Mr. Gunstenson
Biology 30

Assignment: Ethical Paper

In class, you watched the movie GATTACA, which portrays a society in which genetic engineering and genetic technologies have impacted society, culture, ethics, economics, and nearly all aspects of human existence. You are to write a paper that addresses the ethical implications of technological/scientific development. As a common starting place, use the movie GATTACA as something to start voicing ideas and opinions upon.

You will be required to argue or defend a position as to how far genetic engineering/technology **should** go and why. You MUST support your arguments with evidence and scientifically sound arguments. For example, if you make a claim that we use genetic engineering in today's society, you must cite evidence of this statement. This can take the form of an article you found online, something in your textbook, or something you learned in class. Please remember to always **cite your sources.**

In any scientific paper, you must address both sides of the argument in a fair and appropriate manner. As such, you must address opposing arguments or extreme perspectives in a fair and respectful manner. Remember to support all claims and ideas with scientific evidence and research!

Guiding questions to address:

You are to write an essay that addresses the following main questions:

- In the movie GATTACA, what types of technologies have developed and how have they impacted society, ethics, economics, and possibly the environment?
    - How have science and technology developed to meet societal needs and expand human capability?
- How have scientific research and technology (in our world) developed help achieve a sustainable society, economy and environment?
- What are the social, cultural, environmental, ethical and economic considerations to scientific and technological development?
- **Should there be limitations as to the types of scientific research/development done in today's society or the future?**
    - **How/where would you draw the line? WHY?**

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Things to think about:

1. How did being a "God Child" or "in-valid" affect Vincent as a child?
2. When Vincent's parents went to a genetics center for a second child, the geneticist stated “I have taken the liberty of eradicating any potentially prejudicial conditions - premature baldness, myopia, alcoholism and addictive susceptibility, propensity for violence and obesity.” The father then asks “We were wondering if we should leave some things to chance.” To this the geneticist responds, “You want to give your child the best possible start. Believe me, we have enough imperfection built-in already. Your child doesn't need any additional burdens.” Would it be irresponsible for the parents to want to leave something to chance?
3. Sperm and egg donation service agencies offer hope to infertile parents who hope to conceive their own children in the future. Sperm donation is a relatively easy process, requiring no more than an hour’s time. However, donating eggs is a rather complicated task, requiring months of hormone therapy and minor surgical procedures to retrieve the harvested eggs. In addition, drugs injected into women cause their ovaries to ovulate several eggs at once, greatly increasing the odds of developing cancer. To compensate for the ‘inconvenience’, women are given a large sum of money. Often, young, female college students are targeted for egg donations since they are considered more educated and healthier than their older female counterparts. Do you think females should be compensated for donating their eggs? Why or why not? Is it appropriate for egg donation agencies to advertise for potential egg donors on college campuses?
4. During a particular scene in GATTACA, Irene (Uma Thurman) submits a hair from "Jerome" to check on his genetic make-up. At the same time, another woman submits a saliva sample from a recent kiss to screen her potential boyfriend/husband’s DNA. Is she violating his rights by doing this without his knowledge? How much would a DNA screen reveal about someone’s personality and intelligence?
5. If we reached this point in our society, would you choose to make your child a “valid”?
6. If our society were this way, how would knowing whether a person is a “valid or invalid” affect your relationships with them or others?