

The Ethical Code of the Citizen-Scientist

In the modern age of rapid information transfer and scientific advancement, scientists are faced with an increasingly strong link with society at large and their research. As a result, my personal code of ethics focuses on the role of the citizen-scientist, one who does research but also understands and encourages the link between science and society. My personal code of scientific ethics can be summed up in the following bullet points.

- Perform with honesty and transparency, both with regards to other scientists as well as the public at large
- Engage in research that helps advance society for the betterment of mankind
- Work to encourage science as a means of solving political problems
- Be aware of the links between science and society in terms of funding and possible consequences and work with the public to determine the future of science whenever possible

These points can help one to act as a responsible scientist in the age of interlinked politics and research. Briefly, I will elaborate on each in order to further define why these ideas are important to the pursuit of science.

Performing science with honesty and transparency is more than just a means of insuring one's own success in science. Science itself is based on the combined findings of all those engaged in research, as a result, it depends on the honest presentation of information with the understanding that others will, in the future, base their work on that which has come before. A second aspect of honesty in science has to do with how the public interacts with science and scientists. Without a reputation for honesty and impartiality, science ceases to act as a means for public decision making. Most of us would like our work to be influential in terms of future technical and social thought, each case of scientific dishonesty acts to degrade the trust placed in us by the public. A lack of transparency creates a similar problem. When the public, or other scientists, find themselves unable to see the underlying work done to come to a scientific conclusion, uncertainty is increased in terms of how trusted a conclusion that is.

The goal of science is often seen as the simple pursuit of knowledge, the unveiling of the universe's secrets without concern for how that information is used. In this view, the pursuit of knowledge itself is the only goal. However, despite the romantic appeal of this notion, science is never performed in a social vacuum. All research can have social effects. By recognizing this fact, we can focus our efforts into those areas which will likely benefit mankind. While there is no overriding reason why we should not pursue knowledge for its own sake, I believe we have a deontological imperative to act with society's best interests at heart.

Science is often seen as an apolitical pursuit. However, when political controversies are brought forth, science is often invoked to support the arguments for different actions. As scientists, it is

important to understand that our work, our ideas, will often be used to further political goals. Rather than hide from this, I believe we should encourage scientific thought as a means of solving political conundrums. In order to do so, it is necessary to consider the possible political implications of one's research as well have an understanding of how to communicate with the public about science. This part of my code of ethics strongly encourages scientists to study not only science, but also how to communicate scientific findings to a public audience.

The last point listed in my code of ethics focuses on how scientists and the public should interact. Far too often it seems that scientists view their work as separate from society. In truth, whether being funded by the government via tax dollars or working for a corporation which desires research for certain outcomes, the pursuit of science is linked to the public at large. Furthermore, due to the speed at which information can now travel around the globe, it is likely that any scientific advancement will be put to use sooner rather than later. By recognizing these links between science and society, scientists can further act and plan to support the use of their research for the betterment of mankind.

At the end of the day, I view scientists as members of society with special responsibilities due to the nature of their jobs. Few other professions offer the same chance to form society. Whether through creating new technologies which define how society will function or acting as presenters of expert information to influence political decision making, scientists find themselves saddled with unique responsibilities in the modern age. Through keeping in mind the code of ethics outlined above, I hope to act as a more responsible and involved scientist. With any luck, codes such as this will encourage others to do the same.