



Can today's decisions really be future-proofed?

The impact of long-term policies on future generations will differ over time, and policymaking should take this into account, argues Céline Kermisch.

The concept of 'future generations' is common in research and policymaking in fields that take a long view, such as energy and the environment. It is typically used to invoke an ethical dimension. But to whom do we refer when we speak about future generations? This question is not often asked, and even less often answered.

We need to define future generations carefully. Failure to do so leads to severe and potentially damaging shortcuts in deciding the legacy we choose to leave and debating its potential effects.

A good example is the discussion of radioactive-waste management. Here, future generations are considered as a unified group of people: every generation that follows ours, with no attempt to constrain them by time. So, in talking about nuclear waste, the consideration of future generations mandates us to plan for the entire period that the material will be harmful — up to a million years, according to some estimates.

That timeframe includes our grandchildren and those people — or other forms of life — who will share our planet hundreds of thousands of years from now. From an ethical point of view, it is meaningless to pretend that this is a homogeneous group for which nuclear-waste policies will have the same impact. And trying to treat it as such distorts policy.

One of the most important decisions to make when we plan what to do with our nuclear waste is whether we give people in the future the ability to overrule our decision and choose their own strategy. In a few thousand years, for example, a perfectly safe solution could be available. That argument demands that we put the waste somewhere from whence it can be retrieved. So, if we choose — as most nations have — to dispose of it in underground facilities, the ethical attitude towards future generations implies that we should not permanently seal off these disposal sites.

At first glance, this strategy respects the autonomy of future generations and so is ethical. Take a closer look, however, and there is a point in the future when this ability of our successors to choose their own option becomes irrelevant. That autonomy benefits only those who know and remember that the waste is down there. Given that we struggle to answer questions about lost human civilizations from just a few thousand years ago, humility demands that we assume that knowledge of the location of disposed-of radioactive waste, and how to handle it, could be lost some time in the next million years.

The French nuclear-safety authority assumes that this memory loss will not happen for at least 500 years. But clearly, much could happen between the years 2500 and 1002000. Some advocates of retrievable waste options claim that

future generations will simply seal off the disposal before the memory is lost. Even if this is true — and we have no way of knowing — it does not solve the ethical problem of assuming that all future generations can be treated in the same way. In this case, the advantages of retrievability are relevant only to those generations alive before the disposal site is sealed.

This example shows that it makes no sense to talk of 'future generations'. We should instead refer to two groups: 'close future generations' and 'remote future generations'. How we define these groups depends on the problem being assessed. For radioactive-waste management, remote generations are defined as those that have forgotten that the waste is there. The exact time in the future at which the memory is lost is not a relevant question here. We assume it will happen, and plan accordingly.

Addressing impacts on future generations in this way questions another claimed benefit of keeping nuclear waste retrievable — that the ability to monitor and maintain disposal sites is keeping them safe. But, given that it applies only to close future generations, the number of people protected by this policy is much smaller than is generally assumed.

The same is true when talking about the security of the waste. Sealing off disposed radioactive material so that nobody — including terrorists — could access it protects fewer people than we might imagine. For remote future generations, the security risk evaporates — everybody, including those who would use it for malevolent reasons, has forgotten that it is there.

Just as there are intergenerational trade-offs between us and future generations, so there are similar conflicts between close and remote future generations. This applies to a range of long-term issues with impacts that vary with time. For instance, when analysing the funding of nuclear-waste management from an ethical perspective, it is relevant to distinguish between generations that benefit from nuclear technologies and those that do not.

This distinction could also be used to inform ethical debate on other long-term problems, including climate change. Remote future generations could be, for example, those that live in a world in which the average temperature increase has surpassed 3 °C and sea levels have risen by a set amount. Their needs are then clearly framed as different from those of close future generations, which could remain fixated on trying to prevent a 2 °C rise — or persist in arguing about whether the threat of global warming is real. ■

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