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Ethics of Posthuman Aesthetics: Genetic Engineering – is there a U-turn?

Numerous heated debates have been sparked over genetically modified crops (GMC) ever since their inception. These are crops that are engineered for disease and pest resistance by gene-splicing and they pass the genetic changes on to their offspring through inheritance and heredity. Considered a boon to the planet by some and a bane by others, they are still being grown and cultivated despite protests by many fractions such as Greenpeace and its allies, who contend that these crops pose ecological health risks and therefore propose bans on them till the risks involved could be assessed. Some extremists and activists have even taken to uprooting the crops and there are supermarkets that boycott such genetically modified food (GMF). As GMF are usually swimming anonymously in the market, there have been demands for labeling. Do you know that the tasty Pringles' potato chips are actually GMF?

The importance of labeling GMF is a matter of life and death. This is because some people may have allergic reactions to GMF. There is a case where a gene from Brazil nuts is transferred to soyabeans to improve their nutritional quality. However, it has been found that people allergic to the Brazil nuts were also allergic to the modified soyabeans. Fortunately, this was discovered before the soyabeans were launched in the market and thankfully, there were no casualties. Thus, to protect the lives of consumers, it is vital to label these GMF.

What exactly do GMC have to offer? Besides the promise of cheaper and better food and the ability to eliminate starvation, there appears to be an environmental plus, as these crops do not require heavy tilling or heavy doses of pesticides, thus making the crops sustainable. GMC seems like the solution to the economical use of resources, labour and time and the answer to the hunger problems of the world.

However, on the other hand, all the uproar over GMF is not without legitimate causes of concern. The effect of genetically altered organisms on the wider environment is still in

murky waters and needs to be better understood than it is today. There is also the notion that some companies that control this technology of creating GMF may oligopolise the market. Thus instead of producing higher-yielding crops to be distributed equitably among farmers in developing countries, genetic engineering only serves as a handmaiden to agribusiness.

One of the drawbacks of GMC is that there is a risk that the GMC may result in the mushrooming of super weeds. Riso National Laboratory in Denmark has found that "a gene implanted into rape to make it resistant to a herbicide was found to have jumped into a closely related weed-like plant. Now that the weed plant is also resistant to herbicide, it will pose as a greater threat to the surrounding crops.

The argument that pests may become resistant to GMC is non-sustainable. Even without GMC, pests have already evolved to become resistant to certain chemical pesticides. This inevitable process of natural selection is simply part and parcel of life.

So, the critical issue here is, is there a turning back for GMC? GMC have evolved to such a stage where it is difficult to revert back to the normal way of growing crops. As the population increases at an exponential rate, GMC seems vital in feeding the people. As long as GMC have been adequately tested to be safe for consumption and not have any major life-threatening side effects, and do not harm other living organisms that depend on the crops, GMC should receive the blessings of mankind. If GMC can remain as good servants and do not evolve to become bad masters, GMC will do the human population much good in terms of sustaining the environment and feeding them. However, this may be just wishful thinking.

From the genetic engineering of plants, we move on to that of animals. It is not uncommon to see transgenic animals with foreign genes or removed genes in laboratories and biotechnology firms. They are created to generate large quantities of useful proteins more rapidly and cheaply. Goats making human antibodies such as antithrombin III, a protein that controls blood clotting, and pigs producing human clot-busting factors are commonplace.

Even the genomes of pathogens are not spared. The DNA code of Xylella fastidiosa, a bacterial plant pathogen has recently been mapped out and this can be very significant for

citrus growers. With this genetic knowledge found, there is the untapped potential to manipulate the genes in the pests in such a way so as to possibly render them harmless to the citrus crops and therefore, protecting the harvest.

Having genetically engineered plants and animals, how can one forget about the humans? In July 2000, there was a revolutionary breakthrough in life sciences. The first draft of the entire human genome was completely decoded and this fact was greeted with much fanfare. The possible outcome of the Human Genome Project is that there will no longer be genetically imperfect people. In fact, there may be a whole new world of perfect Homo sapiens if ever there is a yardstick for basing the standard of perfection. Blindness, depression, Parkinson's disease and many more hoards of other physical and mental debilitating handicaps and illnesses will be things of the past. However, is this perfection really attainable and if it is, is it necessarily a progress? Can there be too much of a good thing? Think about thes scenarios: If Stephen Hawkings was genetically perfect with no handicaps like he had, would he ever have been as great as he was in the field of physics and astronomy ? How about Stevie Wonder? If he were not blind, could he have produced more beautiful and melodious music? It was because they are lacking in certain physical aspects that they make up for it by being great in what they do. Stevie Wonder's other senses are sharpened because of his blindness and his heightened sense of sound and sensitivity to music enabled his many well-received compositions. Of course, others may argue that given the chance that they could have been genetically perfect, what more could they have accomplished and contributed to the world?

Coming back to the issue of the human genome, there are talks of patenting the genetic sequences or more rightly, the meaning of the sequences and their links with aspects of humanity for profit. Two polemical camps have arisen with regards to this issue of genetic patenting. The pro-patent group believes that patents serve as an encouragement to generate more research which will ultimately be beneficial to everyone. Money makes the mare go so

likewise, patents, which protect the intellectual property of research organizations, provide huge incentives and rewards for the continuity of further research.

On the side of the anti-patent camp, the vehement argument is that with patenting, there will be greater class divide between the haves and have-nots. Only the rich can afford to use the knowledge to enhance their gene pool and indulge in gene therapies, resulting in widening disparity with the poor. There is also the ethical question: is it moral to let just the few well-off humans benefit from the Project when something as universal as the fundamental genetic make-up should optimistically benefit the whole of humankind?

With genetic engineering of humans, there is the possibility of creating designer babies with made-to-order traits. Using germline therapy to prevent a baby from getting cancer or other diseases may not be too controversial. But where will the line be drawn? Human nature is such where perfection is usually sought after. Parents may want their babies to be genetically engineered to be the next Mozarts and Einsteins. Will there be genetic discrimination among the designed and non-designed? Will insurance companies use genetic screening to set higher premiums? Will employers base recruitment of employees on their genetic make-up? Many more questions are raised than answered as to the issue of designer babies.

Genetic engineering or gene therapy have so far been successful in the treatment of certain diseases such as stimulating new blood-vessel growth in the heart to treat heart failure or in the limbs to correct faulty circulation. The treatment of a number of genetic diseases such as that of haemophilia, is promising as well. There is no turning back in these situations as they are for the benefit of mankind. If genetic engineering is used for the purpose of curing diseases, it is for a good cause. But to go into eugenics raises many ethical issues which are hard to resolve. Humans will no longer have much individuality but just be a mere collection of interchangeable and replaceable parts. So, while we still can retain some semblance of humanity, we should not try to play God in the sense of creating super babies, if not, there may really be no turning back then.