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## Indicators and Correlates of Status and Dominance

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### Synonyms

Correlates; Dominance; Indicators; Prestige;  
Status

### Definition

Social status has many definitions; however, it can be considered analogous to “rank” in social non-human animals, whereby the higher in social status a person is, generally the more resources, mating opportunities, and higher fitness benefits they receive. Cues of human status and dominance are discussed below.

## Introduction

What does a big bank CEO have in common with a bank teller working at one of its numerous locations? They are both part of the company hierarchy. Their day-to-day experience at work is likely, however, to be very different because they are on opposite ends of the company hierarchy. The CEO has reached the highest possible status, and therefore also holds vast resources, power, and wealth, over and above all others below them in the company. The bank teller, on the other hand, must take orders from all those situated higher in the company’s hierarchy, and can, if there are no safeguards in place, have their salary docked or suspended, be declined a raise, and even be made redundant without much warning.

Status hierarchies are ubiquitous in both non-human and human animal groups where individuals live in relatively close proximity and are in contact often enough for it to be warranted. These hierarchies likely serve a purpose and may be beneficial for individuals within a group to reduce within group conflict. That is, formation of status hierarchies can be beneficial to all individuals in the group as it means that there are less overt and prolonged aggressive interactions between the same individuals. Once a hierarchy is established, most individuals will likely learn their place, although hierarchies can change with members moving up or down the ranks, for example, if an individual dies or is displaced through external factors.

## Advantages of High Status

### Nonhuman Animals

Being of high social status brings advantages, such as the ability to manipulate resources or even mating opportunities. These benefits have been well documented in nonhuman animals. For example, studies of red deer have shown that stags of high status displace those of lower rank in order and are able to occupy food areas which have higher nutritional content (Ceacero et al. 2012). Similar results have been observed in a wide range of other animals, such as American bison, crayfish, and willow tits (see Ceacero et al. 2012, for brief review). Thus, being of high status in many animals leads to benefits including the ability to monopolize resources.

Another potential benefit of being high in status is having higher reproductive success or leaving more descendants. While this may in part be linked with the ability to monopolize resources, it is worth discussing as there is a large literature on the subject. In nonhuman primates, for example, the rank a male occupied within the group was positively correlated with reproductive success (Cowlshaw and Dunbar 1991). That is, higher ranked males were more likely to have more mating opportunities and produce more offspring than those which were ranked lower. In a very large study which compiled the research of over 700 published research articles, Ellis (1995) found similar results in a wide range of disparate nonhuman animal groups including rodents, birds, fish, and primates. More recent research has demonstrated many more examples of this link between rank and reproductive success (for example, in Macaques, Schülke et al. 2010). Thus, a major benefit of being a leader in animal societies appears to be higher reproductive success.

### Humans

The benefits of high social status or rank are not exclusive to nonhuman animals. High status humans, specifically men, are also likely to increase their reproductive success relative to low status men. Indeed, Hopcroft (2006) presents a comprehensive table of preindustrial cultures in which high status has been positively correlated

with higher reproductive success, judged by number of surviving offspring. Other than reproductive success, high status individuals, such as the bank CEO mentioned above, have also been found to have increased economic/resource gains (Cheng et al. 2013). High status individuals gain not only power but also resources and more mating opportunities, which may then equate to higher reproductive success.

### Indicators of Status and Dominance in Nonhuman Animals

Being of high status is important as it can lead individuals to enjoy many of the benefits described above and in nonhuman animals, there is much research linking physical traits with status.

There are many indicators of high and low status in nonhuman animals and these vary based on the species in question. For example, body size and age are indicators of status in some species where larger individuals tend to be the dominant ones (Post 1992). In addition, many animals have secondary sexual characteristics and/or weaponry which can be used as indicators of status or rank, especially in an agonistic setting. Well-known examples include antlers, and caribou and red deer with larger antlers have been shown to be more dominant than those with smaller antlers (Appleby 1982). This research suggests that age, size, and size of ornamentation are all ways in which certain nonhuman animals signal their rank to conspecifics.

### Achieving Status in Humans

When looking at humans, in contrast to some of the marked differences between the sexes in some nonhuman animals, it is striking how similar men and women are to each other. That is, one sex does not have prominent weaponry such as antlers or extensively bright coloration which can be used to assert rank/authority. There *are* differences in physical strength, with men generally being stronger (Lassek and Gaulin 2009), and height, with men on average being taller. However, these differences are not as prominent as in many other species, and the examples discussed in the section above. So, how do humans generally reach a

position of high status? In many groups, individuals are a part of in everyday life, be it during work, sports teams, or other group-based activities, how do they climb the social ladder?

Recent research suggests that there are two main ways of attaining high status in humans, *dominance* and *prestige* (Henrich and Gil-White 2001). Gaining status through dominance usually entails the use of coercion, aggression, or force in order to “make” others follow an individual. Conversely, gaining status through prestige does not require an individual to make others follow them and their orders, but rather intrinsic skills, qualities, and knowledge that they possess motivate others to follow them. The key difference is that while dominant individuals act upon others in order to receive followership, prestigious individuals freely, and somewhat passively, receive followership simply through the characteristics they are perceived to possess.

Examples of the use of two methods of status attainment can be seen in real-world individuals. Billionaire businessman and current US president Donald Trump can be considered a dominant individual. He recently completed building the “Trump International Golf Links” near Aberdeen, Scotland. Even though there was a public attempt to boycott the project, mostly due to the golf course being located on a site of scientific importance, Trump continued with the project. Additionally, Trump continues to fight plans to build a large wind farm close to the golf course claiming that it would spoil players’ views. There is even speculation that Trump has used the law to remove local residents from their homes so that they are not located near his golf course and its adjacent hotels. If these claims are true, then Donald Trump has demonstrated himself to be a forceful, coercive, and dominant individual, achieving his goals despite resistance from others. Even within his presidential campaign/term, Trump has publically berated and been hostile toward candidates, foreign dignitaries, news outlets, people who disagree with him, women, immigrants, and people of different races/ethnicities (see @realDonaldTrump on twitter.com ([www.twitter.com](http://www.twitter.com)) for examples).

In contrast, a real-world example of an individual who might be considered prestigious is the current Dalai Lama. He has championed nonviolence in order to solve conflict, and thus seems unlikely to resort to force in order to get his way. He is also a part of the Elijah Interfaith Institute, which aspires to open dialogue with many different faiths in order to foster peaceful relations among them with the aim to lead to trust and transparency – in effect the opposite of coerciveness and manipulation. Finally, he has accrued international acclaim and praise, including winning the Nobel peace prize in 1989. It is the Dalai Lama’s many personal characteristics, convictions, and qualities which have led others to hold him very high regard, and he is almost universally acknowledged as an individual who deserves to be listened to and followed.

The stark contrast between Donald Trump and the Dalai Lama is quite evident. While both are high status individuals, holding power and influence over others, the tactics used to achieve this status are very different. While Donald Trump has, in effect, exerted his dominance in order to achieve his goals, regardless of the consequences and who it might affect, the Dalai Lama has earned his status through cooperation, and the many merits and qualities which he shows to those around him.

Recent research has also pointed to social and physical dominance being two different methods of attaining “dominance,” with physical dominance dealing with physical characteristics (such as being able to “win a fistfight”), while social dominance implying more guile (is influential but also tells others what they want; e.g., Puts et al. 2006).

## Definitions of Dominance

As the above section implies, there appear to be many ways in which researchers study high status, with some opting to provide definitions while other researchers opt to simply allow participants to use their “gut instinct” to decide what dominance, prestige, power, status, etc., are.

The use or lack of use of a definition can complicate matters, as some researchers divide dominance into physical dominance and social dominance and find differences between the two. For example, studies have found that faces of women which have been manipulated to look more feminine are rated as more socially dominant, while both women and men's faces manipulated to look more masculine are rated as more physically dominant (Watkins et al. 2012). The definitions used to describe physical and social dominance in these studies were taken from Puts et al. (2006), where participants rated voices for dominance and where physical dominance was described as the ability to win a "fistfight," while social dominance was described as being a respected "leader." This definition of social dominance which also includes words like "influential" was originally used by Mazur et al. (1994) to denote dominance; however, in the context of the dominance and prestige literature mentioned above, where dominant people may not necessarily be respected, this social dominance definition appears to align closer with prestige (Henrich and Gil-White 2001). How exactly social and physical dominance relate to the concepts of prestige and how they relate to, or are potentially subsumed by the concepts of dominance, have yet to be established.

"Status" itself has been used to refer to "an individual [who] is respected, admired, and highly regarded by others" in a recent study (Fragale et al. 2011, pp. 767). This quality was compared with individuals who were powerful, where power described someone who "can control others' outcomes by granting or withholding valued resources" (Fragale et al. 2011, pp. 767). Again the definitions used to describe status and power are similar to those used to describe prestige and dominance, respectively, by Henrich and Gil-White (2001).

It is important to note that the research and studies described below may all have slightly different definitions of dominance and its variants, or prestige, whereby the researchers may either have provided various definitions or allowed participants to use their own internal concepts of human social status to guide their judgments.

Moreover, future studies should try to elucidate exactly what individuals are imagining when they are asked about these concepts – for example, what adjectives/characteristics/features would they attribute to a dominant person or a prestigious one?

## Overview of Indicators and Correlates to Status in Humans

Many different cues and correlates to social status have been explored in humans within the last 30 years. A few studies pertaining to certain indicators are described below.

### Faces

Faces are usually the first thing an individual sees or is drawn to when they enter into an interaction with another person. Faces hold a variety of cues, people use faces to judge people's attractiveness, their trustworthiness, and even their competence (see Todorov et al. 2015 for review), among many other traits.

Dominance has been linked to certain facial characteristics by some researchers, including such as prominent brows, muscular and well-defined jaws, broader faces, and masculinity in men (Mazur et al. 1994). In women, those with more masculine faces are considered as more physically dominant while as those with more feminine faces are considered to be socially dominant (Quist et al. 2011).

Additionally, recent research has shown that facial width-to-height ratio (fWHR) (or the distance between the two zygions with respect to the distance between the lower brow and upper lip) is also related to both self-perceived and other-perceived dominance in men though not to prestige (Mileva et al. 2014). Using self and other report measures, in three studies, the authors found that men with higher fWHR ratios were rated as higher in dominance, and rate themselves as higher in dominance using two different dominance scales. fWHR has also been linked to other behavioral characteristics associated with dominance, such as aggression, where Carré and McCormick (2008) showed, when looking at

National Hockey League (NHL) players and varsity hockey players, that those players with higher fWHRs were also more likely to have had longer stints in the penalty box – where players are sent if they have performed an act which is deemed reckless or prohibited in the sport. While some researchers have disagreed that fWHR is linked with aggression, a recent meta-analysis suggests that the two are positively correlated (Haselhuhn et al. 2015).

Another aspect of dominance which fWHR has been related to is exploitative behavior. Stirrat and Perrett (2010) allowed participants to play a trust game and found that men with higher fWHR were more likely to exploit the trust of those they were playing with than men with lower fWHR. Similarly, Haselhuhn and Wong (2012) found that men with higher fWHR were more deceptive in a negotiation task related to the fictitious purchasing of property, and more willing to cheat in a “dice roll” than men with lower fWHR. As such, at least in men, fWHR appears to be related to dominance characteristics as well as to self- and other-perceived dominance.

The facial features discussed above are static and do not, for the most part, change on a person’s face once they have reached the end of puberty. That is, one cannot easily alter (other than with some types of reconstructive surgery or perhaps through gaining a large amount of weight) one’s facial structure as it delineates the underlying skeletal structure. Facial expressions, on the other hand, are easy to alter and have been shown to interact with dominance attributions. For example, research suggests that men with neutral, angry, and happy expressions are more likely to be perceived as dominant than those expressing fear and sad expressions (Hareli et al. 2009). In women, the pattern is more complex, with some studies suggesting women exhibiting anger expressions are perceived as more dominant (Hareli et al. 2009).

Faces therefore allow individuals to make many attributions about a person, and can also be used to infer their dominance, or perhaps lack of dominance.

## Voices

Just as faces are important in signaling dominance during first introductions with a stranger, another important cue individuals can use to gain information about someone’s dominance is that person’s voice. Studies suggest that voices are able to signal dominance, with lower pitched voices being considered as higher in dominance (Puts et al. 2007), especially with respect to physical dominance versus social dominance. As men tend to have lower pitched voices than women, and men are physically stronger (Lassek and Gaulin 2009), it may not be surprising that dominance is associated with a lower voice pitch. Indeed, masculinized voices (i.e., those with lower fundamental frequencies – equated to pitch) tend to be considered as more attractive by women in general, with the authors suggesting this is due in part to relating to their sexual maturity (Feinberg et al. 2005).

More recent research has again showed that artificially masculinized voices are associated with higher dominance, and are also considered more attractive for short-term relationships rather than long-term relationships by women (Vukovic et al. 2011). This research suggests that voices can be used as valuable cues to someone’s dominance which can in turn impact attractiveness and other judgements.

## Height

Another characteristic commonly associated with influential, powerful, and dominant people is height. Indeed, studies asking preschoolers to rate the dominance of men and women of various heights show that height is positively related to other perceptions of dominance (Montepare 1995). That is, tall men and women were considered more dominant than their shorter counterparts.

High dominance would be expected to lead to influence and success, and recent studies have looked at the relationship between height and leadership. In a task where the researchers had participants simply draw a “leader” and a “citizen” using a pen and paper, significantly more participants drew the leaders as taller than the citizens (Murray and Schmitz 2011). In a second

study, Murray and Schmitz (2011) also found, through self-report measures, that participants who were taller also thought that they would be more qualified to be candidates for leadership roles than participants who were shorter. In a study examining all previous presidents of the US dating back to 1790, Stulp et al. (2013) showed that presidents were significantly more likely to be taller than other men in their birth cohort, and that taller presidents were more likely to be reelected, win popular votes, and be considered as better leaders.

Height is therefore an important characteristic, at least for men, in that it can make them appear higher in dominance and consequently higher in leadership characteristics than men who are shorter. In addition, as tall men also rate *themselves* as more dominant and as having greater leadership qualities, this may mean that they are internalizing other's opinions of them and behaving accordingly. Another possibility is that differences in height, perhaps related to differences in circulating testosterone levels, lead to subsequent behavior change (e.g., tall individuals are more likely to exhibit dominant behaviors), which in turn affect other's perceptions. Which and to what degree each of these affects the relationship between dominance and height is not yet known.

### **Nonverbal Behavior, Personality, and Hormones**

Several recent studies have looked at dominance with respect to nonverbal behavior and personality. Cheng et al. (2010) looked at self- and other-rated perceptions of prestige and dominance in a set of undergraduate students as well as male university athletes. They found that high dominance was positively correlated to personality characteristics including extraversion, aggression, and narcissism, and was negatively correlated with agreeableness. In contrast, prestige was positively correlated with extraversion, agreeableness, conscientiousness, self-esteem, and openness, while being negatively correlated with aggression. These results were most evident in the self-ratings of undergraduate students, and provide an interesting insight into the differences between dominance and prestige as separate

strategies for gaining high status. Other nonverbal cues related to "aggressive" dominance include a decreased tendency to laugh along with others in a group setting, as well as increased time spent looking around the room as opposed to at others within the group – what the authors consider an attitude of disinterest (Kalma et al. 1993). Additionally, dominant individuals are more likely to have persistent, direct eye gaze, while those who are lower in dominance are more likely to look away and give only furtive glances at the dominant individual (Mazur et al. 1980).

### **Color**

Bright coloration has been found to be a dominance cue in several animal species including, for example, in face of mandrills (Setchell and Wickings 2006). More recently red has been associated with dominance in humans as well. In a unique study, Hill and Barton (2005) found, when analyzing four different contact sports (i.e., Judo, boxing, etc.) during the 2004 Olympic games, that those contestants who were assigned the color red were more likely to win, and that if there was less ability asymmetry between that individual and their opponent (i.e., where individuals had similar competitive abilities), those wearing red were even more likely to win. Indeed, in a simple study using only shapes of different colors, Little and Hill (2007) found that participants chose red-colored circles or triangles more often than blue when asked which would be more aggressive. Additionally, they found that women were more likely to rate red stimuli as higher in dominance, while men were more likely to rate red stimuli as the "winner" of a contest.

Recent research has shown that men whose pictures have been superimposed onto a red background are more likely to be rated as higher in attractiveness than those posing on blue or achromatic backgrounds, and that this effect is mediated by perceptions of status (Elliot et al. 2010). That is, red is associated with high status, and that leads to higher attractiveness ratings for men on red backgrounds. As such it appears that color can affect attributions of status, dominance, and competitive ability, not only in nonhuman animals but also in humans. Specifically, the color red seems

to be linked to dominance, though there may be other colors which have yet to be studied which also appear dominant.

## Wealth and Displays of Wealth

Wealth has long been associated with social status and cues to wealth may then be important in inferring status. Research has focused on the association between wealth and attractiveness. At least in men there are reproductive benefits to being wealthy, with wealthier men having more offspring than less wealthy men both in Western industrialized and more traditional societies (Pérusse 1993). Of course, cues to wealth will be culturally dependent, with specific cues perhaps only being valued in particular cultures. For example, the Mukogodo of Kenya value ownership of livestock but this may not indicate high status to city living New Yorkers, who may look to other cues such as the expense of clothing and items such as watches, jewelry, and cars. Research in Western countries has revealed that manipulations of job titles or clothing linked to wealth is related to attractiveness, at least for men, with professional high-earning jobs making men more attractive to women than lower earning jobs (Townsend and Levy 1990).

## Relative Dominance

Research is now emerging on the importance of relative dominance, and while not an indicator of dominance, it is nevertheless worth mentioning. To illustrate, imagine that an individual were approached, somewhat menacingly, by a formidable player in the NFL (or Rugby Union for British readers). In most instances, that individual might respond by being frightened, perhaps for their life, and adopting the decision to run away from the confrontation. However, if that individual is similarly tall, muscular, and menacing, then they might “hold their ground” and opt to continue with the confrontation. This scenario illustrates how important it is to use oneself as a relative

marker with which to make comparisons regarding others in terms of dominance.

Recent research in evolutionary psychology has shown that these relativities extend beyond dominance. In one study, women who were not using oral contraceptives and rated themselves as highly physically attractive also preferred men with higher facial masculinity and symmetry, two traits commonly associated with higher genetic quality, than women who thought themselves less attractive (Little et al. 2001). Thus, relative ratings of attractiveness appear to influence women’s judgments of attractiveness in partners; those who think more highly of themselves, in this case with regard to attractiveness, also believe that they are able to attract and attain a higher quality male, in this case one who is more masculine.

There is relatively little literature regarding relative dominance; however, research by Watkins et al. (2010b) has found that men who rate themselves as high in dominance using a standardized dominance questionnaire are also less likely to attribute dominance to masculinized versions of a face (i.e., they were less sensitive to masculinity when deciding which of two facial images – one manipulated to look low in masculinity and one manipulated to look high in masculinity – was the more masculine one). Taller men have also been shown to be less sensitive to cues of other men’s dominance (Watkins et al. 2010a), and above it was discussed that taller men are also rated by others as higher in dominance. In women, Watkins et al. (2012) showed that those women who rated themselves as higher in dominance and those who were taller tended to be less sensitive to masculinity/femininity manipulations of female faces. These studies suggest that self-perceptions of one’s own dominance can affect attributions of others dominance as well, with those individuals who perceive themselves as being higher in dominance also being less sensitive to cues of dominance from other individuals. Thus, it seems that others’ dominance cues are particularly important to individuals who perceive themselves as being low in dominance, perhaps because they have the most to lose when

interacting with a dominant individual (specifically in confrontational scenarios).

These studies indicate that self-perceived and relative dominance are important to address in order to fully explore and understand the nuances of human dominance and dominance perceptions.

## Summary

Social status and particularly dominance has been the topic of a great deal of research in the last 30 years. Those who possess high status can earn great rewards (i.e., reproductive success) and as such it is important to know more about the indicators and cues of social status, some of which are briefly touched upon above. However, definitions within the literature differ and it is important to keep this in mind when performing research on social status. In addition, the importance of relative dominance and relative social status is only now becoming elucidated and will no doubt become an important topic of research in the coming years, if for no other reason than to control for individual differences found in research results. In the following sections, some of the above sections and others will be discussed in greater detail.

## Cross-References

- ▶ [Dominance and Status in Nonhumans](#)
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- ▶ [Dominance Hierarchies](#)
- ▶ [Dominance in Humans](#)
- ▶ [Dominance and Prestige](#)
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- ▶ [Size and Dominance](#)
- ▶ [Status and Dominance Hierarchies](#)
- ▶ [Vocal Indicators of Dominance](#)

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