Ethics of Genetic Enhancement and Diminished Achievements: Revisiting Gwen Bradford's Account of Valuable Achievements

Nucharee Wongsamut[1]

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Abstract

Genetic enhancement refers to the use of genome editing technologies, such as CRISPR/Cas9, to improve human capacities beyond medical indications. Critics argue that genetic enhancement could lead to diminished achievements. I call this objection "the diminished achievement argument." This argument is articulated by Gwen Bradford's account of valuable achievements which holds that difficulty is a source of value for achievements. In this paper, I defend Gwen Bradford's account of valuable achievements from three objections: the problem of absurdly difficult tasks, the problem that achievements attained by people who have a great deal of skill or ability appear less valuable, and the problem of lucky achievements. I argue that, based on Bradford's account of valuable achievements, genetic enhancement diminishes the value of human achievements. Nonetheless, I maintain that the diminished achievement argument does not entail the impermissibility of the use of genetic enhancement.

Keywords: Genetic Enhancement; Valuable Achievement; Diminished Achievement; Gene Editing

[1] Lecturer Dr., College of Interdisciplinary Studies, Thammasat University
E-mail: wnuchare@tu.ac.th

Introduction

CRISPR/Cas9 is the most advanced genome-editing tool because it can be used to remove, add, and alter genes with high accuracy and low costs (AYANOĞLU et al., 2020; Ferreira & Choupina, 2022; Park et al., 2021). Not only does CRISPR/Cas9 technology have the potential to be used for therapeutic purposes, such as curing genetic diseases, but CRISPR/Cas9 also has the potential to be used for genetic enhancement. Genetic enhancement refers to genetic modification for reasons beyond therapeutic purposes (Anomaly & Johnson, 2023; Buchanan, 2013).[2] This could involve altering genes to enhance intelligence, improve stress management, increase happiness, build muscle, change hair color, or enhance empathy. These modifications could be pursued for oneself or for one's offspring (Prince, 2024). A concrete example of using CRISPR/Cas9 gene-editing technology to enhance people is the case of the Chinese scientist, He Jiankui. He Jiankui and his colleagues used CRISPR/Cas9 technology to produce babies with HIV immunity (de Araujo, 2020). As we gain more knowledge about the human genome, we can identify specific genes that link to cognitive functions (Lavazza, 2018). For example, Mathew Huentelman et al. investigate the case of SuperAgers, i.e. individuals who do not lose their memory and reasoning abilities as they age. The studies by Huentelman et al. demonstrate that SuperAgers aged 80 or older exhibit superior memory compared to the average adults aged between 50 and 65. It was discovered that SuperAgers exhibited alterations in the MAP2K3 gene. According to Huentelman et al., inhibitors of MAP2K3 may offer a novel strategy for enhancing cognitive abilities (Huentelman et al., 2018). With knowledge regarding the human genome coupled with advanced genome-editing tools, such as CRISPR/Cas9, genetic enhancement, whether physical or cognitive, becomes a concrete possibility.

However, genetic enhancement, which aims to improve traits beyond medical necessity, raises more ethical concerns than the therapeutic use of genetic technologies to treat diseases (Baylis, 2019; Carter & Pritchard, 2019; Etxebarria, 2024). For example, the American Medical Association's Code of Medical Ethics asserts that "genetic manipulation should be reserved for therapeutic purposes. Efforts to enhance "desirable" characteristics or to "improve" complex human traits are contrary to the ethical tradition of medicine." (The

[2] In this paper, I will not examine the moral debate surrounding the distinction between enhancement and therapy. The distinction between treatment and enhancement is a subject of ongoing debate. For example, David Resnik argues that the moral distinction between enhancement and therapy is not clear (Resnik, 2000).

American Medical Association, 2024) An objection to genetic enhancement has been made on the grounds that the use of gene editing to enhance human capacities would result in diminished achievements. I call this objection "the diminished achievement argument." In this paper, I examine the diminished achievement argument and defend this argument against some objections. I also discuss the implications of the diminished achievement argument to the permissibility of genetic enhancement. This paper will proceed as follows. First, I explain the diminished achievement argument. Second, I examine Gwen Bradford's account of valuable achievements, which the diminished achievement argument relies on. Third, I respond to objections to the diminished achievement argument. Finally, I argue that even if the diminished achievement argument is sound, it does not entail the impermissibility of genetic enhancement.

1. The Diminished Achievement Argument

With advances in gene-editing technology, genetic enhancement holds the potential to improve our health—for example, by preventing disease and enhancing cognitive abilities. Despite these potential benefits, one of the objections against genetic enhancement is that it could diminish the value of our achievements. I call this objection "the diminished achievement argument." It claims that achievements attained with the aid of genetic enhancements are less valuable than those achieved without such aid.

One prominent proponent of this argument is Michael Sandel. He argues that:

> "[i]t is one thing to hit seventy home runs as a result of disciplined training and effort, and something else, something less, to hit them with the help of steroids or genetically enhanced muscles. Of course, the roles of effort and enhancement will be a matter of degree. But as the role of enhancement increases, our admiration for the achievement fades." (Sandel, 2007).

According to Sandel, the use of genetic enhancement diminishes the degree to which an achievement is worthy of admiration. For him, achievements are less valuable when they are attained with less effort. Thus, if genetic enhancement reduces the amount of effort required to succeed, the resulting achievement becomes less valuable.

The diminished achievement argument, then, depends on a particular account of what makes an achievement valuable. To evaluate the strength of the diminished achievement argument, we need to examine the concept of *valuable achievement* on which it relies. In the next section, I will consider an account of valuable achievements proposed by Gwen Bradford.

2. Bradford's Account of Valuable Achievements

In this section, I explain Gwen Bradford's account of valuable achievements and examine three objections to her view. I argue that none of these objections successfully refute her account. Like Sandel, Bradford holds that valuable achievements require effort. She argues that difficulty is essential to the value of an achievement. She argues that difficulty is essential for rendering value to an achievement. For Bradford, activity is difficult when it requires effort, which is similar to the exertion of the will (Bradford, 2013). Bradford holds that when understanding difficulty as a matter of requiring effort or the exertion of the will, we will see various activities that have effort-requiring features can be counted as difficult activities, such as activities that require physical exertion, a great deal of knowledge or a high level of skill, or cooperation from others (Bradford, 2013). Bradford gives an example of how difficulty is essential for conferring value to an achievement. In the case of being on top of a mountain, the achievement would be valuable only if obtained with difficulty. When someone reaches the top of a mountain by using a helicopter or an escalator, the achievement is less valuable. So, she claims that at least in this case, "difficulty is responsible for the value of the achievement." (Bradford, 2013). Being on top of a mountain is an achievement, but without difficulty or effort, reaching the top of a mountain is valueless. According to Bradford, difficulty is a feature that confers value to all achievements.

Bradford relies on perfectionism to explain how difficulty makes achievements valuable. According to perfectionism, the excellent exercise of perfectionist capacities has intrinsic value. These capacities are fundamental to human beings. In other words, they are near universal or near inevitable to human beings, such as rational capacities. Bradford proposes two criteria to determine which capacities can be included in perfectionist capacities. First, the exercise of these capacities is near universal or near inevitable to human activities. Second, these capacities are intuitively good to have or develop. Bradford contends that the exertion of the will can be counted as a perfectionist capacity because the exertion of the will satisfies the two criteria. It is obvious that human beings have a will. We exert our will in many activities we engage with. Also, it is clear that the exertion of the will is intuitively good to have and develop. Since the exertion of the will satisfies the two criteria of qualifying as a perfectionist capacity, it is intrinsically valuable. As engaging in difficult activities is an exertion of the will and the exertion of the will is intrinsically valuable, therefore, attaining achievement with difficulty is intrinsically valuable (Bradford, 2013).

We can see that for Bradford, the value of an achievement lies in the difficulty needed to attain it. So, we can summarize her account of a valuable achievement: a successful task that involves difficulty—something that requires effort or the exertion of the will, such as activities that require physical exertion or a high level of skill. This account implies that an achievement has to be competently caused by an agent. Commentators have identified three potential objections to Bradford's account: the problem of absurdly difficult tasks, the problem that achievements attained by people who have a great deal of skill or ability appear less valuable, and the problem of lucky achievements. I argue that none of these objections rebut Bradford's account of valuable achievements.

The first objection holds that accepting difficulty as an essential feature of a valuable achievement leads to a counterintuitive result. This is because people must exert great effort or endure great obstacles in order to make achievements valuable. The more difficulty we endure, the more valuable achievements we attain. For example, we might admire an achievement more if we reach the summit of Mount Everest without supplemental oxygen (Danaher, 2017). But this strategy is risky and the obtaining of this achievement entails a serious and perhaps needless risk to one's own life and well-being. So, if we adopt Bradford's account of a valuable achievement, this position will lead to a result that risky achievements may, in some cases, be more valuable than less risky achievements.

In response to this objection, Bradford argues that achievements are not the only value in life. There are other values that are worth striving for, such as knowledge or pleasure. As we are mortal and we have limited time, there is no need to pursue each of the most difficult tasks that present themselves in our lives. Instead, we should consider which value we should pursue or how many obstacles we should endure, otherwise, we may not have the time and energy to pursue other values or achievements. Therefore, accepting that difficulty is a source of value for achievements does not entail a commitment to absurdly difficult tasks (Bradford, 2013).

The second objection to Bradford's account of valuable achievements is that it is too narrow by focusing exclusively on difficulty. This approach could lead to counterintuitive results, as a highly-skilled person may accomplish tasks with less difficulty than someone with less skill. Consequently, Bradford's account suggests that achievements by more skilled individuals might be less valuable than those by less skilled individuals. However, it seems counterintuitive to regard the achievements of the more skilled person as less valuable simply because they involve less difficulty (Hirji, 2019). If this is the case, a skillful violinist who successfully plays a difficult piece of music with less effort will have a less valuable

achievement than an amateur violinist's achievement who plays the same difficult piece of music. In response to this objection, I think we should count all the difficulties the skillful violinist has encountered while transitioning from an amateur violinist to a skillful violinist. If someone accumulates difficult experiences or expenditures of effort, it is likely that the skillful violinist faced more difficulties than the amateur violinist. So, an ability to play a difficult piece of music with more ease in the case of the skillful violinist is, in fact, an experience of greater difficulty. Thus, the skillful violinist's achievement of playing a difficult piece of music is more valuable than an amateur violinist playing the same piece. Therefore, Braford's account of valuable achievements will not always result in people with a high level of skill attaining achievements with less value.

However, one could argue that my response demonstrates only that Bradford's explanation of valuable achievements does not always lead to individuals with a higher level of skill producing less valuable achievements compared to those with lower skill levels. It can be argued that my response is compatible with it sometimes being the case that a person with less skill who exerts a lot of effort to accomplish task Y will have accomplished a more valuable achievement that a person who exerts less effort because they have more skill. This notion may seem counter-intuitive to some extent. Bradford argues that her account of valuable achievement holds that difficulty is the source of valuable achievements. However, her account does not preclude the possibility that some achievements may also be valuable in virtue of additional features, i.e., features that are not common to all achievements. She gives an example of other features that could contribute to the value of achievements. That feature is skill. She argues that it is possible for an achievement that shows great skill to be more valuable than an equally difficult achievement that demonstrates a lesser display of skill. In this scenario, a skillful violinist can enhance the value of their achievement in playing a difficult piece of music, even if they exert less effort in doing so. Consequently, it is not necessarily the case that an amateur violinist who expends more effort in playing the same piece of music will have a more valuable achievement (Bradford, 2013).

The third objection relates to the position that difficulty is the source of value for an achievement. Dong-yong Choi argues that if difficulty is essential to the value of achievements, numerous achievements will be excluded from being valuable achievements, such as lucky achievements. Choi considers it possible that a product that is obtained through luck can have the status of valuable achievement (Choi, 2023). Imagine a scientist experiments with a Covid-19 drug in a lab. This scientist makes some mistakes by utilizing an incorrect substance.

Moreover, she does not dissolve the substance properly, so she will not be using the substance at the concentration that she intends to use. Fortunately, it turns out that she discovers an HIV cure by accident. However, according to Bradford's account of valuable achievements, this discovery of the HIV cure cannot be counted as a valuable achievement because little difficulty or skill was involved in this achievement. Intuitively, we tend to believe that the discovery of an HIV cure is a valuable achievement because the achievement will contribute to saving the lives of millions of people who live with HIV. In the case of this discovery, the account of an achievement that is based on overcoming difficulties cannot accommodate numerous cases of lucky achievements as valuable achievements.

However, there is an argument that the kind of lucky achievement, such as the case of the discovery of an HIV cure cannot be counted as a valuable achievement. Duncan Pritchard (2010, p. 28) contends that we should not count lucky achievements as valuable achievements. He holds that there are two kinds of luck. The first is intervening luck in which "something actually gets between the agent's abilities and the success." When an agent completes a task because of mere luck, not because of using her relevant abilities or a lot of skills or engaging with and overcoming difficulties, in this case, intervening luck causes the success in question. Pritchard gives two examples of how success can occur by way of intervening luck. The first example involves a runner who uses her skill and abilities to outperform other competitors. She wins an Olympic gold medal because of her skill and abilities. So, her achievement is valuable. On the other hand, her counterpart also wins an Olympic gold medal because of mere luck, which could occur if all of her competitors are not able to compete due to injuries. Pritchard holds that the second runner's success in winning the Olympic gold medal does not exhibit a valuable achievement because her winning is due to mere luck (Pritchard, 2010). The second example of intervening luck involves an archer who fires an arrow, but suddenly a freak gust of wind blows the arrow away; later, another freak gust of wind causes the arrow to hit the target. In this case, the archer's success with firing the arrow to hit the target is due to mere luck rather than her relevant ability. So, according to Pritchard, the archer's success is not a valuable achievement (Pritchard, 2010).

Pritchard contends that there is another kind of luck that can be compatible with valuable achievements. He calls this kind of luck "environmental luck." To illustrate his point, Pritchard gives an example of a situation in which environmental luck presents itself in a form of a valuable achievement. Suppose that there is an excellent violinist named 'Viola'. She successfully performs a difficult piece of music. Yet, she does not know that the room

where she performs is surrounded by a huge amount of water. Through luck, this water does not break through the wall and prevents her from finishing her performance. In this case, Viola has a lucky achievement because her performance could easily have been unsuccessful. Viola's success in performing a difficult piece of music involves environmental luck. Her achievement is valuable nonetheless (Pritchard, 2010).

If Pritchard's framework of the differences between environmental luck and intervening luck is correct, the case of the success in discovering an HIV cure cannot be counted as a valuable achievement because it involves intervening luck. In the case of the discovery of an HIV cure, the amateur scientist discovered the HIV cure by accident rather than through using her skill. She did not competently cause the success, so she did not exhibit a valuable achievement.

However, there are usually multiple causes that contribute to an achievement, but not all of them contribute equally to an achievement. Tsing-Shing Ho gives an example of a forest fire. Lighting causes the forest fire, but lightning is not the only cause of the forest fire. There are other factors, such as oxygen and combustible materials, such as wood and grasses. Without all of these factors, the forest fire might not occur. Nevertheless, we tend to think that lightning is the most salient cause of the forest fire. Ho holds that when someone claims that a valuable achievement is a success that is caused by an agent's ability, that person does not mean that an agent's own ability is the only cause of the success. She might mean that an agent's own ability is the most salient cause, among others, of an achievement (Ho, 2018). With this explanation about the salient cause of an achievement, it might be argued that a valuable achievement can be caused by multiple factors. Luck will not diminish the value of an achievement if luck is not the most salient cause of an achievement and the most salient cause of an achievement is an agent's own ability.

I argue that in the case in which an agent's own ability is the most salient cause of an achievement, and luck is a less salient cause of an achievement, the presence of luck still diminishes the value of an achievement. Suppose that there is a super marathon competition in which the winner must win three sessions of a mini-marathon. A runner uses her effort to beat the other competitors in order to win all three sessions. A second runner also wins three sessions, but she only wins the first two sessions through her own effort. She wins the last session because of mere luck as none of her competitors are able to finish the last session due to injuries. In this case, we can count the second runner's achievement of winning the super marathon as a valuable achievement because she uses her effort to win two sessions. Yet, mere

luck was involved in her winning the last session. We can see that the second runner's achievement is less valuable than the first runner's achievement since good luck was involved in the second runner's achievement. Therefore, a lucky achievement cannot be counted as a valuable achievement or at best can be counted as less valuable than an achievement that does not involve intervening luck.

Nevertheless, there is another objection to the claim that an achievement that occurred by way of luck cannot be counted as a valuable achievement. Tsung-Hsing Ho holds that an apt achievement, which is a success because of an agent's competence or ability, can be equally as valuable as an inapt achievement, which is a success through luck. Ho contends that the belief that an achievement through effort or ability is superior to an achievement through luck implies that an agent who is successful through luck is not competent and would not be successful without luck. Ho maintains that this implication is wrong. He uses John Greco's example to demonstrate that an apt achievement can be as valuable as a lucky achievement.

> Suppose, for example, that an athlete runs a race in a way that is clearly an exercise of her athletic excellence. Suppose also that she wins, because the other runners, some of whom are equally excellent, get sick before the race. Or suppose that she wins, because other runners were bribed. *But remember: she, in fact, is truly competent. That is, even if other athletes were in good condition and competed in the race competently, she might still win the game* (Ho, 2018).

I contend that Ho's argument is inconclusive. We can never be certain that the runner is competent. Even if the runner is truly competent, the other runners who have withdrawn from the race might have been equally competent or even more competent. So, the possibility exists that the athlete might not win the race if other runners were in good condition and fully competed in the race. Therefore, it is still possible that the athlete could win the race as a result of mere luck because the other runners have withdrawn from the competition.

Let us consider another argument from Ho, which claims that all successful performances depend more on luck rather than on an agent's own abilities. For Ho, luck plays a significant role in explaining why an agent is competent in successfully completing a task. Consider the athlete example in which the runner who is the most skillful and competent in the competition beats other competitors to win the race. According to Ho, we can explain why she is so competent by way of luck. As Ho (2018) explains "she is competent because she may be gifted in running, live in a society where she can receive the best training, and not be

ill on the day of race." Thus, all achievement through competence or ability actually depends on luck. Therefore, Ho claims that an achievement through competence can be equally as valuable as an achievement by way of luck (Ho, 2018).

I argue that Ho's argument is flawed. It is not true that we can always explain all aspects of an achievement through an agent's competence by appealing to luck. Let us consider the case of the Olympic swimmer Michael Phelps, who has an unusually large wingspan and whose body produces less lactic acid than the average person. These physiological advantages contribute to his success, but some might argue they are just biological luck. In this case, it is true that Phelps has luck in having physiological advantages. Yet, I argue that his luck is not the most salient cause that contributed to his success. If Phelps was lazy and had not expended effort in training, he would not have won Olympic gold medals despite having biological luck. This example exhibits that the most salient cause that contributes to his success seems to be other factors, such as his discipline. So, it is not conclusive that his achievements depend more on luck than competence. Therefore, Ho fails to establish that an achievement through competence is just as valuable as an achievement that is the result of luck.

I have explained Bradford's account of valuable achievements, which holds that difficulty is the source of value of achievements, and refuted the three objections to this account. In the next section, I will discuss how Bradford's account of valuable achievements affects the value of an achievement earned with the aid of genetic enhancement.

3. Genetic Enhancement and Diminished Achievement

In this section, I argue that in adopting Bradford's account of valuable achievements, the employment of genetic enhancement will lead to diminished achievements. The diminished achievement argument supports the conclusion that genetic enhancement diminishes the value of human achievements. This argument relies on Bradford's account of valuable achievement, which maintains that the value of an achievement is associated with the overcoming of difficulty. Genetic enhancement diminishes the value of achievements because genetic enhancement removes or reduces difficulties. For example, Leon Kass argues that genetic enhancement will diminish the value of achievement because humans will have an "easy life" (cited in Carter & Pritchard, 2019).

One might counter that genetic enhancement diminishes the value of achievement, as enhanced individuals could face a more challenging life—rather than an easier one—contrary

to Kass's suggestion. For example, they may encounter heightened societal expectations and a more intensely competitive environment, potentially making success just as demanding, if not more so, than it is today.

In response to this counterargument, I maintain that even if enhanced individuals face increased expectations, their achievements are still less valuable than those of non-enhanced individuals, all else being equal. This is because the initial difficulty involved in attaining the achievement has been reduced. Consider a swimmer who has undergone genetic enhancement to increase his wingspan, giving him a clear physiological advantage in competitions. Suppose he wins an Olympic gold medal and subsequently faces intense societal pressure to maintain his success. Now compare him to another swimmer who, despite having a smaller wingspan and no genetic enhancements, also wins Olympic gold and faces the same level of public expectation.

In this case, both athletes deal with similar societal pressures post-achievement. However, the genetically enhanced swimmer faced fewer natural obstacles in reaching that point, as his advantage was granted. Therefore, his achievement is less valuable than that of the non-enhanced swimmer, who overcame greater natural difficulty to reach the same level of success.

However, Lisa Forsberg and Anthony Skelton argue that the proponents of the diminished achievement argument fail to explain why biomedical enhancement, such as genetic enhancement is more problematic than other kinds of enhancers that also reduce an agent's difficulty in completing a task, such as running shoes and tutors or trainers (Forsberg & Skelton, 2020). In responding to Forsberg and Skelton's criticism, my argument is that genetic enhancement is not more problematic than other kinds of enhancers. I contend that people who complete a task with the aid of an enhancer, whether a biomedical enhancer or advanced running shoes, attain achievements with less value compared to people who complete a task without an enhancer. For example, Eliud Kipchoge used the most advanced running shoes, Nike Vaporfly shoes, to finish a marathon in less than two hours for the first time in the world, in 2019. If other runners using basic running shoes were to finish the same marathon in the same time, their achievements would arguably be more valuable. This is because the runners who use the simplest running shoes face more difficulty than the runner who uses the most advanced running shoes. So, people who attain achievements through the use of an enhancer still have achievements with less value than people who obtain achievements without the use of an enhancer.

4. The Diminished Achievement Argument and The Permissibility of Genetic Enhancement

In this section, I argue that even if the diminished achievement argument is sound, the diminished achievement argument does not entail the impermissibility of genetic enhancement. I discuss a case in which the diminished achievement argument cannot be used to justify the impermissibility of genetic enhancement.

The argument of diminished achievement does not necessarily imply the impermissibility of genetic enhancement, particularly when genetic enhancement is employed to reduce or compensate for one's limitations. For instance, consider a scenario where genetic enhancement should be allowed, such as using it to mitigate the detrimental effects of climate change on indigenous people (Fanciullo, 2020). These indigenous people are highly vulnerable to the health impacts of climate change because they are frequently located in harsh environments, and far away from many services, including healthcare services (Lansbury Hall & Crosby, 2022). For example, climate change contributes to more frequent and intense heatwaves in Australia, which leads to an increase in hospital admissions for remote indigenous people who work outdoors or have pre-existing conditions (Lansbury Hall & Crosby, 2022). They have contributed the least to climate change, but they are the most affected by it (Baer, 2022; Benavides et al., 2024; Wheat et al., 2022)

To address this disparity, genetic enhancement could potentially be utilized to enhance their resilient capacity against extreme heatwaves and alleviate the adverse effects of climate change on their lives. Through genetic enhancement, Indigenous Australians would undoubtedly face reduced difficulties or challenges, resulting in achievements of lesser value. Nonetheless, the permissibility of genetic enhancement should be considered due to its potential to mitigate vulnerabilities and the disproportionate effects of climate change on Indigenous Australians' livelihoods.

Genetic enhancement should be permissible when it is used to improve various performances, including physical performance, cognitive performance, and health, as long as the genetic enhancement technology is safe and accessible to all individuals. The use of genetic enhancement can be compared to the use of other enhancers. Despite the fact that using other enhancers may lead to diminished achievement, we are still permitted to use them. For instance, we are allowed to wear advanced running shoes to enhance our running performance, consume coffee to help us stay awake longer, and receive the Covid-19 vaccine

to improve our health and prevent Covid-19 infection. Given that there are no inherent distinctions between the use of other enhancers, we should likewise be allowed to use genetic enhancement for physical enhancement, cognitive enhancement, and health enhancement.

However, Ju Wang argues that while genetic enhancement can be used to reduce the disadvantages we may face, it is important that we also integrate our own efforts and play an active role in our enhanced lives. For example, if a person is nearsighted, they might use eyeglasses to improve their ability to read while preparing for an exam. In this case, although the eyeglasses aid in the task, the individual still puts in effort to study and succeed. Thus, the use of genetic enhancement should not entirely substitute for our personal efforts—otherwise, we would not be competent agents in bringing about our achievements. This would result in achievements of no value (Wang, 2021). With the case of Indigenous Australians and the use of other enhancers in mind, we can see that the diminished achievement argument cannot be used to justify the impermissibility of genetic enhancement.

Conclusion

Bradford's account of valuable achievements holds that difficulty is a source of value for achievements. This account supports the diminished achievement argument which maintains that the employment of genetic enhancement diminishes the value of achievements. This is because genetic enhancement reduces or removes difficulty. However, I have shown that the diminished achievement argument does not lead to the impermissibility of the use of genetic enhancement, for example, the case of employing genetic enhancement in order to decrease the disadvantages one may face, and to enhance several performances.

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