## **EDITORIAL**

The relation to time, the relationship of continuity and change, tensions between the desire for security, the fear of uncertainty and the desire to exploit the potential for shaping the future are a constant background theme of societal debates on the future. Some of these debates reveal a longing for certain things to be fixed once and for all, i.e. to be finally decided on and governed. A good example is the phase-out of nuclear energy which its supporters would love to make irreversible and binding for all times. Similar, maybe not as massive, is the situation with the ban on food from genetically modified plants and animals. Or, in a completely different direction, think about the desire for a "final", i.e. irrevocable, cessation of historic hostilities between neighbouring countries. Phrases like "there must be an end to ..." or "never again must ..." are the verbal expression of the desire to hold on to something which, please, should not be questioned anymore.

However, the desire for finality is limited, at least in two directions. On the on hand, it is one of the basic principles of democracy that anything which is decided by politics can always be decided otherwise again. The reversibility of decisions, e.g. in the course of a change in the majority situation, belongs to the central and legitimising characteristics of democracy. In this respect, there is no prospect of e.g. cementing the nuclear phase-out for all times.

On the other hand, the desire for timeless finality conflicts with the uncertainties of knowledge about future developments. Estimates may change due to new knowledge, and things that are today considered and desired to be final and binding may look different in the future in the light of changed knowledge and may suggest other consequences.

This brings us to main topic of this issue, which is about the final disposal of esp. highlevel radioactive waste. Already the term "final repository" suggests the desire for finality. But depositing the highly dangerous wastes in a final repository, locking them up, and – metaphorically speaking – throwing away the key, hopefully forgetting where it is – is this not Utopia, associated with the longing to get rid of it and, finally, forget about it? Yet, precisely because it is known, without any uncertainty, for how long these wastes will produce radiation and thus pose a potential danger to humans and the environment, this could motivate the desire for "final" final disposal.

The democratic problem of creating such finality is evident in the German debate on a final repository. If there are diverging political positions and majorities change every few years, then there will be no clear problem-solving strategy. However, what leads us to the main topic of this issue is the second obstacle to "finality expectations": the uncertainties of knowledge. Here, reliable and continuous monitoring over some time after sealing and closure of the repository may provide some relief: In case of unexpected developments, this would allow modifying or even changing decisions already taken. This could go as far as the retrieval of wastes from a repository. Of course, the technical challenges alone are enormous and so would be the social and political embedding of such kind of monitoring and of possible decision processes based on it. There also seems to be a conceptual challenge which is to implement a "pretty final" but not "really final" final disposal. Anyway: in its linking of technological and social as well as governance issues, a challenge for technology assessment!

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