

Dear Professor Belli and reader

This research project allowed me to explore a topic that I've been interested in for a while. The idea of modifying human genetics and the resulting consequences, good or bad, has been something that I've thought about when it comes to science fiction due to my love for the show Orphan Black.

When first trying to figure out what my topic was going to be for this project I was very unsure. I had wanted to reference two of my favorite science fiction text, Destiny the game and Orphan Black the show, but could not find a connecting theme that I was interested in. One of my original topic ideas was to talk about combining humans and machines, almost like cyborgs. I had this idea because around the time of brainstorming, Destiny 2 released some content and lore about a race or group of people in the world of the game. That group being Exos, robots but with human consciousness. The questionable ethics that was behind the process of making Exos was my starting point for brainstorming topics for this project. I wanted to explore something that dealt with humans and ethics. For context, Exos were created by a scientist called Clovis Bray. Bray was chasing immortality at the expense of others. He worked on uploading human minds into Exo bodies, but that required him to tap into some dark powers beyond his understanding as the human minds would reject the robotic body, waking up in a state where there's no sign for your mind to know that you are alive, such as your sense of touch, smell, taste and the rest; this would cause people who underwent the Exo experiments to freak out. Something like that was what I want to explore, but I also really wanted to talk about my favorite show Orphan Black. Orphan Black was a show I had known about for a while before I started watching it, but when I did I was a bit obsessed with it. The show took from real science and had interesting characters and themes. It was a show primarily about Clones. The main character, Sarah Manning, one day sees someone that looks exactly like her, die in the opening scene. In an attempt to figure out why someone looks like her, Sarah steals her identity and from there the show goes on to explore themes related to questionable and illegal cloning such as putting a patent on the clones' DNA thereby making them the property of the organization that made them, which brought the idea of not owning your own body. However, as living, breathing, human beings, they should, naturally, have their own rights and part of the show is them fighting for those rights. The show explores immortality, as one of the reasons for the clone project (known as Project Leda in the show) is to experiment with a mutation to see if they can achieve a longer life span. They talk about harvesting genetic material from people that are unaware of the experiments going on. There is also another theme tackled in the show about germline which is genetic alterations passed down through generations, and this is shown in the show through the fact that the experiment was done to the original DNA provider that Project Leda clones stem from, caused all clones (but two), to be infertile. Through my research, I found that "Recently, the National Academy of Sciences gave germline gene editing the green light, just one year after academy scientists from around the world argued it would be "irresponsible to proceed" without further exploring the implications". I wanted to explore something that is a little more current with our reality, and while cloning was interesting I felt genetic modify was a bit less specific allowing for me to talk about more. At first, I was mainly trying to focus on just the ethics of human genetic

modification, but when doing rough drafts I realized my topic was a bit vague since I did not exactly specify that is pertaining to 'human' genetic modification. After my first draft, I went to work on solidifying what my topic was about by making a rough outline of what I wanted to cover and talk about. After the lightning round presentations, I worked on getting more details and information into my slides and add speaker notes. The comments also helped me realize that I needed more images in my slides so I worked on adding that. When making the final presentation I focused mostly on getting the right information about genetic modification and CRISPR so I can explain it in a simple way while providing background information about the topic. I supplemented my research by also talking to a friend of mine that majors in Biology and she helped me understand somethings about genetic modification such as germlines. However, some of the information she provided me with proved to be a little too advance for what I was trying to cover but was still helpful nonetheless.

This assignment allowed me to learn more about some of the science behind genetic modification as well as some of the morals and ethics of it. I plan to do more personal research into it, as it is a current topic that I feel is important to discuss since some of the science fiction material surrounding it, is not too far off from becoming reality.