
Intrasexual Rivalry Among Men

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Synonyms

[Intrasexual competition](#); [Intrasexual selection](#);
[Within-sex competition](#); [Within-sex selection](#)

Definition

Intrasexual rivalry is a driving force behind sexual selection. Men's intrasexual rivalry surrounds competition over reproductive opportunities and resources.

Introduction

Men's reproductive potential is higher yet more variable than that of women, owing to women's substantial (and men's relatively lower) obligatory parental investment. For ancestral men, outcompeting same-sex rivals for access to desirable and varied mating opportunities would have benefited their total reproductive success. Evidence of adaptations for increased intrasexual rivalry among men can be seen in modern human physiology, mating psychology, and related behaviors such as epigamic displays and

aggression, which differ between sexes. Mating systems and other contextual factors influence sex differences in competition, such that male rivalry is stronger in polygynous versus monogamous systems, and when female are abundant rather than scarce.

Male rivalry has been shaped over deep evolutionary time by *sexual selection* – or the variability among same-sex conspecifics in fertilizing the gametes of the opposite sex. Sexual selection is the driving force behind evolution (Darwin 1871) and is the product of two interrelated phenomena: *intersexual selection* and *intrasexual selection*. Intersexual selection refers to the nonrandom choice of mating partners between the sexes. Intrasexual selection refers to the competition between members of one sex for reproductive access to members of the other sex. Same-sex competitors exhibit morphological, psychological, and behavioral traits which directly bear upon their ability to attract mates (intersexual selection) and to defeat rivals in coopting and retaining reproductive access and resources. To the extent that the phenotypic qualities exhibited by individual organisms benefit their success in inter- and intrasexual competition for mates, those organisms will be more likely to produce viable offspring who will themselves be more likely to bear competitively efficacious traits allowing them to, in turn, outcompete intrasexual rivals lacking in those adaptive traits for mating opportunities.

In most species, intersexual selection is driven largely by females, who choose their mates carefully from the male population. Males, on the other hand, more often engage in intrasexual selection, vigorously vying for mating opportunity with selective females. Male intrasexual competition is so ubiquitous that in *The Descent of Man*, Darwin (1871) wrote “it is certain that amongst almost all animals there is a struggle between the males for the possession of the female. This fact is so notorious that it would be superfluous to give instances” (p. 143).

The sex difference in the frequency and ferocity of intrasexual rivalry can be understood in light of disparate obligatory parental investment between the sexes (Trivers 1972). Females produce a limited number of energy-rich eggs and males produce many energetically cheaper sperm (Trivers 1972). Females are limited by the number of eggs and hence the number of offspring they can produce over their reproductive lives. Because females bear the heavier parental investment, they have the most to lose from making poor mating decisions and are thus selective in their mate choice (Trivers 1972). In contrast, male reproductive potential is limited only by the number of fertilizable females they can access. Yet because, on the whole, the number of offspring sired by males and females in the population is the same, successful males who reproduce with multiple females impose a significant cost upon other males, many of whom will thus be less-successful or will be shut-out from reproducing altogether. Accordingly, males more than females have evolved phenotypes oriented toward competing for mating opportunities.

Intrasexual Rivalry in Humans

Unlike the vast majority of mammalian species, humans tend to pair-bond, as evidenced by social monogamy, serial monogamy, and even pure genetic monogamy that has been observed across diverse cultures. This, coupled with substantial bi-parental care of offspring, has likely tempered sex differences in intrasexual competition. Men are also highly selective in choosing their long-term mates, and thus intrasexual rivalry among women is not uncommon. Intrasexual

competition can take on many forms, which can be distinguished in terms of combat (i.e., contest) and noncombat competition. Humans exhibit a diverse menu of intrasexually competitive acts including direct combat (i.e., trying to physically threaten, dominate, injure, or kill a rival), verbal derogation of competitors, social manipulation, as well as many forms of noncombative self-promotion (i.e., trying to enhance the positive qualities of oneself, relative to same-sex others) (Buss and Dedden 1990).

Noncombative Tactics

Many of the noncombative tactics employed by men relate strongly to the mate-preferences of the opposite sex. For example, men more than women believe in the efficacy of, and more frequently utilize, tactics of intrasexual competition involving resource possession and display (e.g., driving a fancy car, flashing money, buying women expensive goods, bragging about accomplishments), which correspond to women’s relatively greater preference for mates who possess resources. Another related strategy that may be used during men’s intrasexual competition is *derogation* of other men’s financial resources, physical strength, and athleticism. Indeed when newlyweds were asked to self-report their use of derogation tactics as well as those used by their spouses, men more than women reported derogating a rival’s strength (Buss and Dedden 1990).

Male Intrasexual Aggression

Men compete more violently than women in the domains of status, resources, and dominance. Wilson and Daly (1985) showed that homicidal conflicts in 1972 Detroit were prodigiously committed by men. These findings mirror those from semi-nomadic hunter-gatherer societies, such as the Yanomamo of Venezuela, where one in four adult males are killed by others individuals within their tribe or in wars with other tribes, with nearly half of all men over the age of 25 having participated in killing someone (Chagnon 1988). Aggression directed toward same-sex rivals may solve a variety of adaptive problems, including the coopting of resources, defense against attack (avoiding loss of status and resources), inflicting

costs (on one end making rivals less desirable as mates through reputational damage; on the other end, eliminating them as a potential mate altogether by killing them), negotiating the status hierarchy (such as when Aché males who survive many club fights gain increased status, fear, and admiration), and deterring rivals from future aggression (by having a reputation as a dangerous or violent threat to rivals). The extent that male aggression exists within a culture or subculture hinges upon a variety of factors, such as the likelihood of retaliation and whether the aggression is situated within a “culture of honor,” wherein failure to aggress upon being insulted can result in status loss.

At its core, men’s intrasexual aggression is driven by efforts to achieve and maintain status, resources, and mating opportunity. To test this hypothesis experimentally, Griskevicius and colleagues (2009) primed men with status and mating motives by exposing them to short stories. Results showed that status motives increased men’s willingness to engage in direct aggression (face-to-face confrontation). Men’s aggression was also increased by mating motives within the context of being observed by other men. Male sexual jealousy is also a driving force behind men’s intrasexual violence, whereby over 90 % of same-sex killings involving “love triangles” are perpetrated by men and fewer than 10 % by women (Daly and Wilson 1988). Some researchers have observed links between male aggression, victimization, and mating outcomes. Arnocky and Vaillancourt (2012) found in a prospective longitudinal study that male adolescent indirect (but not direct) aggression was associated with being more likely to have a dating partner 1 year later.

Collective Male Aggression

Warfare and intergroup rivalry can also be understood within the context of competition for reproductive success. Greater male, relative to female, participation in organized collective violence is seen at various cultural and subcultural levels, from street-gangs to international warfare. Durham (1976) developed and tested a model showing that the costs of participating in collective

aggression can be outweighed by its survival and reproductive benefits when access to scarce and valuable resources is at stake. Accordingly, men may have evolved psychological mechanisms enabling them to form coalitions centering upon perpetrating acts of aggression against outgroups with the goal of acquiring or protecting reproductive resources. For instance, among the Yanomamo, collective groups of men often raid neighboring tribes as acts of revenge, and also to forcibly take food and women (Chagnon 1988), suggesting that men form aggressive coalitions to coopt valuable reproductive resources and opportunities.

Adaptive Physiology for Competition

Men’s adaptations for engaging in physical combat are well-exemplified by studies of sexual dimorphism in body size. In most sexually reproducing species, males are substantially larger than females; sexual dimorphism in body size is owed greatly to intrasexual competition, whereby larger males often achieve greater mating success than smaller rivals (e.g., McElligott et al. 2001). Compared to other Hominids such as orangutans and gorillas, modern Humans exhibit relatively less sexual dimorphism in body size. It is important to note, however, that the relatively less extreme sexual dimorphism in humans (at least, in terms of body size) does not imply that observable physiological sex differences are somehow vestigial in relation to intrasexual competition. Indeed, Archer and Thanzami (2007) found that young Indian men with greater size and strength reported more frequent physical aggression in the previous year. Lassek and Gaulin (2009) examined the relationship between fat-free mass (FFM) and limb muscle volume (LMV) and mating success. Results showed that although FFM and/or LVM are positive predictors of daily energy intake and negative predictors of C-reactive protein and white blood cell count, indicating a tremendous physiological cost to production and maintenance of increased musculature, FFM and LMV were also predictive of men’s total and past-year self-reported sex partners as well as age at first intercourse. Men’s body size and strength also relates to various characteristic associated with

intrasexual rivalry. Fessler et al. (2014) found that men's chest compression strength was inversely related to their perceptions of the size and strength of various rivals (supporter of a rival sports team or as a man armed with a handgun), suggesting that assessment of rival physical threat varies as a function of one's own strength. Male adolescents with more handgrip strength are also more likely to highly estimate their own fighting ability, which in turn predicted actual use of physical aggression (Muñoz-Reye et al. 2012).

Whereas physical size and stature may be complicated in men's ability to fight and to provide protection or resources, other associated morphological traits also relate indirectly to men's intrasexual rivalry as signals of their mate-value and/or formidability. For instance, men with lower pitch voices are perceived as being more physically dominant and are also rated by others as being larger, more masculine, and older (see Puts et al. 2012 for review). In samples drawn from both the USA and from Hadza foragers, Puts and colleagues (2012) showed that various sexually dimorphic vocal parameters predicted men's body size, strength, testosterone, and/or physical aggressiveness. In North American samples, women have reported lower pitched men's voices as being more attractive, particularly during the fertile phase of the menstrual cycle, men with low-pitched voices report having had more sex partners, and Among Hadza hunter-gatherers, low voice pitch correlates with having more offspring (see Apicella et al. 2007).

For men, components of facial masculinity such as protruding cheekbones, large and well-defined chins, heavy brow bones, and facial hair might also be important correlates of rivalry among men (see Arnocky et al. 2014a for review). Bearded males are rated by women as being more masculine, aggressive, socially mature, and older (Neave and Shields 2008). Research has shown that a marker of facial width-to-height ratio predicted men's reactive aggression as well as aggression (in penalty minutes) among varsity and professional hockey players, and subsequent studies have linked the FWHR to achievement drive, self-reported dominance, and reduced likelihood of death from homicide involving direct

physical contact (see Haselhuhn et al. 2015). Mueller and Mazur (1996) showed that cadets' facial dominance predicted subsequent status (in terms of promotions) later in their careers. Little and colleagues (2015) found that observers of facial photos of mixed martial arts fighters were accurate above chance in predicting the winners of fights, and that winners' faces were perceived as being more masculine, as well as stronger, and more aggressive. Women in this study also viewed winner faces as more attractive. Taken together, these findings suggest that men with masculinized somatic, facial, and vocal features may be more dominant, more aggressive, more successful in altercations, and are viewed by women as being more desirable, at least within the context of short-term mating.

Testosterone and Men's Intrasexual Rivalry

The common thread between all of the aforementioned morphological signals is that physical size and strength, deeper vocal pitch, and facial masculinity have all been shown to correlate with testosterone (T) – an androgenic hormone that produces male sex characteristics. T diverts resources away from immune functioning; accordingly, only men of sufficient immunocompetent condition can afford the cost of elevated T. A man's condition could therefore be assessed in his T-linked secondary sexual characteristics. T is important to men's intrasexual rivalry for at least two reasons: First, regarding *intersexual* selection, women should prefer men who exhibit features associated with increased T, given that men who can withstand the immunologic costs associated with developing these characteristics are healthier and thus better able to provide offspring with good genes, resources, and protection. Indeed, some evidence has suggested that males with more masculine bodies in terms of height, strength, and with more masculine voices, and faces are indeed healthier than their less sexually dimorphic conspecifics (see Arnocky et al. 2014a for review). T is also positively linked to sperm concentration and motility (Meeker et al. 2007).

Second, regarding intrasexual selection, T is a driving force behind male dominance and aggressive behavior. Archer (2006), in reviewing

evidence pertaining to the challenge hypothesis (i.e., context-dependent increases in testosterone levels linked to aggression) in humans, suggested that T rises among young men who are challenged (e.g., men from “cultures of honor” who are insulted), as well as in men who are in a precompetitive state (e.g., before a sporting match), and among winners of direct competition (e.g., following a successful competition or sporting match). Conversely, T is often shown to decrease among losers of competition (Archer 2006). Notably, T responses to intrasexual competition have been observed throughout the animal kingdom (Archer 2006), suggesting that context-dependent changes in T may serve important adaptive functions. It has been proposed that the costs associated with maintaining elevated T concentrations (e.g., decreased paternal care, increased risk for physical injury/death, depressed immune function, increased energetic demands) may have led to a highly flexible endocrine system capable of rapidly modulating T in response to social challenges (Wingfield et al. 2001). Also, it has been speculated that acute changes in T within the context of competitive interactions may ultimately serve to fine-tune ongoing and/or subsequent competitive and aggressive behavior (Archer 2006). Consistent with this functional account of T reactivity, a growing body of evidence indicates that increases in T during competitive interactions positively predict aggressive behavior in healthy young men (see Carré and Olmstead 2015 for review). Recent research that acutely increases T concentrations through pharmacological challenge indicates that T rapidly increases amygdala and hypothalamic reactivity to angry facial expressions (Goetz et al. 2014). Importantly, these brain regions are rich in androgen and estrogen receptors and play a key role in the modulation of aggressive behavior (see Carré and Olmstead 2015). More recent work indicates that a single application of T to young men rapidly increases men’s perception of their own facial dominance (Welling et al. 2016). Specifically, T led men to perceive themselves as more physically dominant, which ultimately may in part explain links between T and human aggression. That is, T may enhance men’s perceptions of their

own formidability, which may increase their willingness to engage in intrasexual competition with other men. Together, this body of literature suggests that high T men may be more competitively successful than low T men in domains of intersexual selection (especially for short-term mateships) and intrasexual rivalry. Men’s intrasexually competitive behaviors are driven, at least in part, by real or perceived challenges to their reproductive fitness that are mediated by context-dependent changes in testosterone.

Contextual Influence on Men’s Competition

The implementation and efficacy of intrasexually competitive tactics may vary depending on a number of factors including but not limited to (1) the mating system and individual mating goals, (2) the number of mates available locally, (3) men’s relative mate-value, and (4) ovulatory shifts in women’s mate preferences.

Men’s intrasexual rivalry is characteristically different in terms of tactics employed within short versus long-term mating contexts. For instance, Schmidt and Buss (1996) found that emphasizing their immediately available resources was judged as being most effective for men pursuing short-term relationships, whereas showing resource potential as well as derogating a rival’s resource potential and achievements were judged as most effective for men pursuing long-term relationships (Schmidt and Buss 1996). Simpson et al. (1999) told men and women they would be competing with another same-sex individual for a date with an attractive opposite-sex person. While being videotaped, participants stated why the potential date should choose them over the competitor. Results showed that men who reported a more unrestricted sociosexual orientation (indicative of greater short-term mating orientation) were more likely to use direct competition tactics than were more restricted men. Restricted men instead highlighted their positive personal qualities. Men’s intrasexual rivalry is also subject to differences in the overarching mating system. Male–male competition is most common in polygynous mating systems, where males are more likely to compete over gaining and maintaining mating access to females (female

defense polygyny) or reproductively relevant resources (resource defense polygyny). For instance, in polygynous societies, where some men are able to monopolize significant reproductive opportunities and exclude others, the likelihood of civil war (i.e., male coalitional aggression) increases (Kanzawa 2009).

Another contextual factor influencing men's (and women's) intrasexual rivalry is the ratio of reproductively viable men to women within a given population, otherwise known as the operational sex ratio. Recent experimental evidence has shown that when men and women are primed to perceive that mates are scarce, they report a more intrasexually competitive attitude and express more jealousy and willingness to aggress indirectly against a hypothetical mate-poacher trying to steal their partner, with men also reporting a modest increase in willingness to aggress physically, relative to those participants primed with mate abundance (Arnocky et al. 2014b). Barber (2009), using murder data from the United Nations and homicides from World Health Organization, showed that killings in both data sets increased alongside a female-biased sex ratio (i.e., a larger proportion of females to males). This finding held independent of statistical control for economic development, income inequality, urbanization, population density, the number of police, and whether the country was a major center of illegal drug trafficking.

Men's relative mate-value and social standing has also been linked to their intrasexually competitive behaviors. Poor and single men are more likely to commit homicide relative to men who are married and well-off (Wilson and Daly 1985). Yet some research has shown that self-perceived mate-value (SPMV) positively predicted young Indian men's use of aggression (Archer and Thanzami 2009); with SPMV previously being linked also to willingness to inflict discomfort upon another person (i.e., using the "hot sauce" paradigm) and trait measures of aggression (see Archer and Thanzami 2009 for review). The apparent disconnect between perceived mate-value and discrepant information about actual mate-value may thus be a particularly potent predictor of aggression. In two studies, Bird

et al. (2016) showed that narcissistic (high perceived value) men who received information suggesting they were of low objective mate-value in a mock online dating paradigm engaged in more retaliatory aggression toward a same-sex rival in a point subtraction aggression task relative to men who were not narcissistic and received low mate-value scores or men who received high mate-value scores.

Lastly, the efficacy of men's phenotypic markers of dominance and masculinity as well the efficacy of behavioral aggression in being selected for by females may vary as a function of their fluctuating mate-preferences across the ovulatory cycle. Giebel et al. (2013) exposed women to one of four descriptions of a soldier's experience after returning from war, which included trauma related symptoms with (1) high or (2) low appetitive aggression, or no trauma related symptoms with (3) high or (4) low appetitive aggression. Participants rated the man on desirability as a short term or long-term sex partner. Results showed that women preferred a soldier high in appetitive aggression as a short-term mate but not as a long-term partner, and this effect was stronger for women in their fertile phase of the menstrual cycle. Similarly, Gangestad et al. (2004) showed that when viewing tapes of men competing for a potential lunch date, women who were in the fertile phase of the menstrual cycle were more likely to rate men who displayed social presence and direct intrasexual competitiveness as more desirable short-term, but not long-term, partners. Taken together, these results suggest that women's preferences for aggressive men are higher during fertile windows, especially within the context of short-term mating.

Conclusion

Adaptations for increased intrasexual rivalry among men have been observed in sexually dimorphic human physiology, mating psychology, and related behaviors. Men's intrasexually competitive tactics range from resource displays, to derogation of rivals, to direct aggression, warfare, and homicide. Male rivalry results from

intersexual and intrasexual selection, whereby sex differences in obligatory parental investment, reproductive potential, and variability compel the evolution of male rivalry for valuable reproductive resources and opportunities. Contextual factors, including mating systems and individual mating goals, the number of mates available locally, and men's relative mate-value, as well as ovulatory shifts in women's mate preferences, can influence the content and intensity of men's intrasexual rivalry.

Cross-References

- ▶ [Anatomical Adaptations for Fighting](#)
- ▶ [Assault and Murder](#)
- ▶ [Dominance and Testosterone](#)
- ▶ [Intrasexual Rivalry Among Women](#)
- ▶ [Men's Sexual Jealousy](#)
- ▶ [Reproductive Potential](#)
- ▶ [Upper Body Strength and Fighting Ability](#)

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