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## Introduction

This advertisement depicts a baby with perturbingly adult-like, desirable features, the combination of which is intended to provoke unease. The baby is additionally intended to appear somewhat android in its glowing perfection, suggesting a fundamental loss of humanity. It also seems as if airbrushed or made-up; highlighting the pervasiveness of superficiality in that it acquires importance even at the stage of infancy. The catch-phrase, 'engineered to perfection' is evocative of a car advertisement, intentionally removing all semblance of humanity or agency. The brand names all connote genetic promise; 'Gene-ie' referencing a genie and the supernatural, 'PolaDroid' evoking the commodification of the human eye as merely a lens through which other technologies are experienced, and 'FrankEinstein' introducing a sinister undertone to the alteration of human intelligence. The company that provides the service utilising these technologies is termed 'Genetic Labs'. Its logo contains DNA as the site of manipulation, and it appears polished, modern, and sleek as if it were entirely neutral, or even a positive force for change. There is a dry irony and arrogance in the statement: 'no refunds given for loss or perceived loss of humanity', as if reminding a future public that this is the reality they chose, and failed to prevent.

## Purpose

The purpose of this digitally-drawn advertisement was to postulate a dystopian future in which genetic editing is not only accepted, but encouraged by mainstream media. It is intended to be an extrapolation of current practices of the commodification of the human body, with a view to highlighting the perceived necessity created by social engineering efforts in keeping up

to date with the latest biotechnologies, for fear of being left behind. This is a future in which the pressures of unfettered free market innovation have resulted in different companies patenting gene editing algorithms and techniques; in which children who are not 'engineered' may not stand a chance against their peers, as the pursuit of a standardised perfection is the new norm.

The advertisement also aims to generate attention upon the increasing objectification of the human body, with dreams of artificially attained perfection sacrificing what is inherent to humanity. It speaks to the pressures technology places upon all of us, and forecasts a terrifying future in which any positive meaning behind genetic alterations (e.g. use merely for alleviating genetic diseases) has long been lost to superficial pursuits.

### Choice of Medium

The medium; a digitally-drawn billboard advertisement, was chosen as advertisements sell a promise of a false reality or utopia, their objective being purely economic gain. Advertisements also often use exaggerated technological jargon in order to confuse and entice; blurring the lines between fact and fiction. Given the familiarity of the medium, it is able to convey a sense of disquietude that is only slightly removed from current reality and thus it is able to provoke reflection on the pace of unquestioned and unregulated advancements in genetic technologies. This medium highlights the coercive methods of social engineering and the pervasive nature of pop culture in influencing and shaping public discourse and extending acceptable ethical boundaries. Advertisements embody artifice; therefore, they are largely exempt from ethical questioning or justification. Through this medium, it is possible to implicitly

convey the values and aspirations underpinning a possible dystopian future.

Additionally, the medium was specifically chosen to be digitally executed as it conveys a sense of polished and airbrushed finality; the idea of an eradication of the spontaneous, and the imposition of careful curation.

### Audience

As it is intended to address the general public, it utilises a lot of marketing and technological jargon in order to convince the public of the legitimacy of its claims. Particularly, it is aimed at prospective parents, who naturally want what is best for their child. In South Korea, 1 in 5 women have had plastic surgery due to social pressures.<sup>1</sup> In Hong Kong, many advertisements target parents who want to give their children the edge that will make them succeed – whether through baby formula or cram schools.<sup>2</sup> Implicit in these advertisements is an underlying message of irresponsible parenting if action is not taken. In many competitive industries; corporate, academic or athletic, individuals increasingly rely on Adderall and similar performance enhancing drugs to stay ahead of the curve.<sup>3</sup> Advertisements have a huge part to play in influencing what is deemed socially acceptable and desirable. The general public, not well

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<sup>1</sup> Whitelocks, Sadie. "One in Five Women in Seoul Have Gone under the Knife as South Korea Tops Global List of Plastic Surgery Procedures." Daily Mail Online. April 24, 2012. Accessed April 03, 2018. <http://www.dailymail.co.uk/femail/article-2134352/One-women-Seoul-gone-knife-South-Korea-tops-global-list-plastic-surgery-procedures.html>.

<sup>2</sup> Enfagrow. "Help Your Child Aim Higher." Advertisement. Accessed April 3, 2018. [https://static1.squarespace.com/static/558ac671e4b0396e7a12ade4/558d6630e4b064aaeb85ea8f/56c358fed51cd4dfe399cc9a/1455643154960/MJ Prada KV Blocks.jpg?format=750w](https://static1.squarespace.com/static/558ac671e4b0396e7a12ade4/558d6630e4b064aaeb85ea8f/56c358fed51cd4dfe399cc9a/1455643154960/MJ+Prada+KV+Blocks.jpg?format=750w).

<sup>3</sup> Take Your Pills. Directed by Alison Klayman. Performed by Eben Britton, Dr. Wendy Brown, Anjan Chatterjee. March 16, 2018. Accessed April 3, 2018.

versed in the severity and ramifications of technologies such as genetic editing, may be easy targets for effective social engineering. In particular, I believe it is interesting to note that since the advertisement depicts the realities of a future dystopia, the implicit wants and needs conveyed by the advertisement are *not yet* desirable in our current world. Therefore, the advertisement is not currently effective, meaning that the general public, instead of feeling enticed, should feel perturbed, and begin to question the ethics of rapid, unquestioned progression. What becomes apparent instead are the manipulation techniques behind the advertisement of genetic editing, and the superficiality of what is being advertised. Hopefully, this will foster further inquiry and demand for greater transparency in the implementation procedures of emerging biotechnologies.

### Creation

This advertisement was created initially through drawing by hand the head of the adult baby, which was then scanned and utilised as a basis from which digital drawing techniques were used. The software used was GIMP, a free Photoshop-style digital drawing software for artists. Finally, Preview was utilised in order to generate text.

### Theories Behind Research

The origin of this SDA was a combination of the theories and strains of thought that most intrigued me from the module. In particular, I was interested in the genesis of the CRISPR-Cas9 and more specifically, with the ethical considerations that arise from the sudden introduction of a technology which is not fully understood, but inevitably will pave the way for great scientific

change, as well as profound alterations to our lives. After reading an interview with the founders, it is especially intriguing to me that they are intent on creating a wider scientific discourse on the ethics of their creation.<sup>4</sup> Doudna (co-founder) openly outlines her fears in her book '*A Crack in Creation*', which conjures an image of a scientist torn by the potential volatility of her creation – it is hopeful to see her demand for responsible usage, and call for a moratorium on germline editing until further consideration.<sup>5</sup> However, this also inspired me to explore the inverse of this outcome, namely the notion of irresponsible usage – after all, once a technology has been created, it is highly susceptible to misuse or use for the wrong motives – for instance, economic gain. I wanted to take this idea and merge it with the concept of irresponsible scientific communication. Inspired by Kirby, I was interested in exploring the dystopian elements of cultural influence on the public's perception of emerging biotechnologies.<sup>6</sup> For instance, he highlights the pervasiveness of genetic determinism in science fiction movies. I was particularly intrigued by the concept of public scientific understanding being an abstraction far removed from the realities of the technology itself.

Thus, I decided an advertisement was the best means of conveying a falsehood, and the potential for coercive social engineering efforts to evade ethical arguments; an extreme example

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<sup>4</sup> "A Conversation with CRISPR-Cas9 Inventors Charpentier and Doudna." DNA Science Blog. December 03, 2015. Accessed April 03, 2018. <http://blogs.plos.org/dnascience/2015/12/03/a-conversation-with-crispr-cas9-inventors-charpentier-and-doudna/>.

<sup>5</sup> Duncan, David Ewing. "What Keeps a CRISPR Creator Up at Night – NEO.LIFE – Medium." Medium. July 06, 2017. Accessed April 03, 2018. <https://medium.com/neodotlife/doudna-book-cbf1820c88a9>.

<sup>6</sup> Kirby, D.A. "Hollywood's Take on Human Heredity," *The Scientist*, February 2007. <http://www.the-scientist.com/?articles.view/articleNo/24745/title/Hollywood-s-take-on-human-heredity/>. February, 2017.

of what could occur if ethical considerations are not deemed important, or if the consequences of such technologies are not properly evaluated. I was also inspired by various articles and talks on the ethics associated with designer babies, particularly an article from The Atlantic entitled 'The Case Against Perfection'.<sup>7</sup> The article discusses the ethics of enhancement, and one line especially resonated with me: "Like cosmetic surgery, genetic enhancement employs medical means for nonmedical ends – ends unrelated to curing disease or repairing injury."<sup>8</sup> The article goes beyond this by considering the philosophical ramifications for altering fundamentally human traits – at which point in the process do we lose our humanity? In addition, with the continued commodification of the human form, is the meaning and value of striving for progress inevitably lost? On this point, I additionally drew inspiration from TV shows such as Altered Carbon which depict a dystopian, advertisement-riddled future where the human body has been rendered a 'shell' and devoid of meaning; merely an object to often violent, primal, and meaningless ends.<sup>9</sup> I wanted to address all of these issues through creating, in effect, a 'Black Mirror' to pressures we already face in our current society.<sup>10</sup> There is a huge potential for genetic editing to simply play into the obsessive, manic zeitgeist of the time – the quest for perfection; *at all costs*.

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<sup>7</sup> Sandel, Michael J. "The Case Against Perfection." The Atlantic. April 01, 2004. Accessed April 03, 2018. <https://www.theatlantic.com/magazine/archive/2004/04/the-case-against-perfection/302927/>.

<sup>8</sup> Ibid.

<sup>9</sup> Kalogridis, Laeta, and Nevin Densham, writers. "Altered Carbon." In Altered Carbon. Netflix. 2018.

<sup>10</sup> Brooker, Charlie, writer. Black Mirror. 2011.

## Conclusion

All of these issues bring to the fore a need for open and honest communication – between scientists and the public, the government, and regulatory bodies. In particular, more transparency is required in order to bridge the gap between the scientific community and the public. Interdisciplinarity is essential in order to prevent a monolithic group of stakeholders from dictating the course of humanity’s progression. My hope with this piece is that I have contributed to an understanding of the potential impact of genetic editing, and the moral decisions we must all make in preventing a future from which humanity may be excluded.

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