

2008 National Citizens' Technology Forum on Human Enhancement, Identity & Biology Arizona Panelists' Final Report

Introduction:

It is the belief of this group that NBIC technologies present important challenges and opportunities that we must face; we have the utmost confidence that facing them will lead to a better future. The multidisciplinary spectrum of these technologies is so vast that special attention should be paid to the implications, benefits, and risks of human enhancement as a rising field of research and development. The ethical, social, economic and political consequences of NBIC technologies will be present in everyday life. Special care should be taken to avoid excessive prudence or reckless adoption. Our decisions now will affect both the present and the future of humanity and life.

We are excited, as well as concerned, about improved quality of life for all people. Because we are at the beginnings of these converging technologies, it is important that we are proactive in our asking of questions. The answers will most likely lead to a bright future!

Socio-Economic:

The socio-economic repercussions of the adoption of NBIC technologies are several. Some of them we can envision; many more we cannot. These repercussions can range from the aggravation of existing racial, social and economic divides, even to the creation of new ones. It carries the possibility of eliminating some current societal and economic problems to the creation of new ones. However, in presenting and adopting these new developments we should aim to maintain the ideals that allow the individual to become who she/he strives to be, and safeguard the values of liberty and free will, and the pursuit of happiness.

We believe that all people regardless of race, creed, color, or economic status should have equitable access to the benefits of these technologies. The information about these technologies must be presented to the public in terms that will allow understanding of the concepts, benefits and risks, so as to lead to informed decisions.

We are concerned that under-represented and/or minority groups (e.g., Native Americans) will not have a say in the decision-making processes of these technologies, and that their voices of concern will be ignored.

Discrimination towards an individual, race, class, faith, etc., should be prevented regardless of the degree to which they have adopted NBIC technologies.

The future of NBIC technologies should rest with the needs of advancing humanity past the scourges of the human condition. These include poverty, disease, and manual labor. The direction should be bound by the concerns of the public.

Finally, citizens of the world want more information shared by the media, government and industry to advance awareness.

Safety:

We encourage the development of international safeguards and standards for all human enhancement technologies for both public and private sectors. We are concerned about who can be trusted, where reliable information can be found, and who is going to assure human and environmental safety now and in the future. We are also concerned that the “government” regulates itself and there is no oversight of that process. For example, atomic energy sites and old military bases are now “Superfund” sites because of the environmental cleanup costs – the government created a problem and is now responsible for toxic environmental cleanup.

There is a need for the creation of a regulatory body composed of experts from a variety of fields, e.g. ethicists, chemists, etc. Its responsibilities would be the oversight of NBIC safety and efficacy. Its accountability would lie within itself as a regulatory body, the government, and the scientific community. However, regulations from this body or the government should refrain from instilling fear or instituting regulations out of fear.

Human Identity:

We believe in an overriding sense of both individuality and personal identity, and an environment that nurtures free will, in which each person has the right to use or refuse enhancement. It is important to safeguard the ideal that every individual is in fact a unique and sovereign entity in his or her own right. We should also strive to protect and respect the sanctity of the idea of an individual, unique, soul. Mortality is important to the human identity, yet the desire to improve the quality and length of life is also part of the human identity.

Regarding the debate of restoration vs. enhancement, we are divided in opinion. Some of us would like to see an adjusted bell curve implemented as a standard for normalcy. The adaptation of the bell curve would work not as a definitive statement of identity but as an establishment of when a person is either submitting to a restorative treatment or an enhancement procedure.

Others of us fear the use of an adjusted bell curve skewed in favor of enhancement as the new standard of normalcy. Implementation of this adjusted bell curve can lead to a new human identity that is fabricated by a societal obsession with enhancements.

Some of us are concerned that the personality, spirit, and identity of the individual will become altered and/or distorted.

Government:

We, citizens of the world, are inherently responsible for the roles of our governments in participating with the global NBIC market. Active awareness of the decision-making process must be made transparent and accountable to the global community. We are concerned that the United States citizens are not involved in or truthfully informed of the appropriation of federal funds used for research and development of NBIC technologies.

Environmental:

NBIC technologies should be used to find new environmental solutions to both new and old environmental problems, e.g., medical and biological waste. These externalities should not adversely affect the sanctity of life. In addition, we are concerned that we don't have adequate knowledge about, or means of disposal of, "waste" produced by NBIC technologies. For example, nano waste particles are so small they can easily contaminate the whole environment without anyone's knowledge. Another example is recycled drinking water causing negative effects on the human system. We are concerned that these types of technologies will upset the natural order of the planet, people, plants and animals, including life cycles and food chains.

Development issues:

Regarding development of NBIC technologies, we believe in the following:

- We should depart from a tendency and custom to legislate, enforce and regulate out of fear. The evolving technologies should be allowed to grow and not be choked by regulatory concerns.
- Funding should remain both public and private to avoid monopolies.
- Human enhancement technologies need to be more understandable to non-scientists.
- We are concerned that the accessibility of this technology will be easily available to terrorists, black market labs, and/or other individuals with the intention to harm others.
- We are concerned that only a select few will benefit from NBIC technologies due to how accessible they will or will not be.

Health:

We are on the cutting edge of an exciting and wonderful health revolution for the advancement of humankind. The goals of these technologies should be prevention, treatment and cures over enhancement, and prioritizing humanitarian gain over special interest gain.

However, we still have some concerns. They are:

- prolonged exposure to NBIC in the body;
- risks of dehumanization as a result of NBIC;
- people living longer will further stress current planetary resources;
- a society filled with artificially enhanced individuals may become dependent on the medical profession;

- Immortality should not be a goal of NBIC health advancements lest it eliminate the meaning of living.

Regulatory Challenges:

We are concerned about who makes the rules, the qualifications of the rule-makers, and their accountability to the general public.

What makes NBIC technologies challenging from a regulatory standpoint:

- Permanence and dependability
- Enforcement and oversight
- Unforeseeable repercussions
- Limited understandings
- Widespread effects
- Generational effects
- Endangerment of organisms
- Maintaining safety and effectiveness without stifling progress and innovation

We are concerned about secret government infiltration and the invasion of privacy with these technologies. For example, 1) injecting nano tracking devices into humans to track their every move; 2) big brother watching and controlling the masses; 3) government directing where money goes against public interest.

Conclusions

The new and unique challenges presented by nanotechnology creates a need for new and unique safeguards and procedures to both protect and preserve a new and better quality of life for generations to come. We recommend that governments cooperate on a global scale. We would like to suggest the creation of a new regulatory and investigative bi-partisan committee which includes citizens, natural and social scientists, ethicists, philosophers of science, and governmental officials. It should be the responsibility of the government and individuals to be informed of the current state of affairs of NBIC technologies, hold industry accountable, and promote active decision-making and participation in the advancement of NBIC technologies.