such as predictable age gradients and female formidability findings, suggest that explanatory frameworks for women's fear require (1) their contribution to both survival and mating components of reproductive success, and (2) a more domain-specific conceptualization of fear beyond that offered by SAT.

Cultivation of social bodyguards

As a final example, consider the findings that women prioritize the cultivation of bodyguards in mate and friend selection. Women, more than men, prefer social alliances who are physically formidable (Meskelyte & Lyons, 2022; Snyder et al., 2011) – a sex difference not mentioned in the target article. Bodyguards, we suggest, have been and continue to be critical for women's survival and mating success. They offer unique functions including deterring physical and sexual assaults and reducing damage following assaults. These protections buffer against the survival and reproductive costs of sexual coercion (Buss, 2021) – again suggesting that explanatory accounts should consider the specific ways in which women's adaptations contribute to the multiple components of fitness, and tradeoffs therein, beyond the domain-general invocation of survival.

Conclusion

The target article describes an impressive array of documented sex differences in physiological, psychological, and emotional responses that are plausibly tributary to survival over human evolutionary history. We applaud the authors for expanding SAT to explain the evolution of these sex differences. We suggest that many important adaptive problems recurrently faced by women over evolutionary history contain fitness consequences for both survival success and mating success, and tradeoffs therein, and thus argue for a broader and more domain-specific conceptualization of these adaptations.

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Conflict of interest

We have no conflicts of interest to disclose.

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