

Sustainability

NB: This is a translated and slightly modified version of the encyclopedia entry:

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Although the German word 'Nachhaltigkeit' is generally translated with 'sustainability', the history of the two terms differs.

Abstract

The key question of the article is what sustainability ethic demands from us (if anything at all). Starting with a brief description of the discourse about sustainability/sustainable development the article suggests that the imperatives of sustainability ethics are not easy to identify. In a first step one could take up the common opinion that the person who protects the environment acts morally in the sense of sustainability ethic. However, this would ignore the three-pillar model and thus the change in meaning that the term pair sustainability/sustainable development has experienced. In a second approximation one could conclude that sustainability ethics must be understood as the sum of the postulates of environmental, economic and social ethics - but this fails because these three domain ethics negotiate different objects that are incommensurable.

Opening up a new perspective, the article turns to the possibility that sustainability/sustainable development has become a primarily axiological category in recent years, not an ethical one. If this holds then it would be a category mistake to try to come up with ethical duties. It seems that axiology (not ethics) is a more appropriate category.

Indicators (that define sustainability) undoubtedly belong to the discourse on quality of life, not to the discourse on ethics. Instead of, "What should I do?" the question is reversed into: "What can the state (and the international community) do to make me and my kids have a good life?"

Definition and history of the term

The terms "sustainability" and "sustainable development" have become popular across the world in a very short space of time: the major world conferences in the past few decades have focused on them, they have been incorporated in international treaties, coalition agreements at federal and state level have made them the guiding principles of government policy, and many countries have enshrined them in their constitutions.

Despite - or precisely because of - this rapid career, no agreement has been reached on the meaning of the two terms. It seems as if nothing is as popular as talking and writing about sustainability and at the same time nothing is as hopeless as trying to define the term in a way that is capable of consensus and generally binding (cf. Jüdes 1997, 1).

This critical diagnosis refers to the use of *scientific* language. The often unintentionally funny *colloquial* use of the term ("Nature was sustainably destroyed by the oil spill") is not the subject of this article.

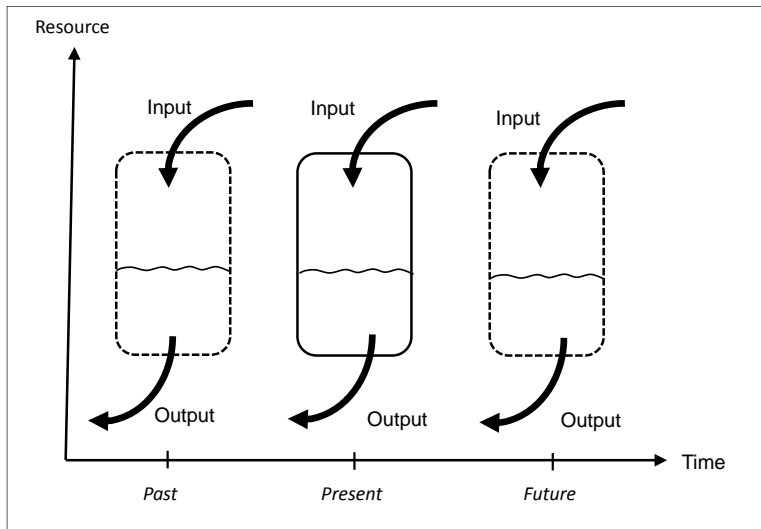
A virtue is sometimes made of necessity, and then a precise definition is explicitly rejected. "The fact that this concept," writes Karl-Werner Brand "has quickly advanced to become a central model of the international debate is essentially due to the fact that it is diffuse enough to ensure a broad normative consensus with very different ideas about the way in which it should be implemented. Conceptual precision would have just taken away the concept's model potential" (Brand 2004, 37).

An important criterion for clarifying for clarifying the definition of these terms is their original meaning. The Duden dictionary explains the etymology of 'nachhaltig': it is a derivation of the now outdated noun 'Nachhalt', which is synonymous with something that is stored for times of need. One of the first texts in the German-speaking world where the word is found in connection with resource management is the *Sylvicultura Oeconomica* published by Hans Carl von Carlowitz (1640-1714) in 1713. The German term 'nachhaltig' (sustainable) was first used with regards to forestry, where it meant that only as much wood should be harvested as would grow back. The forest - in its yield function, not as an ecosystem - should be preserved for future generations.

Since the end of the 1990s, 'nachhaltig' has been uniformly translated into English as 'sustainable' in the German literature. The stem of the English verb (as well as of its French counterpart 'soutenir') goes back to the Latin verb 'sustinere', which means to endure, to maintain, to bear, to support, to preserve. However, 'sustainable', unlike the much older English word 'sustained', did not become established in the English language until the 1980s. In the case of 'sustainable', a process is identified that promises the same stable return in the future, whereas in the case of 'sustained', the development to date is assessed. Under the term 'sustained yield', the principle of careful management has been applied in English-speaking countries for several centuries to the use of forests and other natural resources (e.g. fisheries) at the local level.

The upshot so far: the etymological significance of 'sustainable' refers to an intertemporal-static equilibrium, i.e. the decrease of a renewable resource through human intervention is as great as its increase per period thanks to (natural) regeneration. This notion of sustainability did not include any idea of growth in the long run.

Fig. 1: Sustainability as an intertemporal-static balance



This concept has also been used since the end of the 1990s by economists for financial matters. In the case of violations of the principle of 'financial sustainability', such as when the state spends more than it earns, a 'sustainability gap' is identified.

The Brundtland report and the birth of sustainable development

Brand and Georg Jochum regard 1987 as the year in which the term 'sustainable development' was first used (Brand/Jochum 2000, 20). The compound English term was variously translated as into German in the 1990s ('zukunfts-fähige', 'zukunfts-gerechte', 'dauerhafte', 'dauerhaft tragfähige', 'aufrechterhaltbare', 'naturverträgliche', 'naturerhaltende', 'zukünftig existenzfähige' sowie 'anhaltende' Entwicklung), but since the 2000s it has been uniformly translated as 'nachhaltige Entwicklung'. The rise of this concept to a global model began with the 1987 final report *Our Common Future* by the World Commission on Environment and Development (WCED), chaired by the then Social Democratic Prime Minister of Norway, Gro Harlem Brundtland. This Commission coined the often repeated definition: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, 43).

The 22-member commission, made up of scientists and politicians from North and South, had a concrete mandate: to overcome the conflicting interests of industrialised countries (environmental protection) and developing countries (poverty reduction). In order to design a development process that would ensure both environmental protection and poverty eradication, new terms were sought - and 'sustainable development' seemed to be a good compromise.. The coupling of the two terms was an innovation. There can

be no doubt that, despite all the controversy over the correct interpretation, 'sustainable development' connotes a dynamic of change, albeit not necessarily quantitative economic growth. As mentioned, in the forestry origin of the term 'sustainability', there was no room for the notion of growth, as this would have meant steadily *increasing* yields in the long run. This objective is incompatible with the principles of the management of renewable resources that can generate only *constant* yields. Small wonder then, that the development idea implied in the concept of 'sustainable development' was heavily criticised by environmental associations. In their view, the concept of sustainability should continue to be linked exclusively to aspects of stability and conservation (of ecological functions). According to this position, ideas of change, dynamism and growth had no place in an environmental policy model. In view of the relationship between the two components of the composite term, sustainable development was described as a dichotomy, even a contradiction in terms (cf. Sachs 1993, 16).

The Brundtland Report uses the terms 'ecological', 'economic' and 'social' in spatial proximity, but in the text of 1987 there is no explicit reference to the later three-pillar model. At the normative level, both the intra-generational and the intergenerational dimension were already used in the report to justify 'sustainability' / 'sustainable development'. Rules for the management of renewable and non-renewable resources were also already being formulated in the Brundtland Report.

The report was the focus of discussion at the subsequent United Nations Earth Summit on Environment and Development (UNCED) in Rio de Janeiro in 1992, at which 178 states agreed on a declaration and a joint programme of action for the 21st century - Agenda 21.

Waypoints in the sustainability discourse since 1992

The discourse about 'Nachhaltigkeit' - a centuries-old word in forestry - and the discourse about 'sustainable development' - the compromise formula of the world community in Rio - merged into one discourse. From the outset, the Rio concept was based on a multi-dimensionality that did not exist in its German original meaning. This was a real challenge to interpret and concretize. The final report of the Enquete Commission for the *Protection of Humans and the Environment of the 12th Bundestag* in 1994 can be regarded as an important contribution to the discussion in Germany.

There, the definition of a fluid equilibrium was still the prevailing opinion, and appropriate management rules were formulated for the ecological sector.

The conception of the second Enquete Commission of the 13th Bundestag in 1998 initiated a paradigm shift by introducing the three-pillar model into the German discourse (Deutscher Bundestag 1998, 30-32). Consequently, provisional management rules were now also being drawn up for the economic and social dimension, dragging the concept away from being a (purely) environmental policy model. This change of meaning has been widely and controversially discussed in science on several levels. The first level dealt with the question of how many and which dimensions should be considered at all. On the second level, there was a debate on how the relationship between the dimensions could be seen and how the problem of integration and conflicting goals could be solved. On the third level, it was a question of what content was addressed within the dimensions. The controversial positions in the debate are summarised in a more recent presentation as follows: "Under the premise that the satisfaction of the needs of present and future generations is only possible if nature is preserved as the basis for life and business, some positions give ecological concerns priority over all others in the event of conflict (...). Economic and social issues play a role as causes and consequences of environmental problems. However, the resulting requirement to implement environmental protection measures as 'economically and socially acceptable' as possible does not change the primacy of ecological sustainability. (...). In contrast to ecological sustainability or one-pillar concepts, multidimensional concepts reject the principle of giving priority to the ecological dimension and instead emphasise the need to give equal consideration to the dimensions of sustainable development". (Grunwald and Kopfmüller 2012, pp. 54-55; pp. 57).

A literature analysis carried out in 2003 of sixty definitions of sustainability by various scientists in the German-speaking world (Tremmel 2003) showed that concepts that see (at least) three pillars side by side on an equal footing are increasingly gaining acceptance. This has only become more common since. Today, some 25 years after the beginning of the discourse on sustainability and sustainable development, definitions that give priority to ecology have become rare. And rightly so. It makes little sense to use sustainability as a container term that is barely filled, because ultimately only ecological principles are to be concealed behind the term. Anyone who wants to protect the environment can continue to demand this goal with the term 'environmental

protection'. A neologism only makes sense if it describes something new for which there is no adequate term so far.

Indicator-based definitions of sustainability/sustainable development

A new aspect came into the definition debate when indicator-based catalogues were developed. For if sustainability and sustainable development are defined as what concrete indicators intersubjectively and verifiably measure, then a far higher degree of accuracy is achieved than if the pair of terms is only vaguely (and potentially misleadingly) described. In the run-up to the World Summit in Johannesburg in 2002, the German Federal Government presented its sustainability strategy, which included 21 areas of action in four fields of action (intergenerational justice, quality of life, social cohesion and international responsibility). In comprehensive revisions (so far 2004, 2008 and 2012), the catalogue of indicators was further developed, although this was done with caution, due to the desire for indicator comparability over time. Even after changes of government, the new government did not exchange the sustainability indicators in alignment with party preferences. The German parties are not as polarized as, say, the US American ones, and this fact allowed for a remarkable stability of the indicators over time. The 2012 report contained 38 indicators. In the field of *intergenerational justice* these were, for example, energy productivity, greenhouse gas emissions, biodiversity and landscape quality, public deficit and enrolment of new students.

The indicators of the field of action *quality of life* were, amongst others, GDP per capita, proportion of organic farming, air pollution, premature mortality and number of criminal offences.

In the area of *social cohesion*, the indicators were: employment rates, full-time childcare, the gender pay gap, and the number of foreign pupils who achieve school-leaving qualifications.

International responsibility was operationalised by the following indicators: proportion of gross national income spent on public development expenditure, and German imports from developing countries.

The objectives and also the degree to which the objectives have been achieved have thus become quantitatively describable, so that, according to this definition approach, sustainability terminology is no longer subject to unexplained or unclear terminology. An indicator-based approach provides a crystal-clear definition: a society develops

sustainably if the corresponding goals of the sustainability strategy are achieved (or at least [approximated](#)).

Update 2018: As mentioned, the German sustainability indicator system stayed more or less the same for almost two decades. But at the beginning of 2017 there was a major change (Federal Government 2017). The background was the adoption of the 17 Sustainable Development Goals (SDGs) by the United Nations. It is comprehensible that the UN demanded that the SDGs also be implemented at the national level, and the German government did so. However, thereby Germany gave up the tried and tested own sustainability strategy. The field of intergenerational justice, for example, under which important indicators were collected until 2016, is now missing. Overall, since 2017 the German Sustainability Strategy has been less oriented towards future justice than in the past. Without wishing to reverse the meaningful subordination of the national sustainability strategy to the SDGs, it would therefore make sense to supplement it with a future-oriented indicator system that ties in with the earlier national sustainability indicators.

The 17 Sustainable Development Goals represent a concern for human development but not for non-humans ecocentric goals. Excluding the 11 goals which refer directly to human issues (poverty, food, health, education, women, energy, economy, infrastructure, inequality, consumption, institutions) we are left with 6 issues which are potentially ecocentric. But when the associated goals and targets are further examined, one can see that each issue is still an anthropocentric one as it stands in the context of its utility to humans.

Sustainability ethics as a new ethical domain

Ethics is understood here as the systematic reflection on morality. As a normative discipline, it makes statements about what people should do (according to Kant: what their duties are), and thus establishes criteria for good and bad actions.

So what should we do in order to behave sustainably? The brief history of the sustainability discourse already suggests that the imperatives of sustainability ethics are not easy to identify. As a first step, one could take up the common opinion that the person who protects the environment acts morally in the sense of sustainability ethic. However, this would ignore the three-pillar model and thus the change in meaning that the pair of terms 'sustainability'/'sustainable development' has undergone. In a second approximation one could conclude that sustainability ethics must be understood as the sum of the postulates of environmental, economic and social ethics (Carnau 2012) - but this fails for two reasons. First, these three ethical domains negotiate different objects that are impossible to bring together or measure equally (incommensurability).

Secondly, this approach would also be an oversimplification, because it would not take into account the shift in the understanding of sustainability and sustainable development in recent years towards a set of measurable, objective indicators. As mentioned above, indicator catalogues represent progress within the discourse about the definition of the pair of terms 'sustainability'/'sustainable development'. If this is acknowledged when

discussing the postulates of a sustainability *ethic*, it is advisable to first derive obligations from indicators that occur in several concepts in different national sustainability strategies. This can then be used to compile a list of duties that contains the following commandments, for example: Reduce greenhouse gases! Act in such a way that the GDP per capita increases! Live healthily! Don't smoke! Start studying! Don't commit crimes! Go vote! But don't vote for extremist parties! Register as a bone marrow donor!

Such a list of obligations, although it can be derived stringently from indicator-based sustainability concepts, is not (yet) discussed in sustainability ethics. In most cases one relies on the vague formula that sustainability is a concept that is normatively founded on inter- and intragenerational justice. About one third of sustainability theorists base their concept at the normative justification level exclusively on considerations of intergenerational justice, for a further 60% intergenerational justice stands on an equal footing with intragenerational justice goals (Tremmel 2004). It therefore appears necessary to briefly describe the state of future ethics (more precisely: intergenerational ethics) and then to relate this to the discourse on sustainability.

In addition to theoretical questions about human identity and personality, generation ethics discusses the extent of our duties towards future generations. Intergenerational sufficiency (cf. Meyer/Roser 2009) assesses intergenerational justice according to an absolute standard: a later generation is treated fairly if its well-being is at least at the sufficiency level, i.e. reaches a level sufficient for a good human life. Whether it is better or worse off than other generations is irrelevant. The majority of philosophical authors, however, do not argue for an absolute standard of human well-being with regard to intergenerational justice, but a comparative one, i.e. one that determines the desirable level of well-being in comparison with other generations (see Chapter III.29). Within the framework of such comparative standards, strictly egalitarian principles (that present and future generations should have equal opportunities to live) are relatively seldom postulated. Far more often, comparative standards are used together with the phrase 'at least as good'. Similar to John Locke (1977, II § 25) about 300 years ago ("at least as much and as good") present philosophers such as Dieter Birnbacher, Otfried Höffe, Eric Rakowski or Gregory S. Kavka share the view that the heritage of each generation should be at *least* the same, but if *possible* greater, than the heritage it had inherited from the previous generation.

But also the view that intergenerational justice contains an obligation (not limited by 'as far as possible' or 'perhaps') to increase the well-being of succeeding generations has its supporters (Tremmel 2012).

Depending on whether the phrase 'at least as good as' or 'better than' is used, this has different implications for the extent of our obligations to the future. The first variant still belongs to the strictly egalitarian standards, albeit in an attenuated form, but the second does not. In relation to the living conditions of man, the first variant corresponds to the intertemporal-static concept of sustainability. Theories of intergenerational justice, on the other hand, which proclaim an improvement for later generations, can be said to be closer to intertemporal-dynamic sustainable development concepts.

Sustainability indicator catalogues as a part of axiology, not ethics?

But could it be completely wrong to try to develop ethical postulates related to sustainability, i.e. a sustainability ethic?

It is widely customary to regard axiology (value theory) as an independent area of philosophy separate from ethics. Kant once clearly distinguished the pursuit of happiness from the virtuous fulfilment of duty. He only saw ethics as responsible for the latter. It is possible that sustainability/sustainable development has become a primarily axiological category in recent years. For the numerous indicators that have been set up to determine a society that is developing sustainably seem to describe what constitutes a permanently *happy* life for all citizens of the earth. The question of the duties of the individual contained in the sustainability concept would then become secondary.

There is a lot to be said for this interpretation. According to the latest Enquête Commission, when defining its set of indicators, it has used the entire spectrum of welfare measurement methods, ranging from long-established welfare measures such as the United Nations Human Development Index (HDI) published since 1990 to the National Welfare Index (NWI) and current initiatives such as the Measures of Australian's Progress (Australia), the United States (Key National Indicator System, KNIS) or Great Britain (National Well-Being Framework of the British Statistical Office ONS) (German Bundestag 2013, 231). The indices mentioned undoubtedly belong to the discourse on quality of life, not to the discourse on ethics. Sustainability/sustainable development has become the catchphrase for the contemporary determination of quality of life and prosperity, both now and for future

generations. Instead of, "What should I do?" the question is reversed into: "What can the state do to make sure that me and my children have a good life?"

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