The Birthing Programmer Accompanying Piece.

For my student devised assessment, I decided to describe a dystopian future with an emphasis on genes and how they could become an essential aspect of society. I wanted to convey this description in the form of a poem and by using poetic techniques, I hope to highlight the slippery slope argument and promote discussion among the readers.

Dystopian fiction is a popular genre especially among young adult (Finnsson, 2016). Personally, I find dystopian young adult books an exciting read as there is a juxtaposition between an extreme ideology and the effects of it on individuals and the usual development of the character from child to adult. Dystopian fiction has a "unique quality of engaging its readers with pressing political matters" (Finnsson, 2016, p.4) which may also include the ethical issues that surround genetics. I believe this genre is important in providing a springboard for discussion and allowing readers to evaluate whether the events could actually happen. For The Birthing Programmer, I took inspiration from the film GATTACA (1997) and the book Matched by Ally Condie (2012). GATTACA (1997) is based in a future where parents are heavily advised to use genetic selection and modification to manufacture their baby due to the use of genotype profiling in identifying individuals as "valid" or "invalid" which goes on to affect individuals' career opportunities. Within The Birthing Programmer, I used this theme by allocating individuals to certain careers depending on their genes and furthermore, with the introduction of the birthing program, genetic selection and modification was used to ensure children are designed for specific roles. Matched (Condie, 2012) is based in a future where young men and women are paired together to give them the best possible chance at having healthy children. In The Birthing Programmer, I suggested how pairings could be dependent on genes to ensure the couple have the best possibility to produce the "perfect baby".

I titled my poem *The Birthing Programmer* as I liked the idea that this poem was written by an unknown character within the dystopian future who had once been involved in the birthing program (hence knowing the scientific terms) but has now realised the negative implications of the program on society. I intended for the character to have written this poem as public warning to other societies or future generations therefore by choosing this format, it would be accessible to most people as it is a short but emotive read. I also used poetic techniques to imply hidden and subtle meanings. In the first seven verses, I used the same rhyming method (the first line rhymes with the third line and the second rhymes with the fourth line) throughout. These seven verses introduce the new ideology within the dystopian future including how genes have been used to determine marriages and careers, the new "birthing program" where parents have the opportunity to adjust their children's genes and how this program has evolved by forcing parents to have babies who will benefit society. By using rhyming methods that readers would recognise from other poems, readers start to associate these genetic ideologies with the norm.

In the final verse, there are seven lines rather than the usual four and no intentional rhyming therefore completely deviating from the repeated structure the reader is familiar with throughout *The Birthing Programmer*. This new structure is to coincide with the first mention of a singular individual ("What's the chance of my baby looking like me?") whilst with the rest of the poem, I talked about groups of people (e.g. "scientists" and "governors"). Firstly by not talking about a singular person, I hoped that the reader could imagine themselves within this dystopian future and visualise how different their lives would be if the same emphasis was placed on their genes. Secondary by only referring to groups of people in the poem, individuals are forced to share a common identity therefore demonstrating how genetic modification on a large scale could mean the loss of individuality. Additionally, the final verse is the first instance in the poem to express concerns

about the ideology. I used questions with the intention of guiding the readers to form their own opinion towards genetic modification however the phrasing of the two questions ("What's the chance of my baby looking like me?" and "But don't they make us human rather than genetically modified machines?") have negative undertones. "Machine" implies the loss of all humanity but I think it is important to highlight that with genetic modification there does not seem to be a limit yet so humans could be modified to be flawless like a machine. Finally, I referred to characters "playing with genes" which is in reference to the concept of playing God as genetic selection and modification can be used to "alter life and influence human evolution" (Peters, 2014). In *The Birthing Programmer*, scientists and governors are acting as God as they have the ability to decide whose lives are worth living and even with the primary goal to eliminate disabilities, it is implying that individuals with disabilities don't live a life worth living.

Throughout *The Birthing Programmer*, I was implying how genetic selection and modification is a scientific and social matter as even small changes on a molecular level will change that person and as a result, society. I used references to "scientists" and "governors" as representatives for these matters and in the final verse, I explicitly talk about "science and society". I think it is essential for readers to understand although scientists may strive to know the limit of genetic modification, it is societies' responsibility and choice to use these facilities.

Within *The Birthing Programmer,* I included a few scientific references. I used the abbreviation DNA which I anticipate most readers to understand DNA's relevance within genetics however I was expecting the base pairs: A, T, C and G to be a new concept to readers without scientific background. DNA is made up of a sequence of smaller molecules called nucleotides. There are four different DNA nucleotides: adenine (A), thymine (T), guanine (G) and cytosine (C) which are paired up (i.e. each A in one of the strands of DNA is paired to a T in the other strand and each C in one strand of DNA is paired to a G in the other strand) (A Brief History of Genetics: Defining Experiments in Genetics., 2010). However in *The Birthing Programmer*, I choose not to describe the exact science behind these base pairs instead mention them in the final verse "A C was better there than a G" to confuse readers as they do not understand the exact effect of this change. I hoped to convey how confusing and difficult it is for the public to determine their opinion on genetic selection and modification when they have limited knowledge of the in-depth science behind genetics. When faced with a decision about genetic modification and selection, I anticipated that parents within the dystopian future could feel pressured to make a certain choice as they do not fully understand the scientific jargon surrounding genetics.

The slippery slope argument is the idea that decisions are not separate entities but rather have the possibility to start a trend (BBC, 2014). This argument is used frequently within genetics especially in regard to genetic selection and modification being used to eliminate disabilities which some argue could lead to traits like height being selected and modified. The slippery slope argument was the underlying theme for *The Birthing Programmer* as I wanted to explore what could happen with genetic selection and modification if it was used for minor traits. The "birthing program" was introduced as something for the benefit of the child by eliminating disabilities. As parents are often encouraged (and "morally required") to produce the best child possible (Buchanan et al., 2000, p.161), I assumed that parents would be eager to ensure their child was not born with any disabilities. Following the argument of the slippery slope, I went on to explain how "boundaries were pushed and the limit surpassed" and the birthing program becoming a system with the potential to change minor traits. Typically, the idea of best possible children is based solely on the purpose of making a child's life the best for them regardless of other standpoints like of society (Buchanan et al., 2000). However, I wanted to explore the idea of society having more of an influence in the

genetic modification of a single child hence the involvement of governors and scientists in determining the best traits for the child in association with their future careers. Interestingly, as described in *From Chance to Choice* (Buchanan et al., 2000), Aldous Huxley's *Brave New World* has already imagined a future where children were produced to suit specific role i.e. producing children with significantly limited capacities who will be more likely to be content in menial roles in society compared to the average person.

With a topic as scientific as genetics, fictional pieces of work are important in order for the public to be exposed to the basic ideas and involve them in the discussion surrounding genetics. These pieces of work can also be thought of as a warning to scientists and others researching genetics who may not have considered the long-term slippery slope argument for the work they are researching. As described by Kirby (2017), films (and other pieces of fiction) tend to follow the current scientific trends. With the new invasive prenatal test now being offered to mothers with a higher chance of Down's syndrome baby, there are concerns about the increased abortions as a result (Boseley, 2016) which is a form of informal genetic selection. Therefore I wanted to use my assessment as a way to explore the slippery slope argument surrounding genetic selection and how it could develop to be applied to minor traits.

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