Ethical And Cultural Concerns With Emerging Technologies

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Introduction:

Over the past few decades, with the rapid advancement of technology, many ethical issues concerning scientifically advanced interventions or projects have been raised. With regard to the issue, there have been two opposing arguments presented by each camp. One side views technology and science as ethically neutral per se and holds the view that dilemmas only arise when scientific knowledge becomes a means to achieve wrong ends. The other camp views science and scientific knowledge to be free of ethical values and norms and considers the domain of science to be beyond ethical reproach. In this paper, I shall discuss two technologies that have generated an ethical and cultural debate: In Vitro Fertilization IVF and Human Enhancement. These technologies have been addressed, and solutions to ethical dilemmas in the use of these technologies have been suggested.

Issues:

In the field of reproductive health, research in new technologies is vital as it is linked with the formation of upcoming generations. Today, artificial insemination, IVF, and embryo manipulation have revolutionized childbirth from what was strictly within the confines of matrimonial relations (Wymelenberg, 1990). In the early 1970s, when the process of IVF was being researched, some theologians and activists termed the procedure as an unethical experimentation on humans. At the time, the primary argument was that if the parents wish for a child, that still does not entitle them to have a human egg fertilized in a petri dish, using a method possibly unsafe that could result in a deformed child. The ethical issues surrounding IVF can be categorized into four broad terms: the relationship of the infertile couple and physician to the pre-embryo, the relationship of the expected offspring to the infertile couple, the relationship of the infertile couple to the physician and affected offspring, and the relationship of both the infertile couple and the physician to the community at large. In IVF, selected embryos are transferred to the uterus, and the remaining are frozen (Goldworth, 1999). The ethical issues involving the procedure include the question of whether destroying an embryo is a wrong and immoral thing to do and whether the fertilized ovum is considered a person or not. Although there are different opinions on whether the pre-embryo is a person, all agree that it is to be treated with the utmost respect. The other ethical issue is whether the physician is doing anything possibly wrong to the expected offspring or the infertile couple that

opted for IVF is doing something possibly wrong to the expected offspring. For instance, in case a child born out of IVF is born with a serious disorder, is the infertile couple to blame for wronging the child (Goldworth, 1999)?

In today's world, there is another ethical debate surrounding the issue of how humans wage war. Contemporary weapon systems may be extremely powerful and impressive, but their weakest link yet the most valuable assets are still the fighters themselves (Lin, 2012). Human enhancement technologies are not new, especially for military purposes. The use of amphetamines and caffeine has long been used to keep soldiers alert and awake. Furthermore, in pharmaceutical drugs such as modafinil, which is used to enhance cognition, there has been a growing interest. Gene therapy, as well as dietary supplements, have also been considered to boost a soldier's performance in battle. Contemporary research has gone beyond diet, researching for ways to enhance or modify the digestive system of a soldier by altering its function and structure to allow them to digest cellulose in order to be able to survive on grass as food (Henschke, 2017). There are several ethical concerns with regard to it, both in civilian and military uses. The first concern is whether informed and meaningful consent can be obtained to undergo such human enhancement. Another issue is whether it is right to use a drug such as propranolol to reduce a soldier's capability to experience trauma since the drug can dampen a memory's emotional force. Another issue is regarding governance and policy (Miah, 2016). Regarding athletes, it is questioned whether the use of enhancement drugs would violate the spirit of the sport or raise concerns about inequality. The other issue is whether people would begin misusing enhancement technologies to pursue cosmetic trends that would always be changing. Therefore, the concern is that enhancements could interfere with essential qualities of human identity that we, as specified, would rather preserve than lose.

Solutions:

In the case of IVF, a range of ethical stances have been taken with regard to its research. Some religions, as well as the Roman Catholic Church, for instance, see the fertilized ovum, which is chromosomally complete to be alive. There is considerable disagreement between ethical bodies and committees, and the majority of them formed until now disagree with experimentation and research on embryos after 14 days have passed since fertilization in the laboratory. The ACOG committee allowed the use of non-human embryos and to only use human embryos when vitally needed information could not be obtained otherwise, and that too from before the 14th day of fertilization (Wymelenberg, 1990). Some scientists dispute that and suggest that only after three weeks have passed since the zygote's formation can it be called an individual. The solution to many ethical questions associated with fertility-related medical interventions is to consider the acknowledged benefits produced by the response that outweigh the perceived harms. Couples that undertake IVF consent to receive the benefits that outweigh the potential harms and become willing to incur the financial costs or the mental or physical associated risks (Goldworth, 1999). The incidents of possible defects also do not justify banning the procedure to protect expected offspring since, without the intervention, there would be no children born at all. Being alive is better than not existing. Therefore,

it can be ethically argued that existence compensates for the harm of potential congenital disabilities, which advances in technology have reduced to a considerable extent.

On the question of human enhancement, the case is slightly different, and it is essential to form some general principles governing the ethical conduct surrounding the issue. It requires extensive investment and independent consultation to formulate laws. Regulations would be needed at different levels. A society's preoccupation or obsession with outward beauty trends may lead them towards the pursuit of beauty ideals that are impossible for most people in the community to achieve. The ones who manage to reach the ideal may not remain satisfied and may feel the oppression of the ideal persistently as it keeps evolving. This can also lead to an unhealthy consumption of psychiatric medication. Furthermore, if there is a quest to alter genes to eradicate certain traits that, to humanity, in general, may seem unfavorable, it may eventually lead to a reduction in genetic diversity. The possible ramifications could lead to many complications, for example, if a plague, disease, bacteria or a virus spreads, it could affect nearly everyone as there would be less genetic diversity. Those who subscribe to transhumanist views favor all forms of enhancements and see that in the human condition, there are no static features. The ethical argument for them is that since, over the period of history, human vulnerabilities to the environment have steadily declined, we no longer tolerate severe forms of social control, and we have expanded our moral kinship. Therefore, there is no reason to preserve a static human identity. However, the potential harms of human enhancement will also, at some level, justify social efforts to bring formal controls over their use and development through law, regulation, and public policy (Juengst & Moseley, 2015).

Conclusion:

Technology in the past four decades has given rise to a fundamental change in our lives, from how we communicate with each other to the way we fight wars. A lot of these technologies have not come without controversy and have often led to polarized and intense debates that are wrapped in either dishonest demagoguery or scientific ambiguities. It is entirely possible that the future's emerging technology may very well lead to us redefining our understanding of the material world, manufacturing, and biology. Its implications can extend further into global power balances and geopolitics (Al-Rodhan, 2015). Innovation must be welcomed for its benefit, but issues such as human dignity, inequality, sustainable development, and inclusiveness must be taken into account. Ethical considerations and dual risks must be evaluated and should remain our guiding posts in the future as well. Our approach towards regulating technology can inevitably and ultimately will lead to vast implications. Therefore, the ethical perspective must also be taken into consideration so that the equality of individuals and human dignity can be preserved.

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