THE TECHNOLIFE METHOD

The TECHNOLIFE method maps ethical issues at early stages of S&T and represents social imaginaries relating to these issues. It is a suite of exploratory, qualitative and quantitative steps:

1. A scoping exercise that defines **hot topics** in relation to the technological fields. Hot topics are issues of concern that involve unsolved social, moral or political tensions and that are immature for regulatory definition and resolution.

2. Deliberation within **KerTechno**, our specially designed online open-source software in which citizens and stakeholders discuss the hot topics. The purpose of the deliberation exercise is to elicit arguments, concerns, imaginaries and alternative frames of understanding with respect to central policy issues seen in the light of broader cultural developments.

3. An online KerTechno **voting system**, allowing for quantitative analysis of results.

4. A qualitative, analytical procedure that identifies the **arguments, concerns, imaginaries and alternative frames of understanding** elicited by the participatory exercise and defines their relation and relevance to early stages of S&T and policy development.

Both the theoretical framework underlying it and its balance between approaches are essential features that give TECHNOLIFE its innovative character and robustness.

EUROPEAN COMMISSION

7 CAPACITIES

TECHNOLIFE is a research project on the ethics of emerging science and technology, coordinated by the University of Bergen. Its partners include Univ. of Copenhagen, Lancaster Univ., Univ. of Manchester, Univ. de Versailles-St.Quentin-en-Yvelines, Univ. of Tartu, Univ. Autònoma de Barcelona and EC-Joint Research Centre (Ispra, Italy)

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TECHNOLIFE on YouTube:
http://www.youtube.com/TechnolifeDebate

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Citizens as Informed Debaters about Human Enhancement and Body Modification

TECHNOLIFE: Ethics with People Key Results

techn01ife

HOT TOPICS

In the academic-ethical literature on **human enhancement and body modification** one can find some key controversies: About the body (its **stability/malleability** and its normative significance); about what should **count as enhancements**; about the importance of **justice** and **equality** in the distribution of enhancements; and about the **choice of moral and political theory**. Science fiction literature offers an even wider range of issues, such as:

Issues	Ethical concerns
Social	**Control:** Order and violence, surveillance, xenophobia, security, cheating, autonomy and freedom, colonization, eugenic selection
	Distinctions/inequality: Gender, class, marginalization of the (non-)modified
Identity (individual)	Identity/memory loss, borders of humanity, split personalities, human/non-human rights (animals, androids), individualism, privacy, moral enhancement, loyalty, safety, freedom
Immortality (life-span)	Overpopulation/depopulation, intergenerational disorders, extinction (loss of adaptability), evolutionary transcendence

For our TECHNOLIFE deliberation on enhancement and body modification, the following hot topics (see reverse side) were chosen:

a) **Normality versus Perfection**
b) **Freedom of choice and social difference**
c) **Forever young**

The topics were presented in a short movie: http://www.youtube.com/watch?v=STiuB7nQn1w

The **online debate** with citizens was a **success**. There was considerable activity, and it exhibited **real in-depth engagement** with the issues being debated. Importantly, two frames of understanding emerged:

1) **Social justice, power** and **voluntariness**
2) New aspects of enhancement technologies can be seen if they are understood both as biotechnologies and as **analogous** to ICTs, using concepts of **open source, sharing and connectivity**

"The introduction of computers in our lives, mostly inadvertently, changed the evolution of science. Every kid had a go at programming; and as we now know lots of them cracked it very well and brought in changes that the conventional powers have never imagined. I would like to think of the coming biotechnology revolution in this vein too; something that is highly participation based; not something that is done in ivory towers", (evrana, TECHNOLIFE Forum participant).

IMPROVEMENT AND EXPERIMENTALITY IN HIGH-TECH CULTURES

Academic debates about human enhancement often turn around the high-flying positions of "transhumanists" and "bioconservatives". This focus could cover up important underlying issues. **People already use a number of enhancements** for their everyday lives. High-tech cultures are long-since deeply invested with imaginaries of improvement and experimentality. Debates over human enhancements are not just about "the next gadget"; they are also about **how we live and want to live with science and technology in society**.

ENHANCING THE DIGITAL AGORA

Citizens want to be involved. Many see a non-commercial "**open source**" pathway as an interesting and viable option for enhancements, also as a counterweight to the power of corporate and state actors.

For European authorities, the **policy challenge** is to develop institutional arrangements that can accommodate the **transformation** from a centralised and reactive mode of governance **to a truly participatory and proactive mode**. In the case of enhancement this means more than debate: **Citizens** should be engaged as **co-producers of enhancement knowledge and technologies**.

… I personally have a lot of issues with our current social structure. The hoarding of wealth that has come with our Agricultural Revolution, and the tiered social hierarchies that developed to direct such a lifestyle both will need to change in order to establish a more stable and peaceful future, in my opinion. ("Midare", TECHNOLIFE Forum participant)