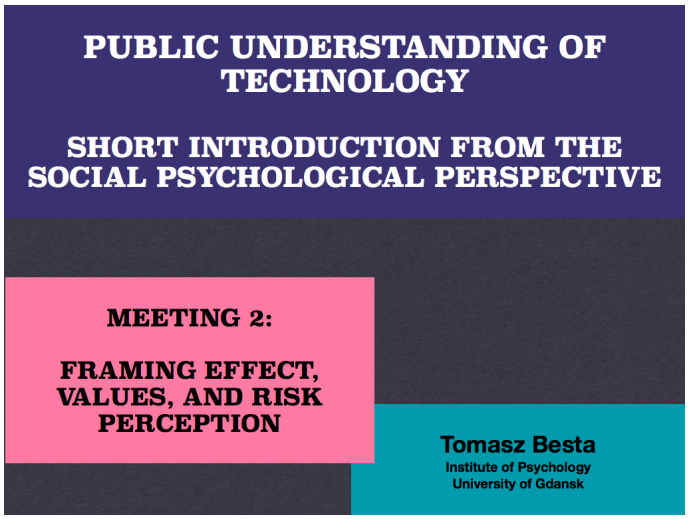

Meeting 2

Framing effect, values, and risk perception

Social representations, which we discussed in the previous section, are also related to **people's values, predominantly according to one's cultural context**. Values could be understood as **guides for people, and people base their decisions on them**. Values that people highlight (e. g. tradition, authority, self-development) indicate those areas of life that are **most precious to individuals.** Values can be defined as **broadly articulated goals in life, the function of which is to direct activities and attitudes**.

In the area of technology perception, previous theories link cultural values to risk evaluation. For example, the **Cultural Theory of Risk Perception, proposed by Douglas and Wildavsky,** assumes that, based on the values most important to people, we can group individuals into four main categories: 1) egalitarians, 2) individualists, 3) hierarchists, and 4) fatalists. **According to this theory, people with egalitarian attitudes are more sensitive to the risks associated with technology and the environment. More individualistic-oriented people are more concerned about the possibility of the outbreak of wars and threats to trade and financial markets.**

People who are hierarchy-oriented are sensitive to violations of rules, laws, and social order. In contrast, people who are fatalists demonstrate a lack of sensitivity to these risks.

Results of other studies on the role of values suggest that values may be important predictors of the one's level of anxiety

and risk assessment. For example, studies on the **Schwartz Theory of Basic Values** showed that values, which emphasize the importance of tradition, social conformity, and security, were related to the expression of concerns related to various social and natural phenomena. In addition, individuals who exhibited a high level of conservation values had greater concerns about contagion during the **H1N1 influenza pandemic.** Similarly, conservative values were associated with the perception of greater risk associated with earthquakes in Japan.

Besides this direct influence of people's values on their evaluations of risks and technologies, values also shape interactions between people. As I mentioned in our previous meeting, we all live in an information bubble. We tend to interact with people who have values and beliefs similar to ours. This information bubble has an effect on the **cognitive frames** we use to evaluate social issues. **Thus, the way the issues or technology is presented to us (by other people, media, and so on) could be very selective and frame our understanding of this phenomena.**

The framing effect is also related to the practice of presenting information about something or someone (an issue or a person) in a specific context so that viewers or listeners will draw the conclusions that the person who presents the information **wants them to have**. People tend to evaluate objects by comparing them to easily available anchors, that is, to the context in which the object is presented. This context, or frame, **could change the viewers' perceptions without altering the facts**.

Let us take a closer look at an internet hoax that nicely illustrates the framing effect. A group of people presented themselves as activists fighting a harmful substance named dihydrogen monoxide (DHMO). They presented this chemical substance as very dangerous for people and the environment. For example, they described it as a major component of acid rain and a cause of the erosion of natural landscapes and of severe burns in people. They said it is used in the distribution of pesticides, and so on. The facts used to describe DHMO were selectively presented but were true. The problem is that in this in this joke, the group omitted the positive aspects of the substance. For example, they failed to mention the fact that **there would be no life as we know it** without it. This hoax was an example of the framing effect, through which even the

Dihydrogen monoxide:

- Is also known as hydroxl acid, and is the major component of acid rain.
- Contributes to the "greenhouse effect."
- May cause severe burns.
- Contributes to the erosion of our natural landscape.
- Accelerates corrosion and rusting of many metals.
- May cause electrical failures and decreased effectiveness of automobile brakes.
- Has been found in excised tumors of terminal cancer patients.

substance commonly known as **water** can be presented as an evildoer.

People's tendency to base their judgments on context is known as an **anchoring heuristic**. Social representations and naive theories related to technologies and science, spread by media and by people from our "social bubble," can **work as frames, anchors for interpreting what is good and what is bad.**

Recommended future readings:

Listerman, T. (2010). Framing of science issues in opinion-leading news: international comparison of biotechnology issue coverage. Public Understanding of Science, 19(1), 5-15. doi: 10.1177/0963662508089539

Schütz H., & Wiedemann P. M. (2008). Framing effects on risk perception of nanotechnology. Public Understanding of Science 17(3), 369-379.

Schwartz, S. H., Sagiv, L. & Boehnke, K. (2000). Worries and values. Journal of Personality, 68, 309-346. doi: 10.1111/1467-6494.00099

Stern, P. C., & Dietz, T. (1994). The value basis of environmental concern. Journal of Social Issues, 50(3), 65-84. doi:10.1111/j.1540-4560.1994.tb02420.x

Xue, W., Hine, D. W., Loi, N. M., Thorsteinsson, E. B., & Phillips, W. J. (2014). Cultural worldviews and environmental risk perceptions: a meta-analysis. Journal of Environmental Psychology, 40, 249-258. doi: 10.1016/j.jenvp.2014.07.002