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## Designer Babies A Tale of Horrific Immoralities

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Over the years, the concept of a designer baby, otherwise known as a genetically engineered baby, has evolved from being science fiction to the prime topic of modern bioethical debate. A designer baby describes a child whose gene sequence has been intentionally selected to contain a specific preferred characteristic or eliminate genetic disease. While supporters say that this technology can help diminish inherited diseases and enhance human abilities, a variety of challenges develop a plethora of questions regarding the use of the technology. Some of the dangerous implications of bioengineered babies are considered concerning social inequity, less genetic diversity, biological damage, and morality regarding genetics. Ultimately, the practice of designer babies and human embryos raises ethical concerns and should be advocated against.

Discussing the ethical and social concerns of genome editing on embryos, a pressing problem that emerges is the potential for increased inequality. Genetic editing erodes the idea of equality and could form great divisions in the future and can accentuate immoral stratification. Suppose enhancement technologies begin to become widely available. In that case, there is a real and present danger that these technologies will only be available to richer families, further stratifying the privileged from the underprivileged. According to Harvard Law School, the average embryo-edited baby can cost up to \$100,000 further amplifying the social gap that will be birthed if this practice continues. [1] Currently, medical care and quality therapies are distributed unfairly, therefore genetic engineering may tend to institutionalize these discrepancies. In communities where access to genes will turn to commercialization, there may emerge a divergence regarding aspects such as intelligence and physical health on account of children of rich families having the advantage over other “normal individuals”. Social stratification would accentuate and create a class of genetically superior individuals. In a world where traits such as high intelligence, physical attractiveness or athletic ability are selected for, individuals would be valued for their genes rather than their personhood.

Notably, another major concern with designer babies regards the loss of genetic diversity. Genetic diversity is critical in sustaining a species, as it offers protection against environmental changes, diseases, etc. A loss of genetic variance that confers resistance to a wide range of pathogens may occur if few genetic characteristics become preferred or emphasized. A narrow gene pool facilitated by the large-scale selection of traits considered desirable could make the human population more vulnerable to diseases or environmental stressors. Referencing a report conducted by The Guardian, this would make humans more vulnerable to diseases, which, up until recently, posed little threat. [2]

Beyond the risks of gene editing, genetic enhancement technologies could be utilized to enhance intelligence, physical ability, or resilience to conditions such as Leukemia or Hemophilia. Although the urge to improve human conditions is understandable, concern remains as much as the long-term biological influences of such enhancements remain unknown. There is a probability that in trying to enhance one characteristic, there might indeed be a corresponding decline in another, thus forming an offshoot effect of negative

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implications for the person concerned. The pursuit of genetic enhancements could also bring together human characteristics consequently reducing natural diversity, an essential aspect of the well-being and survival of our species.

Another prevailing concern surrounding the ethics of baby design raises profound moral issues regarding parental control and the autonomy of the child. While many parents might view genetic modification as one sure way of making life for a child optimal, some others argue this intervention violates the child's autonomy and natural purpose. According to a survey conducted by the Pew Research Center, about 69% of American adults were hesitant to edit gene structures of their embryos, further indicating the prospect of genetic editing is still widely looked down upon by the general public. [3] Additionally, it raises questions surrounding the ethics involved in designing a baby before birth regarding individuality. Some claim it strips the child's right to self-definition and may push onto the child a specific set of expectations or desires not consciously decided upon by the individual. Who decides which traits are desirable? Is that a decision to be left to a few genetic engineers and their scientific peers: to decide which characteristics of human nature are superior or inferior? A world in which parents can select specific traits for their children risks diminishing diversity and encourages unrealistic standards of perfection.

This ideological shift first emanated from He Jiankui, a Chinese biophysicist, who gained international prominence in 2018 upon claiming to design the world's first genetically edited pair of twins. According to an article by Science, Jiankui had modified the embryos of the babies using CRISPR-Cas9, a gene-editing technique that provides resistance to HIV. CRISPR is extremely cost effective and was originally employed to diminish genetic diseases and strengthen the prevalence of desired traits. [4] Regardless of the lab extractions done in the interest of CRISPR, Jiankui's actions were widely condemned as unethical as they ignored established scientific guidelines and medical protocols. Eventually, through efforts of whistleblowing and media reports, it was revealed that Jiankui had not only acted without proper approval from administrators but had also misled patients regarding the risks of the procedure. According to Science Insider, after an international outcry and an investigation led by Chinese authorities, He Jiankui was found guilty of illegal medical practices, and sentenced to three years in prison. [5] Jiankui's actions have raised profound ethical questions concerning the limit of gene editing and the possibility of designer babies. If the creator of designer babies cannot conduct proper research with scientific approval, then what promises the safety of CRISPR and all its future practices? All of these controversies surrounding the development of designer babies contribute to the downfall of the concept and raise concerns regarding legibility.

Designer babies introduce a variety of complex questions that are difficult to resolve. While this technology may hold the potential to eradicate genetic disorders and contribute to an immense improvement in human condition, there is an extreme level of risk in applying it. Modifying genes could interfere with genetic diversity and produce unforeseen consequences, therefore proving once again that pursuing modified children is a far-reaching possibility placed into the hands of society. The moral jeopardies concerning control over the genes along with the potential reemergence of eugenics, demand raise a need for serious reflection and reconsideration. Since scientists will continue developing and researching new technologies for genetic engineering, long-term consequences should be reconsidered with adequate caution. Recognizing and weighing the downsides of such advances against their potential benefits will contribute to the realization that this field of technology has grown to become dangerously risky and contains the potential to diminish our social values. Ultimately, designer babies and

human embryo editing techniques are alarmingly immoral and fuel the rise of unfair prejudice in our thriving society.

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