

Perceptions Of Social Dominance And How To Change Them

04-19-2024 - It's surprising that human infants [as young as 10 months](#) may be able to identify social rank. Research suggests that infants learn to distinguish who around them is dominant, using relative body size as a cue.



Experiments by University of Oslo psychologist Lotte Thomsen indicate that [infants may use the cue of body size to predict that a larger-sized object will prevail](#) over a smaller-sized object in a controlled visual representation. And, a Yale University research team found that [infants as young as three months seem to be able to recognize that voice pitch correlates with body size](#), with smaller organisms producing a higher pitch sound.

How Do We Know What Infants Think?

Researching and evaluating infant perceptions is complex. Experiments assessing infant reactions involve familiarizing them with an animated visual object, such as a colored block, and then varying its relationship with another similar block.

When the expected relationship is reversed, in what's called a "violation of expectation," researchers measure how long the infant gazes at the anomalous image, as compared to the length of its gaze on an expected image. The longer gaze at the unexpected image is interpreted as meaning that the infant recognizes something is not right.

For example, to assess the perception of dominance, [Thomsen and an international team of researchers](#) showed infants animations depicting a small and a large block moving toward each other, where one or the other would bow and give way to avoid a collision. In a series of experiments, they found that the infants gazed longer when the larger object yielded to the smaller one, suggesting that this was not what the infant expected.

This line of research suggests that by one year of age, infants may be able to recognize that size is related to strength and dominance, that the bigger size will prevail in a conflict situation, and that this holds for other conflict situations. These experiments conclude that knowledge of cues about perceiving social hierarchy develops very early in the human organism, and continues to develop through childhood and adolescence.

Other Species Do It Too

Studies comparing the hierarchical structure of human societies to those of other species suggest that “[there may be no fundamental discontinuities between social structure in humans and animals.](#)” Social hierarchy in animal groups is nearly ubiquitous: Non-human primates, insects, birds, and fish do it.

Social groups of non-human species form hierarchies to help protect the group from predators, reduce aggression within the group, find and allocate resources, and ensure that those at the top of the hierarchy can reproduce successfully—all of which is thought to contribute to the well-being of the group as a whole.

Social grooming is important in holding primate groups together by encouraging bonding. Studies show that primate [grooming triggers the brain to release endorphins, which promote a sense of well-being and relaxation](#) and at the same time create a sense of mutual trust. Grooming among primates can also be used as [a form of conflict resolution and reconciliation](#). It’s suggested that the time-consuming grooming necessity limits the upper limit of primate group size to about 50.

Humans replicate the grooming effect of stimulating endorphins, Oxford University psychologist R. I. M. Dunbar suggests in a 2020 article, by creating a “form of [grooming-at-a-distance.](#)” which includes laughter, singing, dancing, storytelling, and communal eating and drinking. With humans as with primates, the endorphin-releasing practices allow the group members to know each other and predict the future behavior of group members.

Neural Connections

The neural connections to status and status perception are an ongoing area of research in both primates and humans. Temple University psychology researchers suggest that there is an “[evolved origin for attaining high status and recognizing status in others](#)” in both non-human primates and human adults.

Using MRI imaging, scientists looking at the brain areas related to the perception of social status and dominance have identified regions of the brain and neurotransmitters that are activated when humans or primates are involved in perception of dominance in a relationship. Research results vary by experimental setup, but the [studies have consistently identified the same specific brain areas, including the amygdala, the hippocampus, and the prefrontal cortex](#), as being part of the neural network involved.

Future research, perhaps aided by improved imaging and detecting techniques, is needed to create a more precise picture of how the brains of humans and primates are involved in social status perception, the researchers conclude. What is known is that the perception of dominance is learned in human infants and continues to develop in complexity as the individual ages and gains more social experience.

Good or Bad Hierarchy?

If hierarchical organization is actually innate and even necessary for human institutions, the question is then how to make use of this reality.

Hierarchies can be characterized as benevolent or autocratic, based on whether they primarily benefit the general good, those at the bottom and middle, or the few at the top. Looking at human history, the hierarchical societies that come to mind are “bad” in the minds of most people. Think of dictators like Stalin or Hitler, or more modern ones.

But, as [one research team argues](#), “Equality is a mirage.” To function well, a large-scale society needs a system of organization that involves hierarchies, according to political theorists at the University of Hong Kong, Wang Pei and Canadian Daniel A. Bell. They point to the failure of China’s Cultural Revolution, as an example of failed “equality.” Instead, they propose:

“The choice is not between a society with no hierarchies and one with hierarchies, but rather between a society with unjust hierarchies that perpetuate unjust power structures and one with just hierarchies that serve morally desirable purposes.”

The question becomes not a choice between equality or hierarchy, but how to shape a hierarchical society into one that promotes more equality.

The Consequences of Inequality

Equality is now a hot topic in society, whether talking about gender, religion, race, income, or education. Generally, the arc of political development is bending toward more equality, and away from traditional inequalities such as relegating women to a lower rank.

The question of equality isn't an abstract one. Perception of lower social status has consequences for mental and physical health and well-being, as well as life expectancy, for humans and animals. As a [2019 anthropological study of rhesus macaques reports](#), “[S]ocial adversity gets under the skin over long time spans.” Writing in the Proceedings of the American Academy of Sciences, an international team of researchers concluded that social adversity affects the immune system in female macaques, with some variation, such as type of pathogen, length of exposure, and degree of social adversity.

Scores of studies document the adverse effects of the *perception* of low socioeconomic status in human beings. For example, a [meta-analysis of 44 studies of teenagers 12-19](#), conducted by researchers at Concordia University in Montreal, found that lower self-perceptions of status correlate with worse health. Interestingly, the study suggests that objective indicators such as wealth were not as relevant to health as subjective perceptions of status.

[One very specific study published in Health Psychology in 2008](#) looked at the objective socioeconomic status and subjective perception of status and how each was affected by the common cold virus. The researchers involved 193 healthy U.S. adults, who were first ranked objectively and subjectively on social status indicators. After six weeks, the study volunteers were screened for any cold symptoms and if they had none, they were exposed to one of two varieties of a common cold virus. Over the next few days, the volunteers were monitored for cold symptoms.

The surprising bottom line: Subjectively perceived lower social status correlated with greater susceptibility to catching a cold. Objective lower social status did not have this association.

Toward Better Health and Happiness

As [University of Toronto psychologist Marc A. Fournier explains](#), “Income inequality casts a pall over the quality of societal relations, such that everyone living in a more stratified society is less likely to trust others or become involved

in community life.” Further, those who subjectively rank themselves with lower social status, as many different studies show, are more likely to have lower levels of happiness.

The remedies for creating more happiness, and consequently better health, are not mysterious, just an ongoing challenge. Income redistribution is one sure measure, for example, through progressive taxation. [A few studies covering several countries](#) over a few decades have documented that this decreases income inequality and increases happiness.

Other measures also seem self-evident. Are there opportunities in society for advancing one’s status? How can public education systems foster such opportunities? How does the education system prepare young individuals to have more mastery over their lives? How do social institutions create more opportunities for positive community relationships?

Perceptions of dominance and social rank seem to begin very early in life, and later self-perceptions of lower rank, whether or not accurate, affect health and happiness. The open questions are how innate such perceptions are, and how society’s approach to equality can help change these perceptions for the better.

By Marjorie Hecht

Author Bio:

Marjorie Hecht is a longtime magazine editor and writer with a specialty in science topics. She is a freelance writer and community activist living on Cape Cod. You can read more of Hecht’s work [on the Observatory](#).

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