Bright New World

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Intelligence and Its Benefits

It is a brutal fact about the world that some people are more intelligent than others. Ian Deary, one of the world's top IQ researchers, writes bluntly that "some people seem to drive a highly tuned Rolls Royce brain while others potter along with a merely serviceable Ford Fiesta."[1] Some are bright, and when they are bright, they have a tendency to be bright across the board: when people are given a variety of intelligence subtests, such as those in the Wechsler test—which covers everything from vocabulary and comprehension of social norms to picture arrangement, matrix reasoning, and digit symbol coding—we find a significant positive correlation between the tests, ranging from 0.3 to 0.8 (where 1 is full correlation, 0 is no correlation, and −1 is full negative correlation).[2] This means that 9%–64% of variance in one subtest can be predicted from performance in another. The common variance is called *g*, or *general intelligence*.

To appreciate what *g* means, it might be instructive to look at the parallels between general intelligence and physical fitness. If you are good at push-ups, it does not follow that you are good at sit-ups and bench press, but most likely you are. Moreover, just as intelligence is not a single capacity, neither is physical fitness. Still, it makes sense to say that some people are overall more physically fit than others, and, similarly, it makes sense to say that some are overall more intelligent than others. Standardized IQ tests, such as the Raven test, track general intelligence by measuring reasoning abilities that are representative of general intelligence.

General intelligence is beneficial on virtually any theory of benefit. The more intelligent we are, the better we are at recognizing patterns, predicting, and planning ahead, and—when facing problems—the better we are at solving them and at doing so fast and in smart ways. Frank Schmidt and John Hunter have made the case that, for employers, the best single test one can administer to predict work performance is an IQ test.[3] On average, people with a high IQ have better jobs, eat healthier, are less superstitious, and are less likely to be either violent or the victims of violence.[4] Arthur Jensen notes that when comparing siblings reared together, thus controlling for environment, "IQs of full siblings (measured when they are children or adolescents) are positively correlated (+.30 to +.40) with measures of their educational, occupational, and economic status as adults."[5]

To a large degree, IQ is the result of one's genetic makeup. Identical twins raised apart tend to score similarly on IQ tests: for the Wechsler test, the correlation is 0.69; for the Raven test, the result is a remarkable 0.78 (meaning that about 61% of the variance in one twin's Raven's score can be predicted from the other's). Although environment does play a role in shaping intellectual capacities, that role appears to be relatively modest: for unrelated children reared together, the correlation is only 0.30.[6] Interestingly, environmental effects on IQ *decrease* throughout childhood, and though we can become better

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at intellectual tasks through training, we seem to get better primarily in specific abilities, not in general intelligence, and the latter is what accounts for most of IQ's predictive value.[7] All in all, the heritability of IQ seems to be somewhere between 0.5 and 0.9.[8]

Increasing Intelligence, Increasing Benefits

If we could raise global IQ, we would reap significant benefits. Smart people tend to benefit themselves, but, just as importantly, they also benefit others, for an invention or a smart solution is a value that can be utilized again and again. Michael Woodley has argued that there is a strong correlation between genotypic (i.e., exhibiting a genetic predisposition for) IQ and *innovation*, setting forth a multiple-regression model in which genotypic IQ over time (1450 to the modern era) predicts the per-capita innovation rate in Europe with a correlation coefficient of more than 0.8.[9] Such findings cannot be rejected out of hand, because in doing science, innovating, organizing, and challenging orthodoxy, intelligence is a sine qua non.

Because of its importance, it is understandable that several programs aim at elevating IQ. The World Bank and the Copenhagen Consensus both suggest large-scale programs ensuring that pregnant women get sufficient amounts of iodized salt. A lack of iodized salt during pregnancy can take away 10–15 IQ points, and this is estimated to rob the world of up to 1 billion IQ points per year.[10] That is a shame, for we need all the IQ points we can get to solve the world's challenges.

Here I would like to suggest an alternative way to raise global IQ: giving prospective mothers modest monetary incentives to have children that genetically belong not to their husbands (or to ordinary sperm donors) but to high-IQ sperm donors. My aim here is not to work the suggestion out in detail but to bring it to the table and give it an ethical defense.

For this suggestion to be put into practice, sperm banks would have to start taking donations from high-IQ men: for example, those who have an IQ of 125 or higher, that is, the 95th percentile (a number of other criteria should likely be added, such as the absence of serious heritable conditions). The sperm would then have to be transported and stored, and inseminated into women at the right time in their menstrual cycle. The method should most likely be insemination, not in vitro fertilization, because insemination is easier and thus cheaper. Price is also the central reason to opt for sperm donation from intelligent men rather than egg donation from intelligent women.

Having an intelligent child is rewarding. Still, for women to consent to bearing and rearing children that genetically belong not to their husbands but to anonymous donors, one would almost certainly need to associate participation in the program with a monetary reward. The monetary reward would probably need to be portioned out over time; for example, one-third at insemination, one-third at birth, and one-third at the child's fourth birthday. It is difficult to estimate the total cost of such a project, but because both collection and insemination can be done cheaply, because many prospective mothers would need only modest monetary incentives, and because the project could be implemented on a very large scale, let us say that the added cost per pregnancy would be $1,000.

The Kyoto protocol costs $100 billion per year. If we spent only 5% of that money on high-IQ insemination, then every year up to 5 million children would have a higher IQ than they otherwise would have had. This, in turn, equals

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more than one-thirtieth of all births in the world. For each year that such a program is carried out, a new wave of smarter children will be born. Smart children, moreover, will themselves tend to produce smart children, even outside of the program. If this tilts the odds in favor of more researchers, inventors, entrepreneurs, and active citizens, and in the disfavor of crime, it would nudge the world in a better direction.

Objections

One immediate objection to this suggestion is that it is a form of *eugenics*. In a technical sense of the term, this is true, eugenics being the "applied science or the bio-social movement which advocates the use of practices aimed at improving the genetic composition of a population."[11] In this technical sense, however, it is not clear that all forms of eugenics can be ruled out from the outset. Eugenics certainly has a bad reputation, largely due to the Nazis' eugenics programs, but it is doubtful if the Nazis' programs were wrong simply by virtue of being eugenics programs. Rather, it seems that they were wrong by virtue of their particular aims (such as the promotion of a specific race) and the means by which the aims were pursued (extermination, forced sterilization, etc.). We do not need eugenics as such to be wrong in order to be able to condemn the Nazis, and the badness of their eugenics programs—though it might give us reason to proceed with caution—does not give us sufficient reason to reject out of hand all possible eugenics programs, including voluntary ones.

Some of the substantive arguments against traditional eugenics, however, do apply to this more moderate and strictly voluntary proposal. According to one objection, all variants of eugenics rest on the premise that some genes are more beneficial than others, and this premise can be contested. I would like to suggest that this objection fails because some genes are in fact more beneficial. Indeed, it seems that as long as we are evaluative realists and we agree that different genetic makeups yield different psychological and behavioral results, it would be an enormous coincidence if they all ended up being equally beneficial. Surely, a long range of genetic makeups *are* approximately equal in their net benefits, but there are still genes that we can confidently say are more beneficial than others—and, as I suggested previously, selection for IQ will tend to be selection for genes that are overall more beneficial.[12] If this is correct, and the project that I sketch is doable, it seems that at least something can be said in its favor. If high IQ is more beneficial than its absence, then it seems that we have at least a pro tanto reason to promote it.

Pro tanto reasons can, of course, potentially be overridden, and a possible overriding consideration is that in deliberately selecting for IQ, we devalue people with lower IQ, and we do so in an intolerable manner. There is a grain of truth in this objection, because someone who endorses my proposal must commit to the view that it is in fact better to have a high IQ. The benefits of high IQ, however—even apart from their wide acceptance—need not tell us anything about the moral or political standing of people with high or low IQ. It does not follow from what is argued here that people with lower IQ should be given less moral consideration. To make this clear, it might be useful, once more, to draw the parallel between intelligence and physical fitness. Virtually everyone agrees that it is better to be physically fit than not, and we often act on this premise, trying to promote physical fitness in ourselves and in our children—ensuring proper nutrition, exercise, medical checkups,

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and the like. None of this implies, however, that people who are not physically fit have or should have a lower moral or political status. Also, though my proposal does commit me to the view that some people tend to be a much greater benefit to society than others, this should not be controversial, because we already know that such differences exist. It should be uncontroversial, for example, that Alexander Fleming, the inventor of antibiotics, benefited many more people than Louis XIV did. It should also be uncontroversial that Fleming's invention would not have been possible without his very high intelligence.

A related objection might be that the program I sketch would be unfair because it would give some people a significant benefit (high IQ) through no deed of their own. The problem with this objection, however, is that IQ is not fairly distributed to begin with, so it is not clear that my proposal would make things worse. Arguably, it would make things better: some would benefit from a higher IQ, and to the extent that we all benefit from one another's intelligence, everyone would be made better off. As such, even if we were to reach our decision behind Rawls's veil of ignorance, we could still support the proposal. That should not be surprising, moreover, because, fairness-wise, my proposal is no different than other means of promoting intelligence, such as providing pregnant women with iodized salt.

A somewhat different argument might be that the suggested program would treat the women involved exclusively as a means, and that this gives us reason to reject the program. Though it is true that the women would be used, in part, to reach an external goal (higher global IQ), this can hardly be enough to reject the program, as almost all global health programs aim at social goals that are in some sense external to the individuals involved. Also, it is not the case that the women are treated *only* as a means; they are given a choice, and they are offered payment, and having an intelligent child is ordinarily viewed not as a burden at all.

Yet another argument might be that, as a eugenics program, my proposal involves tinkering with human evolution, and this might have unforeseen negative consequences. As such, due to the precautionary principle, we should reject the proposal or at least proceed very cautiously. Though this might be a weighty objection to some eugenics programs, this is not a weighty objection to my proposal. My proposal is low tech and uses only methods that are already widely in use. The only thing I suggest that we tinker with is the matching process, matching high-IQ men with more women than would otherwise be the case. This, however, would not be hazardous. First, people with a high IQ currently reproduce *less* than average, and this is true globally.[13] As such, my proposal would help compensate for an imbalance. Second, and related to this, it is important in all evaluations of eugenics programs to realize that the world is already full of selection mechanisms, so such programs do not introduce selection into a world without it.

Although many current selection mechanisms are beneficial, moreover, not all are. To the extent that there are genetic correlates to sloppiness in the use of contraception, for example, these are now positively selected and spread in the population. What I suggest is that it would be beneficial to tweak human reproduction in an intelligence-enhancing direction, so that we tilt the odds in favor of producing more da Vincis, Pasteurs, Flemings, and Edisons over the coming decades than we otherwise would. Though there are negatives that are pleiotropic or caused by

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higher IQ, such as myopia or genetic diseases, it is unlikely that these could outweigh the benefits of a higher IQ.[14] Importantly, there are also negatives that are pleiotropic or caused by *lower* IQ, such as schizophrenia, and these would proportionally be minimized.[15]

Finally, it might be argued that the proposal just *feels wrong*; it elicits "yuck" reactions, disgust, and repugnance. Though this might be descriptively true, we must ask how we should interpret and respond to such reactions. What things elicit yuck reactions in us is largely shaped by biological and cultural evolution, and though such reactions come in handy in a lot of contexts—say, when we are repelled by rotten food—it is doubtful whether they are reliable in the context of biotechnology assessment. Because our reaction patterns have been shaped over millennia in hunter-gatherer societies, why would we expect them to be reliable in assessing twenty-first-century technologies? Certainly, our immediate reactions should be taken seriously, and we should view them as alerting us that something *might* be wrong. They should, however, be the starting points—not the end points—of our deliberative processes, and in assessing eugenics programs we must keep in mind that most of what goes on in medicine has the potential to elicit yuck reactions. Thankfully, however, medical research has proceeded in spite of such reactions, and we have all benefited immensely as a result.

Conclusion

In this article I have suggested that we should consider aiming at raising global IQ by giving women modest monetary incentives to have children with high-IQ men. Surely, this proposal needs to be worked out in great detail before it can be put into practice. Perhaps it would also need to be revised in several ways, and, quite possibly, other traits than IQ should also be targeted.[16] Still, the suggestion should be on the table, and it cannot be rejected out of hand. It provides a simple, low-tech, and cost-effective way to gradually increase global intelligence, and with the seemingly endless challenges that humanity faces, we need all the sharp minds we can get.

Notes

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