GROUP 9:

CABARSE, GENTILES, ABELLANOSA, NAVERICK JYLE LEX

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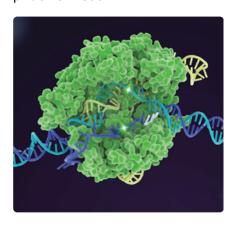
## HUMAN GENETIC

### **CRISPR & ENGINEERING**

### Science has learned to rewrite life itself. The question is, should it?

**CRISPR** is emerging technology that splices DNA into be editable. It enables scientists to cut, replace or rectify genetic material. It is able to eliminate illnesses, regulate genetic physical appearance and even manipulate intelligence. It alters the standard of humanness. The question is not what science can do, but what people ought to be permitting science to do so.

Aristotle was of the view that the purpose of human existence is eudaimonia or flourishing. To achieve that, one needs to be virtuous in his or her actions. Virtue refers to the moderation of extremes with the help of reason. Every action has two sides. Fear and recklessness are on the sides of courage. Greed is on the other side of generosity and waste is on the other side of greed. In between ignorance and pride lie wisdom.



Similarly, science has to seek its middle way. CRISPR empowers a human being to modify life itself. The goodness of it is to know when that power is life-serving, and when corrupting.

There are real benefits to genetic engineering. Ιt can eliminate genetic defects causing such disorders like cystic fibrosis or Huntington disease. It is able to avert suffering before it begins. There is hope among parents regarding the certainty of their child's health. One amendment in a DNA strand has the ability transform the future of a family. This application of CRISPR is in line with the Aristotle concept of a virtue-directed reason.

It safeguards life with the help of knowledge, it does not take it over.

Control can also be carried out with the use of the same tool. Other researchers wish to make genetic editing to make people look better and be taller or smarter. This blurs the line between virtue and carelessness. People cease to act when they want to be perfect rather than be healthy. They act for pride. It is no longer healing science, but status science. That would be too much to Aristotle. It is extreme, it is therefore not virtuous.

#### WE CAN NOW EDIT LIFE. BUT SHOULD WE?

increased The threat is when society considers control over character. When humanity creates children to have them match the standards, the natural variety of humans will be gone. Difference becomes a genetic defect. The enhancement will benefit those who can afford it and not those who are unable to.

It is not just scientific arrogance, but also moral risk that is social inequality. Aristotle cautioned that justice should be in line with virtue. The quest to achieve perfection without justice ruins that unity. It destroys the equilibrium which binds a community.



# HUMAN GENETIC

### **CRISPR & ENGINEERING**

CRISPR is also irreversible. Once the genes are altered, this outcome is passed to the next generations of people. Any error made has the potential to change the lives of hundreds of people. Experimentation should be preceded by ethical thinking. One has to be responsible before getting outcomes. In the case of an edited child getting ill later in life, who is responsible? The parents wanted the procedure? The scientists that performed procedure? the Or companies, who sold it? These are not technical questions. They are moral questions. Progress needs reason.

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According to Aristotle, all human actions have some good as a goal. Medicine is good because of health. Stability is the good of engineering. The truth must be good of science. If CRISPR is not aligned with good virtue, it becomes harmful. Rationality turns into a slave of passion. The attempt people understand its limits ethically, the more they will know about nature of unrestricted progress. The science of ethics developed by Aristotle makes us remember that it is discipline that ensures safety of freedom. Liberty without morality is anarchy.

A lot of people justify gene editing by arguing that they cannot stop the progress. But not all progress is moral.

Without ethics science turns into destruction. It is the same human mind which creates cures that creates weapons. The road to hell is paved with good intentions.

The trick is in CRISPR being used to cure but not to make perfect. A child born devoid of genetic pain is a step in the right direction, which is determined by reason. A child created as beautiful or strong is a symbol of wastefulness. Ethics does not innovation. **Ethics** oppose When defines its purpose. science is to benefit, society becomes more enlightened. Society becomes colder when science is the servant of the desire.

## ETHICAL CONCERNS?

The message of Aristotle remains intact, the aim of knowledge is to live well and not live without restrictions.

Science should proceed in contemplation. The discovery in every case should have moral education. Students, researchers and leaders should be taught that there is no complete innovation without ethics.

Reason alone is not enough. It should strive with discipline, virtue and end. According to ethics by Aristotle, knowledge must make character good first then results. The greater the power people acquire, the more they have to be cautious in how they wield their power.

CRISPR will be what its users want it to be. Genetic editing will save lives in the event that scientists are virtuous.



### **CRISPR & ENGINEERING**

### BALANCING VIRTUE

By being proud, they will divide society. It is a human decision, rather than a technical one. It is not about perfection but wisdom. Virtue refers to right doing right at the right time and right reason. It is the same law that must be the rule of science in the future.

CRISPR the highest human manifestation of intelligence, which alone is senseless. Aristotle also taught that it is habit and not impulse which leads to good judgment. The next step that humanity ought to take is to create moral strength that would be as powerful as scientific strength. Whether human beings can change is not the issue. The issue lies in the fact whether they should have the power that they already possess.

The path forward is clear. Apply science to cure and not to dominate. Guard use not to subjugate, but to defend. Humanity has never created anything more developed than the mind that restrains and refuses to do so. CRISPR demonstrates what is possible to humans. Ethics demonstrates what they ought to do. Real development starts in a situation where knowledge is used to serve life in a humble manner.