

Surprising insights from the social sciences

The shape that strikes fear

By Kevin Lewis

July 19, 2009

It looks like “V” is for vendetta. Researchers asked people to count simple shapes while having their brain scanned. Upon viewing triangles that pointed down (vs. upward-pointing triangles, or circles), people’s brains became more activated in regions involved in processing threats. Building on previous research showing that a normal “V” was rated as more threatening than an upside-down “V,” the researchers theorize that our brains evolved an automatic reaction to certain geometric forms that resemble the shape of emotionally charged facial expressions. While a downward-pointing angle can look like an angry face, an upward-sloping curve can look like happiness - indeed, in the experiment, viewing circles generated more activation in the visual-processing regions of the brain than viewing upward-pointing triangles.

Religion, the key to getting along

With so much conflict motivated by ostensibly religious differences, the search for methods of reconciliation is more important than ever. New research from psychologists in the United States and Iran may help. According to their study, citing pertinent religious sources to deliver a benevolent message can make all the difference. When their own mortality was made salient, people who scored high on a measure of religious fundamentalism became less hostile to foreigners after reading a benevolent message that was attributed to the Bible or the Koran. However, their reaction went in the opposite direction - more hostile - after reading messages attributed to non-religious sources. Perhaps that’s why President Obama cited the Koran several times during his speech in Cairo.

Rothschild, Z. et al., “Does Peace Have a Prayer? The Effect of Mortality Salience, Compassionate Values, and Religious Fundamentalism on Hostility Toward Out-Groups,” *Journal of Experimental Social Psychology* (forthcoming).

Is your boss macho enough?

Testosterone has long been associated with dominance, especially in males. Of course, just because someone is endowed with greater levels of the hormone doesn’t

mean that they will dominate. Many individual and situational variables affect social relations. However, the authors of a new study suggest that groups where status is not positively correlated with (gender-adjusted) testosterone levels will end up having less confidence in themselves. Hundreds of students were randomly divided into small groups that worked together over the course of a semester. In the middle of the semester, the students' testosterone was measured (via saliva samples), in addition to their ratings of each other's status in the group. At the end of the semester, people in groups where higher-status members had relatively less testosterone had less confidence in the group. This "mismatch hypothesis" is based on the notion that high-testosterone people chafe in low-status positions, while low-testosterone people are uncomfortable with the responsibility of high-status positions.

Zyphur, M. et al., "Testosterone-Status Mismatch Lowers Collective Efficacy in Groups: Evidence from a Slope-as-Predictor Multilevel Structural Equation Model," *Organizational Behavior and Human Decision Processes* (forthcoming).

The case for a complicated economy

As the world economy goes through its worst recession since World War II, many people are wondering what a future recovery might look like. If a recent analysis by scholars at Harvard is any guide, future growth will have to be complicated. They argue that complexity is at the root of economic growth and can predict future growth. Their analysis measured the complexity of a country's economy by modeling the diversity and interaction of its productive capabilities, which, in turn, were inferred from the variety and uniqueness of the products that the country contributed to global trade. They find that the economy tends to converge to the level of income implied by its level of productive complexity. So, if we want the economy to do better, we shouldn't necessarily be afraid of more cogs in the wheel.

Hidalgo, C. & Hausmann, R., "The Building Blocks of Economic Complexity," *Proceedings of the National Academy of Sciences* (June 2009).

Are night owls smarter?

Can your circadian rhythm be predicted by how well you do on tests? To answer this question, researchers analyzed data from a national survey of thousands of young people, controlling for age, gender, education, and other factors. They found that people who scored higher on a vocabulary test as adolescents were more likely to go to bed later at night and wake up later in the morning as young adults. According to

the authors, a disposition for being an intellectual over-achiever may be closely related to the disposition to deviate from the natural sunrise-to-sundown circadian rhythm of our ancestors.

Kanazawa, S. & Perina, K., "Why Night Owls Are More Intelligent," *Personality and Individual Differences* (forthcoming).

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http://www.boston.com/bostonglobe/ideas/articles/2009/07/19/uncommon_knowledge_surprising_insights_from_the_social_sciences/