

GENETIC ENGINEERING AND THE INEQUALITIES

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ABSTRACT

In his book *In A Better World? Public Reason and Biotechnologies* Elvio Baccharini discusses (and ultimately rejects) the argument that genetic engineering might deepen the inequalities in the society. However, this argument is grounded on the implicit assumption that financially successful people have certain characteristic C that explains their financial success, and that the lack of this characteristic explains why financially unsuccessful people are financially unsuccessful. This assumption is widely accepted, by Nagel, Rawls, Nozick, and many others. In this article I try to show that this implicit assumption is simply false. There is no such characteristic C. There is no independently identifiable single capability, talent, or asset that explains why rich people are rich and why poor people are poor. Social inequalities cannot be explained as effects of the inequalities in talents.

KEYWORDS

Inequality, talents, explanation, success, natural lottery.

GENETIC ENGINEERING AND THE INEQUALITIES IN THE SOCIETY

One of the worries that Elvio Baccharini deals with in his book *In A Better World? Public Reason and Biotechnologies* is that genetic engineering might deepen the inequalities in the society. He addresses this problem in the Chapter 3. “Genetic Interventions and Distributive Justice”. Here Baccharini relies on Lev's work and says:

“The application of some of the forms of interventions would probably increase existing social inequalities by increasing competitive advantages, like in the case of the enhancement of memory, as well as of analytical, mathematical and communication skills.” (Baccharini, 2015. p.69)

Here we may have in mind a fictional character Dr. Julian Bashir from TV serial *Star Trek, Deep Space 9*. As a kid he was underdeveloped both physically and intellectually. His parents decided to pay an illegal genetic reprogramming which made him physically and intellectually superior to his classmates. Or perhaps we can have in mind a real character Argentinian football player Lionel Messi who was physically underdeveloped as a kid. He grew up to a normal size after the hormonal therapy with the norditropin, a growth hormone. If taken by adult sportsmen norditropin is regarded as a doping. In the case of Messi the use was appropriate because he was brought to the size he would have if he hadn't have a hormonal disbalance. (Perhaps worth noting, Messi was an excellent player even before the hormonal therapy.) On the other hand, Dr. Bashir's genetic reprogramming brought him far beyond the level of physical and intellectual abilities he would have if he hadn't have a genetic failure. His abilities are in some respects almost superhuman, and this is why such reprogramming was illegal. (When this fact about Dr. Bashir was discovered, captain Sisco covered up the case because Bashir was a valuable member of a crew.) So the question is “Does the prospect of an increase of inequalities represent a good public reason for banning genetic interventions?” (p.69.) Elvio's answer to this question is negative. He believes that genetic enhancement would not by itself deepen the inequalities. It could deepen the inequalities only within the unjust distributive framework.

“In general, it appears implausible to forbid somebody the chance to improve her talents and abilities, even if this gives her advantages over others. I agree with Lindsay in opposing the banning of genetic interventions. The view that I endorse is that “genetic enhancement procedures alone will not lead to unjust results; there would have to be an unjust distributive scheme to enable the injustice to come about” (Allhoff, 2005, 44). Regulation is the answer we must pursue (Farrelly, 2002).” (Baccarini, 2015. p.70)

Baccarini also believes (together with Jefferson) that cognitively enhanced people would probably have better sense for justice and solidarity, and that therefore we should not worry about the possibility that they will misuse their enhancement and further deepen the social inequalities. (Baccarini, p.72)

THE IMPLICIT PREMISE

Now, no matter what we think about these arguments, we have to notice that they are based on the implicit premise that there is *a single characteristic or a set of characteristics C that is responsible for individual's position in a society*. And this is the premise that I would like to focus on in this comment. The question is *whether there really is such a thing as characteristic C (talent, asset, capacity, capability, or whatever) that explains success and therefore the inequalities in the society*. The worry is obvious: if there really is such a characteristic, then by enhancing it in some people, we will automatically deepen the social inequalities. But, as I said, the right question is whether there really is such a characteristic or characteristics. Together with a number of other authors, Baccarini believes that there is such a characteristic. He says:

“In the actual world we have enormous differences in the talents of persons. Think about people who live, or have lived with us, like Michael Jordan, Albert Einstein, Maria Callas, Joan Miro, Arturo Toscanini, John Rawls, etc. on the one hand, and of impaired people on the other hand, as well as of people with average capabilities.” (Baccarini, 2015. p.72)

For instance, Thomas Nagel also believes that there are talents that explain success:

“Differences in native talent will produce big differences in the resulting benefits, in a competitive system. Those who have abilities that are in high demand will be able to earn much more than those without any special skills or talents. These differences too are partly a matter of luck. Though people have to develop and use their abilities, no amount of effort would enable most people to act like Meryl Streep, paint like Picasso, or manufacture automobiles like Henry Ford.” (Nagel, 1987. p.78)

So, to make implicit premise explicit, the idea is that:

There exists a characteristics C that explains success.

Or, in other words: the successful ones are successful because they have the characteristic C. If they hadn't have C, they would not have been successful. But they do have it, and that is why they are successful. The unsuccessful ones are unsuccessful because they don' have the characteristic C. If they had it, they would have been successful. But they do not have and that is why they are not successful. Or, to make it as simple as possible:

The successful ones are successful because they are capable.

The unsuccessful ones are unsuccessful because they are incapable.

The rich ones are rich because they are capable.

The poor ones are poor because they are incapable.

THE IMPLICIT PREMISE AND THE DISTRIBUTIVE JUSTICE

It is worth noting that a number of authors take the implicit premise for granted. Among others, contemporary classics like Rawls, Nozick, Nagel and many others. Left wing and right wing authors take different stances toward the premise, but they all accept it, they just take it for granted. Generally speaking, their arguments are the following:

The left wing argument

The incapable ones are not guilty for being incapable. The distribution of capabilities among individuals is simply a matter of natural lottery. It is not a matter of merit, it is not something deserved. Therefore, social inequalities that are consequences of the inequalities in the outcome of natural lottery cannot be just. Therefore, in a just society these inequalities should be compensated.

The right wing argument

The capable ones are not guilty for the fact that incapable ones are not capable. No matter whether the capabilities that they have are a matter of natural lottery or not, their capabilities are their and no one has right to take away from them the fruits of their capabilities. Therefore, in a just society the social differences that are consequences of the differences in the capabilities should not be compensated.

So, to sum up, for the left wing authors characteristic C explains social inequalities but does not justify them. While for the right wing authors characteristic C both explains and justifies social inequalities. The point here is that both sides accept the implicit premise that there is such a thing as a relevant characteristic C.

IS THERE SUCH A THING AS RELEVANT CHARACTERISTIC C?

For the beginning we can note that trade unions do not go into the strikes because they believe that their members had bad luck in the natural lottery or were deprived of the characteristic C. They go into the strikes because they believe that they deserve more for their work, because they demand right wages for their labor. So, those who in fact fight against the social inequalities do not rely on the assumption that there is a relevant characteristic C. The fact that putative characteristic C is not an issue in the actual fight against the social inequalities is a good reason for questioning the very existence of such a characteristic. The idea of the relevant characteristic C is more likely just a widely accepted cognitive shortcut, a successive meme accepted by philosophers and by many others.

“EXPLANATION OF THE SUCCESS”

Whenever some people are successful in something and others are not there is a natural cognitive pressure for the explanation of their success. In such cases we are naturally inclined to look for the relevant characteristic that explains their success. However, sometimes such a characteristic can not exist at all, there may be no explanation at all, sometimes explanation can be trivial. Imagine a horrible situation where 5000 crippled and blinded people have to cross a very dangerous forest with many holes, mines, dangerous beasts, etc. They crawl, roll, stumble, ... By the end of the day 500 of them cross the forest, others remain in it forever. In such a situation we may be inclined to look for the relevant factor, to look for the characteristic C that these 500 had and that others did not have. Of course, in this example there is no such characteristic. There is simply a fact that 500 people crossed the forest while others did not. Perhaps social inequalities are also one of the cases where there is simply no relevant explanation.

HUME'S LAW - A FORMAL CONDITION FOR CHARACTERISTIC C

If we want to have a true explanation, explanandum and explanans have to be logically independent. Explanandum can not be contained in the explanans. For in that case the explanation would be circular, we would have a *virtus dormitiva* explanation. In other words, the way in which we find out whether somebody is successful has to be independent of the way in which we

find out whether somebody has characteristic C. It must be independently possible to determine a presence of characteristic C. This is very important point when we try to explain success because alleged explanans can be semantically too close to the explanandum and in that case we would not have a genuine explanation. For instance, if we want to explain the success of Mark Zuckerberg who created Facebook and made millions of dollars, we might say that he was successful because he was *snalažljiv* or *promućuran*. But what does *snalažljiv* or *promućuran* mean? It means able, apt, potent, efficient, capable, shifty, competent, rangy, etc. But all these terms are dangerously semantically close to successful. After all, what capable means? Do we determine whether he is capable independently of the way in which we determine whether he is successful? If we say that somebody is able to sell sand to Arabs and ice to Eskimos, do we refer to the capacity that explains his success or we just refer to his success? This is why William James in his *Pragmatism* quotes Lessing. A little Hans asks his uncle Fritz: How come that rich people have so much money? Where the meaning is not How come that rich people are rich? but rather How come that people who have a property of richness have so much money? Here James wants to illustrate his point that truth is not something that explains success but rather the same thing as success.

CANDIDATES FOR THE CHARACTERISTIC C

Usual candidates for characteristic C are intelligence, diligence, innovativeness, etc. Though Baccarini, Nagel, and other philosopher rather talk about special and rare talents or skills that explain success in sport, art, business, etc.

Diligence

On August 31. 1936. in Donetsk a Soviet miner Aleksey Stahanov set up a world record in coal mining. Together with his group, he dug out 102 metric tonnes of coal in 8 hours. Stahanov's record remained unbeaten until 1949. when Yugoslav miners decided to beat it. After many unsuccessful trials, the first one who did it was Alija Sirotanović from Breza. By beating Stahanov's record Sirotanović became the hero of work and the icon of the Yugoslav socialism. Although others beat his record within days, he remained the symbol. Here is the list of these incredible results:

Alija Sirotanović, Breza, 24.7.1949. 152 t
 Nikola Škobić, Breza, 29.7.1949. 166 t
 Ibrahim Trako, Zenica, 17.8.1949. 270 t
 Risto Mijatović, Kakanj, 17.8.1949. 354 t
 Džemal Ramović, Kakanj, 18.8.1949. 442 t
 Edhem Škorić, Kakanj, 19.8.1949. 396 t
 Antun Bičić, Raša, 1.9.1949. 635 t
 Abdurahman Babajić, Banovići, 10.9.1949. 1.010 t¹

Now, the relevant question here is whether diligence or hard work can explain social inequalities. Although it is hard to imagine that anybody ever worked harder than these men, they were not significantly better off. Bičić and Babajić became managers in their companies. Sirotanović remained a miner until the retirement. He received as a gift an Fiat 750 and drove it for the rest of his life. Obviously, diligence by itself cannot explain social inequalities. At best, perhaps it can be a contributory cause or a necessary condition of a success, certainly not its full explanation.

Innovativeness

Let me take a couple of examples from the food industry. Zlata Bartl made Vegeta (a universal mix of spices) in 1959. Martin Stanković made Cedevita (a vitamin drink, a powder to be mixed with water) in 1970. Both were researchers in a laboratories of a big companies. Bartl worked for Podravka food company, while Stanković worked for Pliva pharmaceutical company. Literally a millions of packages of these products are annually sold ever since these products has been made for the first time. A Croatian diaspora does not leave the country without at least a kilo of each of these products. In spite of this, Bartl and Stanković are not rich. Although they received a wide popularity, many rewards and many acknowledgements for their products, they received three monthly salaries as a financial rewards for their inventions. Royalties belong to their companies. Perhaps we have to mention that this is not a matter of socialism or capitalism. Many researchers in laboratories all over the world daily sign a contract with their companies that all the inventions they make will belong to the companies. Again, innovativeness by itself cannot explain social inequalities.

¹http://www.rmubreza.ba/index.php?option=com_content&view=article&id=13&Itemid=29

Intelligence

Since psychologists developed methods for testing intelligence, intelligence has become the best candidate for the characteristic C. Here R.I. Nisbett gives a clear statement of the idea:

“Social class is a consequence of intelligence. *The poor are poor because they are not intelligent*, and neither money, nor class, nor parenting practices play much of a role in making some people more intelligent than others”. (Nisbett, 2009, p.89, presenting the views of H.J.Eysenck)

Although intelligence satisfies the formal condition of the good explanation (the way in which one's IQ is determined is independent of the way in which his incomes are determined), this idea is problematic on several grounds. First of all, it seems that there is no direct and systematic link between IQ and income. On the GRE test (General Record Examination for the graduate study in US) philosophers systematically achieve excellent results. We are competing for the first place with physicists & astronomers. On several occasions philosophers get the best results. On the IQ test for the college majors physicists & astronomers score over 130, philosophers and mathematicians score 130, computer scientists and engineers score between 120 and 130, others are under 120. So, we can say that we the philosophers are the smartest, or at least second smartest people after physicists & astronomers. But, are we the richest? Do expensive yachts in fancy marinas belong to philosophers? No! Do we drive Ferraris or Bentleys? No! People who perform best at the GRE tests or at IQ test for college majors often end up at universities and have academic careers. On average, academics are relatively well paid for their jobs but the scores they achieve at the IQ tests are not proportionate to the salaries they receive. Moreover, the intelligence of the academics is not in the function of making money, it is in the function of solving complicated mathematical equations or abstract philosophical problems. The social Darwinist assumption that one puts all of his/her capacities in the function of making money is simply false. Additional assumption is identification of class with income is also problematic. *Nouveau riche* is usually a pejorative expression. Any way, the fact that physicists and philosophers are the smartest people on the world at least *prima facie* can be taken as a *reductio ad absurdum* of the thesis that intelligence accounts for the social inequalities.

We the philosophers, we are the smartest people on the world! Perhaps we are not the richest, but at least we are the smartest. Isn't that an amazing fact? Should we be proud of it? Well, not really. If we take a look at the distribution of results across different sections of the test things become more clear. The GRE test has three parts: verbal reasoning, quantitative reasoning, and analytical writing. What do you think, who has the best result in the quantitative reasoning? Mathematicians! Is this surprising? Not at all. Who else is going to be the best in the quantitative reasoning? Students of English are the best or at least very good in verbal reasoning. Who else could be the best in verbal reasoning in English language if not the students of English language? Students of philosophy are the best in analytical writing. But who else can be the best in analytical writing? That is simply what we do. After all, we teach critical reasoning. We are trained to do it. Those who want to enroll a graduate study in X are already selected and trained to do X. Therefore we should not be surprised that that they have the best results at the tests of X. The explanation is quite trivial. How come that weightlifters are the best in weightlifting? Of course that they are the best in weightlifting. Who else could be? Runners? Swimmers? Who else could have the best results in weightlifting but the weightlifters?

Talents

Talk about the talents in the context of the discussion about the social inequalities can be very misleading. One can get the impression that rich people are rich because they have special and rare talents. But generally speaking special and rare talents are irrelevant for one's economic status. From Baccarini's and Nagel's list of talented people only one person is really rich, that is Henry Ford. On their lists we have: Michael Jordan, Albert Einstein, Maria Callas, Joan Miro, Arturo Toscanini, John Rawls, ... Meryl Streep, Pablo Picasso, and Henry Ford. The mechanism in which market economy sometimes rewards people with rare and special talents in art or sport is not the same mechanism as the one in which Rockefellers or Rothschilds became rich. It is not the same mechanism as the one in which the CEO's and the Wall Street brokers become rich. If we are worried about the increasing inequalities in the society we are typically worried about the fact that the ratio of the CEO-to-worker pay increased ten times in the last 65 years (20:1 in 1950; 42:1 in

1980; 120:1 in 2000; 204:1 in 2016).² And this is a matter of economy, not a matter of talents. Talents in science, art, or sport has nothing to do with this. Although football clubs pay a millions for their players, well paid sportsmen are anomaly, not a rule. A good explanation cannot rely on a few exceptions, it has to cover a majority of cases. Here we talk about the top sportsmen as well. The Sinković brothers, a double scull rowers from Croatia who won 26 consecutive world regattas, recently broke the theoretical limit of VO₂max (oxygen consumption) for human organism, and they are happy to receive a monthly salary from Croatian army so that they can dedicate to their training. Vasily Alekseyev, a Soviet weightlifter active in 1970's, a double Olympic gold medalist, set 80 world records. Although he was able to beat the record for 40kg at once, he did it 80 times, each time for 0,5kg, because for every world record he received a fixed financial reward from the Soviet government. Genetic enhancement may increase the inequalities in our physical and intellectual abilities, but these inequalities are not directly and systematically related to the financial inequalities in our society. This is why these two matters should be discussed separately.

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² <https://www.fas.org/sgp/crs/misc/R43262.pdf>