Edge 160— May 10, 2005
(21.150 words)

Other material (omitted here) comes before the Gottfredson commentary reprinted below. Go to the following URL to see it (a debate between Steven Pinker and Elizabeth Spelke on sex differences).
http://www.edge.org/documents/archive/edge160.html

Go to this URL to read the Baron-Cohen article and other commentaries on it.
http://www.edge.org/documents/archive/edge158.html

Edge The Reality Club

Linda S. Gottfredson responds to Simon Baron-Cohen

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Simon Baron-Cohen's work joins the search for causal mechanisms linking genes, brain, and behavior. The patterned variation by sex at all three levels of analysis provides clues to what those mechanisms might be (e.g., testosterone). Baron-Cohen employs those patterns to better understand, in particular, the etiology of autism and its much higher prevalence among males.

Variation is the raw material for much scientific analysis and for evolution itself, but public discussion of human variation seems mostly off-limits today. We are called upon to celebrate diversity but not notice difference; to observe a new etiquette that forbids utterance of supposedly tactless knowledge. Good feeling compels public ignorance. But bewildered or bemused, outraged or apprehensive, most scientists soldier on.

Baron-Cohen continues to investigate the nature of sex differences. His research on babies only 24 hours old, while needing replication, fits the larger pattern of sex differences in interests, personality, and abilities across the lifespan. For instance, at all ages and worldwide, females tend to be more interested in people and males in inanimate objects. As noted in earlier commentaries, humans are not the only primates showing this pattern. It would have been an exception to the rule had Baron-Cohen's team *not* found boys gazing more at the mechanical object and girls more at the human face. Like the habituation research now used to assay differences in cognitive ability among infants, his results provide prima facie evidence that socialization cannot be the sole cause of variation in social behavior. The interesting question is not whether meaningful innate sex differences exist, but how anyone could construe the preponderance of evidence otherwise.

Baron-Cohen argues that the distinction between "systematizers" (disproportionately male) and "empathizers" (disproportionately female) is especially important in the etiology of autism. He theorizes that genetic risk of autism rises when both parents are systematizers. While onto something important, his work might advance faster and persuade better if, rather than proposing a new distinction, it exploited existing evidence on the dimensionality and relatedness of human psychological traits (all of them heritable), particularly interests ("Holland's hexagon" of six modal types), personality (the "big five"—or three or seven), and abilities (the "3-stratum hierarchical model").

Researchers in vocational interest measurement, personality assessment, personnel testing, and differential psychology have spent a century parsing, cataloguing, and

correlating these differences among individuals. They find a regular pattern of sex differences regardless of age, time, or place. It is not clear where Baron-Cohen's systematizer-empathizer distinction fits in this much-explored territory, but it would seem to map best onto dimensions in the non-cognitive realm: sympathetic vs. cold ("agreeableness" personality dimension), "realistic" vs. "social" vocational interests, or valuing "ideas" vs. "feeling."

Prevalence of autism has increased so much recently that some label it epidemic. Baron-Cohen must explain how this increase is consistent with evidence that autism has strong genetic roots. The two facts are not inconsistent, but many people assume they are. They fallaciously reason that if prevalence jumps within only decades (e.g., more violent crime, more women getting BAs in math), then the behavior in question must not be genetically influenced because the gene pool could not have changed during that time. But it need not have.

First, non-random mating can change the distribution of phenotypes in the next generation of the same gene pool. Baron-Cohen's theory would predict that more assortative mating for "systematizing" will lead to more autism in the offspring generation. It would operate like inbreeding, which increases the odds of offspring inheriting the same deleterious recessive allele from both parents. This explanation doesn't work well, however, for rates of socially important behaviors that fluctuate within a generation (e.g., criminal behavior, which has a heritable component), and perhaps not even for autism.

Second, environmental change matters, but not equally for all genotypes. When environments become more deleterious, the more susceptible genotypes are the first casualties. Environmental toxins may be one such factor in autism. Conversely, as environments become more favorable, some genotypes are better able to exploit the new opportunities. So, as barriers to women in education and work have fallen, the most talented and ambitious women have been the best placed to advance. In neither case has the gene pool changed—only the environments favoring some genotypes over others.

Third, different genotypes seek and evoke different experiences and environments. Outgoing, agreeable, feelings-oriented personalities prefer (and are preferred for) dealing with people; non-social, pragmatic, things-oriented personalities find a better fit working with mechanical objects and processes. When free to choose, the two types will gravitate toward different careers. They will also create different personal environments for themselves and their children. So, just as low-IQ parents don't create the most propitious environments for their genetically at-risk children, perhaps two systematizers provide non-optimal rearing for theirs too.