

# "can science be ethical?" by freeman dyson essay sample

[Technology](#)



**ASSIGN  
BUSTER**

Society has entered to the Era of Technology and this technological development has changed the social landscape. The great layer of information and varieties of technology become available now, but the present day situation , marked by such phenomenon as " scientific revolution" means that all technological advantages society is craving for are nothing but ephemerally. Modern Science is a universal factor that crosses national and cultural boundaries." The widening gap between technology and human needs can only be filled by ethics ,, that must be exerted ... by concerned scientists, educators, and entrepreneurs working together" (Dyson, p. 444, 445). In spite of the fact that technology is truly " stateless", there are no cultural boundaries limiting its application, for this reason ethics and ethical issues becomes an urgent need to control and bound science today.

To prove the fact that the science can be ethical exerted by concerned scientists it is possible to speak about biotechnology and cell stem research practice. The controversy of stem cell research concerns the embryonic stem cells that are widely used in cloning. The gap between the needs of a particular person and cloning practice is wide, and applied ethical standards is the only way to guard researchers in cloning industry. Within this field, ethics is defined as the rules of moral values that guide decision making by scientists. These issues concern human embryos, human cloning and consequences of experiments. For instance, " 5-year old would look like a 10-year old and a 10-year would look like a 20-year old, with potential for heart disease and cancer to develop"(Human Cloning, 1998). These experiments violate human rights and dignity, and show that ethical issues

are so important because embryonic stem cells are hard to control, and hard to grow in a reliable way. Scientists deal with the sphere they know nothing about. For this reason, they are a person's fundamental orientation toward life, what a person sees as right and wrong. Ethical responsibilities of a researcher are how its decisions and actions show concern for what is considering fair and just.

Scientific development is described and manifested by a new line of gadgets and products that purportedly make everyday living easier than before, and ethics becomes the only thing to regulate and fill the gap between scientific innovations and needs of our population. For instance, the use of nuclear energy and nuclear power caused great public concern around the world. The events took place several years ago in the USA showed that ethics " can be a force more powerful than politics and economics, when ... the environmental movement closed down factories for making nuclear weapons in the United States from plutonium-producing Hanford to warhead producing Rocky Flats" (Dyson, p. 444). In this case ethics mean more than simply passing moral judgment about what should and should not be done in a particular situation. It is part of the conscious decisions scientists make about the directions and consequences of the decisions. It is a link between morality, responsibility, and decision making. In this situation scientists, educators, and entrepreneurs working together are responsible for ethical decisions and consequences and impact of their studies on the humanity.

Following Dyson, it is possible to agree that " the technologies that raises the fewest ethical problems are those that work on a human scale, brightening

the lives of individual people" (Dyson, p. 439) and requires less strict ethical code than other technological discoveries. For instance, computers become a common thing for millions of people around the globe. Advances in IT hardware and software have made improvements in technology in many fields possible. Advances in PC technology have resulted in the availability of new channels of communication, an increased flow of information, and sharply lowered costs. From the standpoint of a user, additional products are available and costs of PC are reduced.

This technology benefits as poor so rich and does not require strict ethical issues to regulate this industry. The only ethical problem is that in recent years high-tech garbage has become a big concern. The environmental ethics requires clean production and utilization process to be applied to every production and manufacturing process, but it deals more with recycling and waste management than scientific ethics.

In spite of these facts, some researchers suppose that ethics restricts and limits science from rapid growth. They suppose that science cannot be ethical because public, religion and environmental movement has "concentrated their attention upon the evils that technology has done rather than upon the good technology has failed to do" (Dyson, p. 445). They do not take into account such scientific achievements as unique and universal remedies for many incurable diseases including spinal cord injuries, cancer, Parkinson's Disease, diabetes, etc.; cheap nuclear energy at low cost that allows to prevent resource depletion; predicting earthquakes and hurricanes such as Katrina that save life of millions of people around the globe.

Nevertheless, the main ethical concern is that modern science cannot even predict the results of their searches. For mankind it is a real danger to worry about, because we do not know what is waiting for us further more. The weakness of the opposing view is that it is a great anxiety that our population will be faced with the problems we cannot cope with. Actually, such kind of problems took place in Ukraine in 1986, and tragedy of Chernobyl nuclear power station is a vivid example that mankind have not conquered the science yet, and needs a strong ethics to fill the gaps between the needs of humanity and technological development. In gene engineering, " concern has been raised that a black market for embryos would arise"(Human Cloning, 1998).

To conclude, it is possible to say that the wider the gap between technology and human needs the more ethical the science is. Such fields of research as gene engineering and cloning, nuclear power and atomic energy are based on ethics while technology " works on human scale" (Dyson, p. 439) raises less ethical problems. The science can be ethical if all efforts are made to prevent false claims and pressure tactics. A code of scientific ethics is supported and strictly enforced by scientists, educators, and entrepreneurs working together, and becomes a part of science culture. " Self-regulation plays a major role in identifying and controlling errors and misconduct in science" (Bolton, p. 4). If science sees a code of ethics as a window-dressing facade, it will accomplish nothing. The adoption of strict ethics towards controversial researches shows that science is ethical, and ethics helps to maintain high standards in scientific practice and preserve humanity from violation of privacy rights.

<https://assignbuster.com/can-science-be-ethical-by-freeman-dyson-essay-sample/>

## References

1. Bolton, P. Scientific Ethics, Chapter 16. 2002. Available at: [www. com/  
Ch%2016%20Scientific%20Ethics%2006. 10. 02. pdf](http://www.com/Ch%2016%20Scientific%20Ethics%2006.10.02.pdf)
2. Dyson, F. Can Science be Ethical. pp. 438-447.
3. Human Cloning. Available at: [http://www. cs. virginia.  
edu/~jones/tmp352/projects98/group1/how. html](http://www.cs.virginia.edu/~jones/tmp352/projects98/group1/how.html)