

# VU Research Portal

## The Status-Size Association

Blaker, N.M.

2016

### **document version**

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### **citation for published version (APA)**

Blaker, N. M. (2016). *The Status-Size Association: How Physical Size and Social Status Influence Each Other*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

## Abstract

The goal of this research was to provide a more detailed picture of the relationship between physical size (stature, muscularity) and social status. First, one experiment showed that taller men and women are perceived as more typical leaders than shorter counterparts, but for different reasons. Taller men were seen as leaders because they were also perceived as more dominant, healthy, and intelligent; whereas taller women were seen as leaders only because they were perceived as more intelligent. In the current dissertation, social status is defined as rank within a social hierarchy, which can be navigated with different strategies. Higher status can be achieved through free deference from followers (prestige), or by using force or intimidation (dominance). Two experiments show that both strategies are associated with taller stature and a more muscular physique in males. Two other experiments with children and adolescents (6-17 years) show that younger age groups primarily associate dominance with taller stature and increased muscularity, and the older age groups increasingly associate these physical features with prestige. Lastly, three studies investigated the effects of height differences in dyadic competitive interactions between men. Supporting the popular notion of a Napoleon Complex, relatively shorter men acted more dominantly toward taller opponents, under certain circumstances.

## Summary

This dissertation investigates the relationship between someone's physical size and assessments of their social status. Physical size is related to status in many species – including humans – and may affect both real and perceived status. I refer to this as the status-size association, the automatic association between physical size and position in a status hierarchy. To form hypotheses about the status-size association, I draw from literature in several disciplines (biology, anthropology, psychology). Furthermore, I distinguish between different aspects of physical size and different pathways to obtain status in groups with implications for the status-size effect. I suggest that height and muscularity differently affect status perception, and that status obtained through coercion (dominance) differently

affects size perception than status obtained through voluntary deference (prestige). The dissertation contains four empirical chapters testing different aspects of a status-size association.

### **Chapter 2 – The Height Leadership Advantage in Men and Women**

Research suggests that tall individuals have an advantage over short individuals in terms of status, prestige, and leadership, though it is not clear why. Applying an evolutionary psychology perspective, I predicted that taller individuals are seen as more leader-like because they are perceived as more dominant, healthy, and intelligent. Being fit and physically imposing were arguably important leadership qualities in ancestral human environments—perhaps especially for males—where being a leader entailed considerable physical risks. In line with expectations, these results demonstrate that by manipulating an individual's stature height positively influences leadership perception for both men and women, though the effect is stronger for men. For male leaders this height leadership advantage is mediated by their perceived dominance, health, and intelligence; while for female leaders this effect is only mediated by perceived intelligence.

### **Chapter 3 – The Status-Size Association**

Physical size and status are related in humans and several other species, referred to here as the status-size association. In humans, height's positive relationship with social status is well-known. This relationship can be partially explained by the positive effect high SES environments have on height, and partially by height's association with physical formidability and dominance. I recognize there are multiple strategies to gain and maintain status, namely prestige (voluntary deference from others) and dominance (intimidation, force), and test how these strategies relate to perceptions of height and muscularity in males. Results support a status-size association, and show that, on average, a high status male is estimated taller and more muscular than a low status male. Differentiating between prestige and dominance-based status further shows that while a high status male characterized by dominance is estimated equally tall to a high status male characterized by prestige, a highly dominant male is estimated more muscular than a highly prestigious male. These findings suggest that while status and perceived physical size are indeed related, it is important to differentiate between different aspects of social status and different aspects of physical size.

### **Chapter 4 – Development of the Status-Size Association**

Higher status males – both high in dominance and high in prestige – are estimated to be taller and more muscular than low status males, by adults participants. Chapter 4 investigates whether this status-size association is already exhibited by young children, and whether and how the status-size association changes across childhood (ages 6 to 12) and adolescence (ages 12 to 17). Results show that all age groups associate high dominance with taller stature and increased muscularity – like adult samples in previous research also did (see Chapter 3). However, not all age groups associated height and muscularity with prestige. In the adolescent sample, a prestige-size association increased in strength with age, whereas a dominance-size association attenuated with age. No clear pattern was detected amongst the elementary school group concerning the prestige-size association. Unexpectedly, the association between dominance and size became somewhat stronger with age in the 6 to 12 year-old age group. The differences in developmental patterns in the two samples may be due to large differences in Socio-Economic Status of the participants. I conclude that dominance and physical size are likely associated earlier than prestige and physical size.

## **Chapter 5 – The Napoleon Complex**

Physical size is positively correlated with dominance in several species. In humans, taller males enjoy a number of advantages compared to their shorter counterparts. For instance, height positively affects perceived social status, as well as actual income. This would then suggest that shorter males are at a disadvantage, perhaps leading to strategies to compensate for the status-drawbacks of shorter stature - a largely untested lay-theory known as the Napoleon Complex. The current research tests whether having shorter stature compared to an opponent in a dyadic competitive situation increases dominant behavior under certain conditions. A pilot study showed that males, but not females, who feel smaller take more money in an anonymous dictator game. Additionally, two studies show that relatively shorter males take more money from a shared pool in a dictator game against a real opponent – Study 5.1 showed that this effect is only found when retaliation by the opponent is not possible. Study 5.2 additionally showed that relatively shorter males did not act more physically aggressive in general toward an opponent. I conclude that when a male has the opportunity to gain valuable resources relative to an opponent in a competitive situation without possible retaliation, relatively shorter males assert a higher degree of dominance.