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Environmental justice in interdisciplinary perspective

Empirical research on environmental justice often simplifies normative implications, and ethical investigations in these fields often lack real-world complexity. A new working group bridges these gaps.

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As different as environmental risks and their causes may be, in empirical environmental justice research their ethical assessments are often lumped together. Little distinction is drawn between the diverse ethical considerations that might justify differing responsibilities in dealing with environmental risks. Yet, a range of ethical principles can be applied to assess the distribution of environmental risks and distribute the burdens of action. In contrast to empirical research, ethical investigation of environmental challenges often lacks empirical backing and seldomly relates to real-world cases in all their details. This leads ethics to be rather concerned with abstract conceptual and theoretical issues disconnected from real-world complexities.

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Combining these strands of research more closely is crucial for fully understanding environmental risks and demands intensified interdisciplinary exchange and research. For this purpose, saguf (Swiss Academic Society for Environmental Research and Ecology) has established a new working group to foster and enhance interdisciplinary collaboration. In the following, we illustrate how both research perspectives can profit from each other.

Empirical observations and ethical evaluation

An unequal distribution of environmental risks is often characterized as problematic because those who are more exposed to environmental risks suffer a significant disadvantage. Such a disadvantage is conditioned by two factors (Morello-Frosch and Shenassa 2006, Huggel et al. 2013). On the one hand, it is the way someone is exposed to environmental risks. On the other hand, heavier exposure to environmental risks is often associated with social and economic vulnerability.

The most obvious disadvantage in exposure is geographical proximity to risk sources. For example, someone who lives on the outermost edge of a floodplain is less exposed than someone who lives directly on the riverbank. The nature of the risk also matters. Floods can be deadly, but it is possible to get out of harm's way if there is early warning. However, in the case of high levels of pollution, people can only escape the higher risk if they can afford to move

to less polluted areas. Those who lack the necessary economic and social resources and capabilities to do so are particularly vulnerable to such risks.

However, it is one thing to measure the level of these unequal distributions of environmental risks and quite another to assess whether such inequality is problematic from an ethical point of view (Schuppert and Wallimann-Helmer 2014). It may seem obvious that in areas where unequal exposure coincides with increased vulnerability, the distribution of risks is highly likely to be unfair. However, this is only the case if it can be demonstrated why an unequal distribution of environmental risks is unfair for ethical reasons. An unequal distribution of environmental risks need not always be unfair, and a fair distribution of all environmental risks is not always possible.

The most common statement in this context is that it is unfair to burden some members of society more than others for no ethically sound reasons (Walker 2012). However, one could also claim that an unequal distribution of environmental risks is unfair not because it is unequal but because it does not reflect the contribution of individuals to the causes of these risks. Those who contribute more to climate change should bear heavier burdens in dealing, for instance, with climate-related flood risks. The same often seems reasonable with the profit that someone derives from others' contributions to environmental risks, such as producing goods like plastic toys for children.

Recognition and justice

Claims like these seem reasonable because we believe that those who have caused damage should pay for its repair (Shue 1999, Miller 2007). Ethicists who do not rely on empirical facts may well take such claims as the final step in justifying a fair distribution of environmental risks. However, the fair distribution of environmental risks according to these or similar considerations is difficult to achieve, if not impossible. Technical feasibility, safety considerations, and the need for efficiency often speak against their implementation (Wallimann-Helmer 2018).

A waste disposal system that obliges people to store their waste in their own backyard is not only highly inefficient but also highly dangerous, depending on the waste. Safe and clean waste disposal requires centralized disposal facilities. As a consequence, only those living in the immediate vicinity are exposed to the additional risks and burdens (figure 1). Thus, if reasons of feasibility, safety, or efficiency stand in the way of a fair distribution of environmental risks, a way must be found to legitimize their unfair distribution and make them socially more acceptable (Schlosberg 2003, Törnblom and Vermunt 1999).

Empirical social psychology studies on the search for nuclear repositories in Switzerland show that the social acceptance of environmental risks increases if those affected by higher risks are adequately informed at an early stage and involved in the decision-making processes (Krütli et al. 2015). Hence, an empirical perspective can justify why procedural justice gains importance under circumstances in which a fair distribution of environmental risks is not possible. From an ethical perspective, the legitimacy of such decisions can be justified by relying on the all-affected principle (Goodin 2007). According to this principle, political decisions are only legitimate if all those affected can participate in them.

The interests of all those affected only receive appropriate consideration if they can be brought into the decision-making process under conditions of equality (Shrader-Frechette 2002, Schuppert and Wallimann-Helmer 2014). Although it seems clear that no affected party should be excluded from the decision-making process, this does not necessarily mean that all affected parties dispose over equal power. For example, people with few financial resources are less able to campaign for their own interests. People who lack informa-

tion about the upcoming construction of a waste incineration plant will not be able to understand early enough that their interests are affected. In addition, social milieu and level of education can be disadvantages for people who have to represent their own interests in public (Dalton 2017).

However, even if fair procedures of decision-making are granted, the distribution of risks that is decided can only become legitimate and need not necessarily be just. Thus, we should know what conditions are needed for the interests of all those potentially affected to be properly respected. Whilst ethical research can justify the conditions of proper respect, empirical investigation reveals whether and how these conditions are granted.

Responsibility for the future

Proper respect for all those affected by environmental risks requires more than simply ensuring procedural conditions of justice for their equal participation. It is not sufficient to guarantee only that no one is formally excluded from the decision-making process. Some substantive conditions of justice must also be met. For instance, all those affected must have sufficient financial resources to be able to represent

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FIGURE 1: Dump trucks unloading garbage over large landfill. Only those living in the immediate vicinity of a waste facility are exposed to the additional risks. Such unfair distribution of risks demands compensation.

BOX 1: saguf Annual Conference 2021: *Horizon Europe* as a role model for funding transdisciplinary sustainability research? Prospects and limitations

This year's *saguf Annual Conference* will take place as part of a series of keynotes and panel discussions at the *International Transdisciplinarity Conference ITD 2021*^a. It will discuss the prospects and limits of transdisciplinary sustainability research within the new research framework programme *Horizon Europe*.

Within *Horizon Europe*, problem-oriented research projects are to support and enable the *European Green Deal* and the social transformation it envisions. The mission-oriented funding scheme offers vast opportunities for transdisciplinary sustainability research. Similar research has far less funding opportunities in Switzerland and probably elsewhere. Taking this as starting point, the goal of the *saguf Annual Conference* is to examine the extent to which *Horizon Europe* may serve as a role model for funding transdisciplinary sustainability research.

The *saguf Annual Conference* will take the form of an expert panel discussion on Thursday, 16 September (afternoon/early evening).

a <https://akademien-schweiz.ch/en/current/events/itd-conference-2021>

their interests in the decision-making process. Sufficient information and a threshold level of education must be available for all. The extent to which these substantive conditions of justice must be met is a question of degree and depends on the nature of the political institutions and the resources of a state (Wallimann-Helmer et al. 2016). But if they are met and procedural justice is ensured, then the environmental inequalities decided upon at least appear legitimate.

However, if conditions of procedural justice are met, then those affected also bear joint responsibility for the decisions made, and they must be prepared to participate in the decision-making processes. Consequently, ensuring the conditions of justice for equal participation in collective decision-making entails a degree of prospective responsibility. Those who have the opportunity to participate in decision-making must share the responsibility for what is negotiated (Parrish 2009, Stilz 2011). This may be by participating in the decision-making process or by respecting the decisions taken collectively as legitimate.

For climate and environmental risks, this means that those potentially affected should participate in decisions on dealing with these risks, or at least be prepared to accept decisions made collectively under fair conditions as legitimate. These demands not only presuppose that fair conditions exist for the equal participation of all those affected by climate and environmental risks. They also presuppose that

the collectives, whether cultural or social communities, regions, or states, are capable of assuming their responsibilities in dealing with these risks (Huggel et al. 2016). What is needed to ensure these conditions and whether they are given once again cannot be decided from an ethical perspective alone. Empirical investigation becomes crucial.

It is a pity that until today, ethical research and empirical research on justice-related issues of the environment and climate change have established separate and often disconnected debates. Legal theory uses similar concepts and principles as are known in socio-psychological research on justice. Normative claims guide empirical assessments of risk distributions and are also relevant in legal investigations. However, these different scientific debates tend so far to have operated separately rather than engage with each other. This is why *saguf* has established a new working group on environmental justice: to serve as a platform for such important interdisciplinary exchange and joint research efforts.

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