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Randy Thornhill

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Definition

Randy Thornhill is an entomologist and evolutionary biologist at the University of New Mexico, especially noted for his applications of evolutionary biology and evolutionary psychology to human behavioral science. He attained fame beyond the academy for work with Craig Palmer on applying biological knowledge to the phenomenon of human rape (Thornhill and Palmer 2001). Although the book was specifically intended to help inform law enforcement in the identification and capture of criminals, and the prevention of crime, this was not deemed sufficient justification by many (Dreger 2016). However, Thornhill is more famous within the academy for work on insect mating, parasite-stress theory, and sociosexuality.

Introduction

Thornhill's early work (like that of sex researcher Alfred Kinsey) was in entomology (his MSc was in this discipline), and this may well be no coincidence. Studying insects allows for a degree of detachment from issues of human sentimentality and political commitment (Thornhill and Alcock 1983) focusing on the underlying nuts and bolts of the key drivers of mating success (or failure) rather than human rationalizations of same.

Thornhill brought this same detachment to the study of politics. Here a major insight was that the surface (proximate) rationalizations of political loves and hates may have underlying (ultimate) mechanisms driven by the need to associate with some and disassociate with others. Thus, the parasite-stress theory was born (Thornhill and Fincher 2014). Human immune systems are remarkably complex and, increasingly, being seen as drivers of human behavior in their own right. Thornhill was an early predictor of such mechanisms, realizing that traits such as religiosity, personality, and political leanings were non-accidentally linked to local adaptions to parasite loads). These traits are, in effect, part of the behavioral immune system.

Main Text (or Choose Your Own Heading Here)

Thornhill has managed to link a number of behaviors, for example, to do with physical and moral disgust, attitudes toward strangers, and even food. For example, in the same way that regions of high temperatures tend toward spicy foods (because

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spices have antimicrobial properties), Thornhill hypothesized that visible signs of immunocompetence (such as low fluctuating asymmetry) may also be preferred in such regions. Fluctuating asymmetry is a marker that seems to hold across taxa as a visible honest advert of developmental stability and thus heritable resistance to parasites – making one an attractive partner. There also appear to be local and predictable responses to pathogens. Data from the Global Infectious Diseases and Epidemiology Network did indeed confirm that cultural groups that split along the collectivist-individualist axis showed a high covariance of collectivist (and thus xenophobic) attitudes and high pathogen stress. This work has the interesting implication that the goal of making cultures more liberal would be best advanced through health care rather than argument – a conclusion that Thornhill appears happy to endorse.

Humans are obligate investors. Human babies are highly demanding in terms of both time spent in the womb and the aftercare required for them to be viable. Demands fall disproportionately on the females in our species – their minimum parental investment is considerably higher than the male minimum potential parental investment. What this means is that a suite of mating options are available to both sexes, but these are constrained in important ways.

Sociosexuality is a dimensional trait – which might also be appropriately termed an orientation. At one end of the dimension is restricted sociosexuality – characterized by an insistence on commitment in advance of engaging in sexual interactions. At this end of the scale, a typical person would answer positively to questions such as "I require a feeling of emotional closeness before engaging in sexual intercourse." At the other end of the dimension is unrestricted sociosexuality – characterized by a willingness to engage in sex without commitment. Those at this end of the scale typically answer positively to questions asking whether they would be willing to have multiple sexual partners concurrently or to questions such as "sex without love is perfectly permissible between consenting partners."

Within the general framework of life history theory, which models differential economic allocations of resources to key adaptive traits, sociosexuality describes a set of proximate markers of behaviors relating to mating and parenting effort. Organisms maximize their fitness by focusing resources on where they will have the most effect but, like an effective investment portfolio, bets are often hedged in various ways to achieve this fitness maximization. While both sexes benefit in similar ways from long-term mateships (e.g., through sharing resources and having reliable partnerships), there are predicted to be some sex differences in terms of what constitutes short-term mating opportunities – of which a major component is sociosexuality. This is what scholars have indeed found.

Given the obligate investiture of human females, it is predicted that willingness to engage in short-term matings will, for women, be mediated by said short-term partner's genetic quality. For example, Gangestad and Thornhill (1998) found that willingness to engage in short-term matings (especially extra-pair copulations) was highest when women were at the most fertile part of their cycle. Furthermore their preferences shifted, at these times, toward males who were more symmetrical.

It is likely that at least part of the measured sex differences in sociosexuality are mediated by testosterone. The relationship here is a complex one. In the trade-off between allocating resources to mating and parenting, testosterone facilitates mating effort. Men in long-term mateships tend to have lowered testosterone. McIntyre et al. (2006) used the sociosexuality index (SOI) focused on extra-pair interests to find support for the prediction that the relationship between testosterone and sexual partnership status would rest on extra-pair sexual interests.

Like all evolutionary scholars, Thornhill has had to contend with what appears to be a very human cognitive glitch that refuses to see evolutionary explanations as enhancing existing proximate ones rather than replacing them.

Critics who wish to emphasize that sex differences arise from local social structure (Eagly and Wood 2005) claim that the concept of patriarchy

explains said differences. Patriarchy is a (proximate) descriptor of a cluster of local behaviors and dispositions rather than an ultimate explanation of the factors leading to fitness maximization; thus criticisms of this kind tend to miss the point of evolutionary explanations. For a behavior to be socially constructed, it must have pieces to be constructed from. An explanation like "patriarchy" is thus no explanation at all – it is merely a description which hangs in the air without visible means of support.

Indeed there is little evidence that critics are even aware of the logical distinction between proximate and ultimate explanations, relying instead on a folk-science understanding of "biological" as meaning "fixed action pattern" or similar. Evolutionary explanations are not alternatives to proximate ones – they enlarge and compliment them. Therefore to the extent that "patriarchy" can be taken to be a meaningful designator (and this is not always clear), it should be the case that ultimate explanations will match with it. This is indeed what we find. For any meaningful cultural descriptor of "patriarchal" (meaning traditional male dominated official marriage systems), cross-cultural measures of the SOI match the predictions of evolutionary theory.

For example, when controlling for local markers of mating threats and opportunities that can be assumed to have occurred and re-occurred over evolved time, SOI measures track fitness maximization. Overall women are far more varied in their SOI than men are (mean $ds = 0.74$; Lippa 2009) and more variant in their sex drive across cultures (mean female to male variance ratio = 1.64, which also implies that SOI and sex drive are not identical).

Conclusion

Randy Thornhill still continues to publish widely and with a multitude of coauthors. If there has been any effect of a vocal (but one hopes minority) public unwilling to see their traits as having biological elements, then this has not had a visible effect on his investigations (Thornhill and Gangestad 2015).

Cross-References

- Infidelity
- Jealousy
- Mate Retention
- Personality and Mate Retention

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