

THE *Current*

May 20, 2013

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UCSB Researchers Find Political Motivations May Have Evolutionary Links to Physical Strength

In the animal world, it's pretty easy to predict who will come out on top when, say, a pair of lions go head to head over food or an attractive female. The he-man who most values the resource in question and has the brawn to fight for it will, in all likelihood, emerge victorious.

Researchers at UC Santa Barbara and Aarhus University in Denmark have found that general concept also applies to humans when issues of resource distribution are on the table. Their findings appear in the current issue of the journal *Psychological Science*.

"The link between body size and aggressiveness is everywhere in the animal kingdom," said Daniel Sznycer, a postdoctoral researcher at UCSB's Center for Evolutionary Psychology and co-author of the paper. "It's there among invertebrates, vertebrates, non-human primates, and human primates -- us."

At the level of individuals, redistribution involves a conflict over resources, so the human mind should perceive issues of economic redistribution through that lens, Sznycer continued. "We humans are also primates and mammals and vertebrates -- heirs to the selective regime on conflict. And so, this study predicts that our human minds will use estimates of fighting ability -- in this case, upper body strength -- to

calibrate one's own stance in such conflicts."

In the days of our early ancestors, decisions about the distribution of resources weren't made in courthouses or legislative offices, but through shows of strength. With this in mind, Sznycer, along with colleagues Michael Bang Petersen of Aarhus University, and Leda Cosmides and John Tooby, UCSB professors of psychology and anthropology, respectively, and co-directors of the Center for Evolutionary Psychology, hypothesized that upper-body strength -- a proxy for the ability to physically defend or acquire resources -- would predict men's opinions about economic redistribution.

The researchers collected data on bicep size, socioeconomic status, and support for economic redistribution from hundreds of people in the United States, Argentina, and Denmark. In line with their hypothesis, the data revealed that stronger men are more likely to assert their economic self interest.

What counts as self-interest regarding redistribution, however, varies based on socioeconomic status (SES). Redistribution increases the share of resources of low-SES men, and decreases the share of resources of high-SES men. "Men of low-SES stand to gain, whereas men of high-SES stand to lose," Sznycer said. "What we found is that higher upper-body strength exacerbates your self-interested stance. Bigger biceps correlate with more support for redistribution among low-SES men, and with more opposition to redistribution among high-SES men."

Conversely, men with lower upper-body strength were less likely to assert themselves. High-SES men of this group showed less resistance to redistribution, while those of low SES demonstrated less support.

"Our results demonstrate that physically weak males are more reluctant than physically strong males to assert their self-interest -- just as if disputes over national policies were a matter of direct physical confrontation among small numbers of individuals, rather than abstract electoral dynamics among millions," said Petersen, one of the paper's lead authors.

According to Sznycer, the paper's other lead author, however, socioeconomic status by itself doesn't predict people's attitudes about redistribution. "It's only when you combine the information about strength and socioeconomic status that you can predict these political attitudes," said Sznycer. "This suggests that the human mind is ecologically rational and designed for small-scale societies rather than means-end

rational. In short, within our modern skulls lies a brain designed for ancestral challenges."

Interestingly, the researchers found no link between upper-body strength and redistribution opinions among women. "This is consistent with the male bias in the aggressive use of force among mammals," Sznycer said. "Compared to males, ancestral human females derived fewer benefits and incurred higher costs when bargaining using physical aggression. Women can certainly be competitive, but they use more indirect forms of aggression."

Sznycer also noted that finding the same results in three countries suggests the effect is driven by standard features of the human mind in tandem with particular environmental variables -- here strength and resources -- rather than being an idiosyncratic cultural effect. "These three countries have quite different distributive policies, and yet the way strength modulates these political attitudes is the same everywhere," he said.

Also contributing to the research was Aaron Sell, a lecturer at Griffith University and a former postdoctoral researcher at the Center for Evolutionary Psychology.

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