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Evolutionary Psychologists can't practice what they don't preach: Response To Gallup (2020)

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## **A Brief Statement about Open Discourse**

We take issue with the key assumptions in Gallup's (2020) argument for tasking evolutionary psychologists with reversing a purported genetic decline in human intelligence. Evolutionary sciences are a means of understanding the natural world – not a source of moral values or policy prescriptions.

Importantly, scholars disagree on many issues, scientific and otherwise (e.g., influences on intelligence [Lee et al., 2019; Judd et al. 2020]). We relish vigorous, open debate focused around evidence, and regard no topic as taboo. Such values are necessary to expand and refine knowledge.

## **Problems with the Savannah Principle**

Kanazawa's Savannah Principle (SP; 2004a) states that general intelligence (*g*) evolved as a domain-specific adaptation to solve novel problems through the employment of formal logic. However, the SP misconstrues the EEA as a singular time/place when/where all human adaptations arose (Tooby & Cosmides, 1992; Barrett, 2015) and Kanazawa's (2004b) usage of *g* departs greatly from its established empirical conceptualization (Carroll, 1993; Gustafsson, 1988; Dreary, 2002; Jensen, 2002). Rather than being an adaptation in itself, *g* is a latent variable that interacts with other processes (Borsboom & Dolan, 2006; Deary et al., 2010; Penke, 2010; Penke et al., 2011). Adaptations evolve in response to recurring adaptive problems. The solution to a novel problem, therefore, cannot have been a target of selection. This conundrum cannot be solved by invoking logical correctness as a common feature of solutions generated by higher *g* (Penke, 2010; Penke et al., 2011). Fitness-enhancing psychological responses don't necessarily conform to canons of formal logic (Cosmides, 1989). In addition, we know of no evidence that evolutionary scholars have superior intelligence compared to others.

## **Is Human Intelligence Declining?**

There is no consensus regarding the operational definition of human intelligence. While relative brain size is a strong indicator of intelligence across species, within-species differences

are better accounted for by the quantity and depth of cortical-folds and density of cerebral neurons (Garcia et al., 2018). While intelligence quotient (IQ) tests predict certain outcomes, they yield a limited representation of human intelligence (Hunt & Sternberg, 2006). And while brain size and intelligence likely increased together during much of hominin evolution, only 6% of variation in contemporary humans' IQ scores is accounted for by variation in brain size (Pietschnig et al., 2015).

Hominin brain expansion, especially in the genus *Homo*, was driven by selection for increased information processing and storage capacity: important features in a human adaptive complex that features large brains, an extended juvenile period, downward transfers of resources (both caloric and informational), and late-life returns on a long life of investments in developing difficult-to-learn subsistence skills (Kaplan et al., 2000). Human brain volume has decreased over the last 10,000 years, while reproduction and productivity have increased (Hawks, 2011). Whether human intelligence has changed significantly during this time remains controversial (Dutton et al., 2016; Baker et al., 2015; Colom et al., 2005).

### **Are Intelligent People Undermining Their Evolutionary Interests?**

High fertility is not necessarily fitness-maximizing. Offspring quantity is traded-off against offspring quality. Reduced fertility can decrease infant mortality-risk and permit greater investment in each offspring, increasing offspring survival rates (Kaplan & Lancaster, 2000; Bledsoe et al., 1994). All organisms face conflict between building embodied capital (e.g., skills or knowledge) and reproducing (Hill, 1993). Modern competitive labor markets likely offer greater incentives to delay reproduction and allocate more energy toward building embodied capital (Kaplan, 1996).

Problems with the Savannah Principle aside, there's no clear link between an ability to solve novel problems and a motivation, suggested by Gallup, for evolutionary psychologists to have more offspring to "salvage human intelligence." Even if there were, increased reproduction among several hundred individuals would not affect the distribution of intelligence in a global population of over seven billion. Furthermore, the costs of such a strategy would be disproportionately borne by the women of evolutionary psychology, a fact overlooked by Dr. Gallup.

### **Conclusion**

Adaptive strategies are not primarily reflected in conscious decisions to maximize reproduction, thus there is no reason to expect that knowledge of the principles of evolution should significantly affect fertility decisions. The argument that responsibility for salvaging human intelligence be taken by evolutionary psychologists is illogical in both the underlying assumptions and the conclusions drawn.

What does evolutionary psychology "preach?" Certainly not how people might increase their individual fitness, or how to maintain the high quality of the human gene pool. Evolutionary Psychology is a tool for understanding the human condition in its astounding complexity. What people do with those understandings is outside the domain of science.

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