



Long Term Responsibility

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1. Bearing responsibility is one of the things that make us human. We take on responsibility in the family, in our profession, and in society. We bear responsibility for people that we meet and for the institutions in which we live. We bear responsibility for the ideas upon which the institutions are based: for instance, for freedom, for justice, for democratic structures. And we bear responsibility for what – beyond our own world, the world that we make – bears us: for Nature – as creating and created nature, *natura naturans* and *natura naturata*, as the Ancients said. In Aristotelian physics nature was always *natura naturans*; in Plato's cosmology *natura naturata* was made by a powerful demiurge, who was to become the Creator in Christian thought. In as much as we bear responsibility – here for the world – we also take on obligations.

Responsibility and the obligations that ensue upon it are not limited to the respective present. This distinguishes it from that kind of responsibility, which we assume only temporarily for an action and from obligations that end with an accomplished purpose. These are long-term, and, if we think in generations, they involve future generations, especially their conditions of life. When we mean this kind of responsibility and these kinds of obligations, we speak of *long-term responsibility*. What makes this so special? – And what makes it a problem when we think about it more rigorously? The answer is simple. Thinking two or three generations ahead, be that in individual or institutional relations, is still very concrete, and we can reckon with constant environmental conditions. By contrast, thinking more than two or three generations ahead, or even skipping over a chain of generations into future centuries is abstract; we must assume relations that are unknown and cannot be predicted. Two aspects should be emphasized.

First: In the case of long-term responsibility, the obligations that are entered into with this responsibility do not stop at a particular generation. A thought experiment can make this clear.[i] Suppose that there are rights (whatever their content) that we recognize for *all* humans: can this recognition be taken to be time-limited and valid only up to a generation *k*? On the assumption that certain rights, for instance, the basic human rights, are taken to be time-limited up to generation *k*, then it would follow that the generation *k+1* is denied these rights. And thus there would be people whose rights must be denied. This consequence would contradict the assumption that there are rights that apply to all. But human rights do not expire. There is thus no generation at which the extension of the obligation, for instance, the preservation of human rights, ends; thus, some obligations are unlimited. In other words: The termination of a long-term responsibility would be an arbitrary decision and would violate the principle of *ethical universalism*. This is accepted by more or less all ethical systems, in particular by obligation ethics such as the ethics of Immanuel Kant with its categorical imperative. In ethical universalism, a common will to consider one another in actions as ends in themselves and not merely as means to particular ends is assumed (even counterfactually).[ii] This includes future generations.

Secondly: Assuming the existence of an unlimited (unlimitable) long-term responsibility, the question arises, whether such a responsibility exists in the same way and in same measure with regard to all generations. This is not the case. The reason is that we do not know what the life-world of a future generation *k* will be like. We therefore do not know what we should do or not do in regard to that generation. We know this in regard to the generations that share, or foreseeably will share, our life situation; the generations of our children and grandchildren. Thus the obligations with regard to distant future generations cannot be the same as with regard to near generations. Or in other words: “the binding character of an obligation regarding temporally closer generations should be weighted more heavily in comparison to those regarding more distant generations”[iii] without thereby violating principles of an ethical universalism.

Assuming even minimal anthropological constants, there are still some elementary obligations towards distant future generations that can be identified. Among these are precautionary care for clean water, healthful nourishment, stable conditions of reproduction, energy, biological and cultural variety. Thus in the case of securing sufficient energy resources, we must avoid an irreversible exhaustion of raw materials, and therefore energy research which keeps open all options, including nuclear energy, and an economy of resources that deals carefully with non-replaceable raw materials belong to the most important tasks of humanity with regard to future generations. This includes also the securing of sufficient research resources, for example, in solar research and research on nuclear fusion.

The same applies to danger prevention that affects both current and future generations. One example is climate research, that is not driven only by a scientific knowledge-interest but also by tangible problems whose solutions are of existential importance for both those living now and, to a much more dramatic extent, for future generations. This does not presuppose a more exact knowledge of the life conditions of these generations. What is important is only that the life spaces of future generations or the corresponding options are not restricted in an irreversible manner (keyword: rational economy of resources and preservation of biodiversity, that is, diversity of species, genetic diversity, and diversity of ecosystems). This holds as well for purportedly simple precautions such as safeguarding and marking dangerous waste repositories. The question is, for instance, how the supervision of repositories for highly radioactive nuclear waste can be assured for the next thousand years, whereby it may be assumed that the appropriate documentation and its observance cannot be dependably guaranteed for more than hundred years. In general: Precisely by every generation's doing the obvious, that is, passing on the earth to the next generation as they themselves found it, perhaps even a little better and more stable, they will secure the future of humankind for an incalculable time and comply with their responsibility in the sense of long-term responsibility as well.

2. The problems of a long-term responsibility are discussed today using the concepts of *sustainability* and *intergenerational justice*. The concept of *sustainability* dominates the environmental discussion, and the concept of *intergenerational justice* dominates political rhetoric. Both concepts deal implicitly with long-term responsibility even though these concepts are not at all clear from the start – and even increasingly lose what clarity they had.[iv] Thus, the concept of sustainability is meanwhile used in a downright inflationary manner. Compared to its original meaning in forestry (the obligation to plant saplings to replace felled trees) this concept, especially when used simply in the sense of 'enduring', has to a large extent lost its authentic meaning. Sustainability is demanded everywhere, for instance, in entrepreneurship, in the construction industry, in financial policy, in the areas of health and energy. It is hard to understand what sustainable health care, sustainable energy consumption is supposed to be. The precise meaning of the concept of sustainability dissolves itself to a large extent in an increasingly metaphorical use, which simply means lastingness.

The same applies to the concept of intergenerational justice. This deals with a real exchange relation between generations that stand in direct connection with one another; when applied to distant generations, it loses its meaning (no questions of distribution are raised here, but rather only questions of predictability and of the consequences of present decisions for distant generations). Hence, in both the case of the concept of sustainability and the concept of intergenerational justice, the real *normative* meaning, which is given with the concept of long-term responsibility, is pushed into the background although the point is precisely to take responsibility and to enter into the corresponding obligations. We could then recommend replacing the two concepts with the concept of long-term responsibility. For the issue is not primarily one of economic and ecological questions, the answer to which is rather a means to an end. This end becomes concrete in an ethics of long-term responsibility.

3. Science, which deliberately takes on tasks of responsibility and the corresponding obligations, assumes a *moral form* and becomes a moral subject. This seems to collide with a principle that, within science and with regard to science, is called the principle of *value freedom* and has been held to be a constitutive principle of scientific work as such ever since the sociologist Max Weber. According to Weber, normative foundational efforts in scientific theory formation are inevitably ideological, and at the same time the scientific character of such work can be defined without recourse to normative elements.[v] Science, according to this principle, would be – free of normative limitations – committed solely to ascertaining facts. This presumably excludes moral aspects as well, such as those that are given with the concept of responsibility.

Now freedom and responsibility are difficult concepts, not just in the context of science and research.[vi] Hence, the concept of responsibility, in the opinion of many scientists, belongs to the vocabulary of the unfree. But this is mistaken. Freedom, rightly understood, is always *responsible* freedom; otherwise it is arbitrariness. Wherever a claim is made to freedom of research and science, this freedom must be related to structures of responsibility. There are two reasons for this. First of all: science bears responsibility towards itself for maintaining scientific standards. Among these standards are such norms as testability, reproducibility, and credibility. These norms are not merely methodological in nature, they are also *ethical*. Secondly, science bears responsibility with regard to society for two reasons: because of the essential uncontrollability of scientific knowledge by extra-scientific knowledge, and because of the dependence of modern society on the special competence of the scientific understanding. Connecting up to what has been said about long-term responsibility, this is at the same time a responsibility and an obligation to humanity as a whole.

This responsibility holds with respect to institutions and to individuals. With regard to institutions it holds to the extent that science as a whole takes up long-term responsibility, and with regard to individuals it holds to the extent that the individual scientist is involved. The point here is the *ethos* of science and of the scientist,

and thus we have to do with the moral form of science. *Ethos* is to be understood as a living form in which an institution (here science) and the individual (here the scientist) enter into normative relations (here norms of responsibility and the corresponding obligations). This can, in the rightly understood sense of a long-term responsibility directed towards science, be formulated as a *research imperative* or *commandment*: *Let yourself be guided by the thirst for the new and the will to know what innermost holds the world together, but remember that it is no lesser goal to hold that world together with what you do in research and development.*

END NOTES

[i] The thought experiment of H. Hofmann (*Rechtsfragen der atomaren Entsorgung* Stuttgart: Klett-Cotta 1981, pp. 267ff.) is cited as summarized by C.F. Gethmann, "Langzeitverantwortung als ethisches Problem im Umweltstaat", in: C.F. Gethmann *et al.*, *Langzeitverantwortung im Umweltstaat*, Bonn: Economica-Verlag, 1993, p. 9.

[ii] See F. Kambartel, "Universalitaet (ethisch)", in: J. Mittelstrass (ed.), *Enzyklopaedie Philosophie und Wissenschaftstheorie*, vol. IV, Stuttgart: Metzler, 1996, pp. 414-415.

[iii] C.F. Gethmann, "Wer ist der Adressat der Langzeitverpflichtung?", in: C.F. Gethmann and J. Mittelstrass (eds.), *Langzeitverantwortung: Ethik Technik Oekologie*, Darmstadt: Wissenschaftliche Buchgesellschaft, 2008, p. 14.

[iv] See C.F. Gethmann and J. Mittelstrass, *Langzeitverantwortung* (see footnote 3), pp. 7-8. See also, for a long lasting debate, D. Birnbacher, *Verantwortung fuer zukuenftige Generationen*, Stuttgart: Reclam 1988; D.P. Callahan, "What Obligations Do We Have to Future Generations?" in: E. Partridge (ed.), *Responsibilities to Future Generations. Environmental Ethics*, Buffalo N.Y.: Prometheus Books, pp. 73-85; M.P. Golding, "Obligations to Future Generations", *The Monist* 56 (1972), pp. 85-99.

[v] See M. Weber, *Gesammelte Aufsaetze zur Wissenschaftslehre*, ed. J. Winckelmann, 3rd edition, Tuebingen: Mohr, 1968, pp. 601-602.

[vi] See J. Mittelstrass, "The Moral Substance of Science", in: *The Cultural Values of Science (Proceedings of the Plenary Session 8-11 November 2002)*, Vatican City, 2008 (*Pontificiae Academiae Scientiarum Scripta Varia* 105), pp. 179-187.