

Giulio Pennacchioni*

Navigating the Epistemic Responsibilities of Individuals and Institutions for Sustainability

Abstract

This paper delves into individual and institutional epistemic responsibilities on climate change and sustainability. It highlights the challenges individuals face in understanding climate information and emphasizes the pivotal role of intergovernmental institutions and states as “epistemic facilitators”. Despite the meritorious efforts of organizations such as UNESCO in this sense, only states and institutions can fulfill the epistemic responsibility of sharing accurate climate change information, educating citizens and consumers, and implementing sustainable policies.

Keywords

Epistemic responsibility; Individuals; Institutions; Sustainability; Education

“And It’s a hard, and it’s a hard,
It’s a hard, it’s a hard,
And it’s a hard rain’s a-gonna fall”
“A Hard rain’s A-gonna Fall.” Bob Dylan

Introduction

The Intergovernmental Panel on Climate Change’s Sixth Assessment Report of 2023 strongly confirms not only the existence of climate change but also its anthropogenic origin, as well as its danger to natural and human systems¹. This position is shared by 97 percent of scientists².

* Università Vita-Salute San Raffaele.

¹ IPCC, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2023, Available at: <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>.

² Cook, J., et al., *Consensus on consensus: A synthesis of consensus estimates on human-*

Since the IPCC's first publication in 1990, these data have been in the public domain and gradually expressed with greater confidence³. Despite this, there is still a lot of uncertainty among individuals outside the scientific community about this phenomenon⁴. According to the 2021 Yale Climate Opinion Maps, 14 percent of the American population does not believe that global warming is occurring. Within the same research, it was found that 30 percent of Americans hold the view that human activities are not responsible for causing climate change⁵. In Europe, the percentages are more positive: 77 percent of EU citizens are certain that climate change is a very serious problem of our time. It means that more than three-quarters of EU citizens consider climate change as one of the major challenges at this moment, but it is a percentage relatively low considering the abundance of available reports and data on the argument⁶. While generally an agent cannot reasonably be expected to know more than what is accessible to her⁷, it is also true that we live in a world of abundant information, particularly regarding climate change⁸. In light of the current situation, certain scholars argue that there is a noticeable emergence of epistemic responsibilities and obligations related to climate change and sustainability. Nonetheless, the attribution of these responsibilities remains unclear.

This paper aims to determine the present-day epistemic responsibilities and obligations of individuals – both as citizens and consumers – and institutions concerning climate change and sustainability. The notion of “epistemic responsibilities” has been elaborated by various scholars⁹. In her book *Epistemic Injustice: Power and the Ethics of Knowing* Miranda Fricker, one of the most prominent figures in this discourse, defines epistemic responsibilities as the ethical obligations that individuals and

caused global warming, in “Environmental Research Letters”, 11, 4, 2016, pp. 1-7.

³ F. Pongiglione, C. Martini *Epistemic Harm Social Consequences: A Reply to Torcello on Climate Change Disinformation*, in “Social Epistemology Review and Reply Collective”, 11, 11, 2022, pp. 42-48.

⁴ A. Leiserowitz, et al., *Climate Change in the American Mind: November 2019*, 2019, Available at: <https://climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-november-2019/>.

⁵ J. Marlon, et al. 2022, *Yale Climate Opinion Maps 2021.*, 2022, Available at: <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>.

⁶ European Union, *Standard Eurobarometer 99 – Spring 2023*. 2023, Available at: <https://europa.eu/eurobarometer/surveys/detail/3052>.

⁷ N. Rescher, *Ignorance: On the wider implications of deficient knowledge*, University of Pittsburgh Press, Pittsburgh 2009.

⁸ S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, in “Ethical Theory and Moral Practice”, 19, 2, 2015, pp. 297-311.

⁹ R. M. Chisholm, *Theory of Knowledge*, Prentice Hall, New York 1977; H. Kornblith, *Justified Belief and Epistemically Responsible Action*, in “The Philosophical Review”, 92,1, 1983, pp. 33-48; L. Code, *Epistemic Responsibility*, Brown University Press, Brown 1987.

institutions hold regarding the acquisition, dissemination, and use of information. These responsibilities encompass not only the pursuit of accurate and reliable information but also the conscientious engagement in critical thinking, discernment, and the ethical use of knowledge for informed decision-making and societal well-being.

After having investigated the epistemic limits of individuals and having determined the conditions under which they can be held accountable for their ignorance, I will proceed to examine the various epistemic conditions of institutions, thus establishing them as “epistemic facilitators”. In the final part, I will show that if institutions truly want to fulfill their role as “epistemic facilitators”, an operation of clarification and simplification of information regarding sustainability and climate change is today more necessary than ever. While organizations like UNESCO, WWF, and UNDP have made commendable efforts to promote sustainability education, the primary responsibility for this task rests with states and intergovernmental institutions. This responsibility encompasses not only combating ignorance about climate change but also implementing sustainable policies.

1. The epistemic role of individuals

Gideon Rosen, a key figure in igniting the modern discourse on the epistemic responsibility of individuals, posits that all of us “are under an array of standing obligations to inform ourselves about matters relevant to the moral permissibility of our conduct: to look around, to reflect, to seek advice, to seek on”¹⁰. In a similar vein, Daniel C. Dennett¹¹, comparing the present historical period to earlier ones, contends that individuals in previous generations lived in the epistemic condition for confining their moral consideration to matters that were local and immediate¹². This is because they lived in a society where science, technology, and the global market had not made information readily available to all¹³.

¹⁰ G. Rosen, *Culpability and Ignorance*, in “Proceedings of the Aristotelian Society”, 103, 1, 2003, p. 65.

¹¹ D. Dennett, *Information, Technology, and the Virtues of Ignorance*, in “Daedalus”, 115, 3, 1986, pp. 135-153.

¹² I. Persson, J. Savulescu, *Unfit for the future: The Need for Moral Enhancement*. Oxford University Press, Oxford 2012; S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, in “Ethical Theory and Moral Practice”, 19, 2, 2015, pp. 297-311.

¹³ Y.N. Harari, *Homo Deus: A Brief History of Tomorrow*. Random House, Manhattan 2016; L. Floridi, *La quarta rivoluzione. Come l'infosfera sta trasformando il mondo*, Raffa-

Our ancestors were, relative to us, epistemically impoverished: there were few means of finding out much about non-local, non-immediate effects and problems, so they could plan and act with a clear conscience on the basis of a more limited, manageable stock of local knowledge. They were thus capable of living lives of virtue – a virtue that depended on unavoidable ignorance. [...] Information technology has multiplied our opportunities to know, and our traditional ethical doctrines overwhelm us by turning these opportunities into newfound obligations to know¹⁴.

In short, according to Dennett, the epistemic limitations “of the past” absolved most persons of many moral obligations. Today, this is no longer true due to the advancements in information technology, which “helps expose the weakness of much that has passed for sound in ethics”¹⁵. Science and mass communication have made it possible that “we hear, every day, [...] a thousand cries for help, complete with volumes of information on how we might oblige”¹⁶. According to Anna Hartford,

where we are excused by the scarcity of information, it is quite clear which ignorance we are not culpable for where morally-relevant information is easily accessible, we ought to know it, and where it is not, we are more easily forgiven [...]. But where we are excused by the *abundance* of information, the situation is profoundly different: there is no way to tell what, precisely, we ought to have known amongst all that we could so easily have found out¹⁷.

Given the pressing context of climate change, it is crucial to thoroughly examine the scope and depth of our obligation as citizens and consumers to acquire knowledge about this phenomenon¹⁸. This is to achieve the goals of sustainability, a concept that involves safeguarding the planet’s natural ecosystems and the health of its inhabitants, encompassing three different dimensions: environmental, economic, and social¹⁹. Sustainability serves as a fundamental guiding principle in the face of global challenges like climate change, resource depletion, and social inequalities, striving to establish an enduring state of well-

ele Cortina Editore, Milano 2017.

¹⁴ D. Dennett, *Information, Technology, and the Virtues of Ignorance*, in “Daedalus”, 115, 3, 1986, p. 144.

¹⁵ Ivi, p. 149.

¹⁶ *Ibidem*.

¹⁷ A. Hartford, *How Much Should A Person Know? Moral Inquiry and Demandingness*, in “Moral Philosophy and Politics”, 6, 1, 2019, p. 61.

¹⁸ S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, in “Ethical Theory and Moral Practice”, 19, 2, 2015, pp. 297-311.

¹⁹ B. Purvis, Y. Mao, D. Robinson, *Three pillars of sustainability: in search of conceptual origins*, in “Sustainability Science”, 14, 3, 2019, pp. 681-695.

being for society, the environment, and the economy. To accomplish this, having the requisite knowledge for informed decision-making and responsible environmental stewardship is paramount. As a result, we are compelled to delve into the inquiry of when our lack of knowledge regarding certain aspects of climate change and principles of sustainability can be deemed excusable and when not.

As said by Nicholas Rescher, excusable ignorance “prevails in circumstances where there is a plausible excuse of the individual’s being ignorant”, while culpable ignorance “obtains when the requisite information is available, but insufficient, incompetent, or inadequate efforts are made to obtain it”²⁰. The mere availability of information cannot be the criterion to distinguish between excusable and culpable ignorance since the volume of readily available information now far exceeds any individual’s ability to assimilate more than a little part of it. So, from the point of view of individuals, the diffusion of scientific reports like the IPCC’s since 1990 is not sufficient to rule out cases of ignorance.

As Francesca Pongiglione and Carlo Martini show²¹, our society’s science education system primarily targets individuals with high specialization, leaving the subjects most vulnerable behind²². Lower-educated individuals, typically occupying lower socioeconomic positions²³, are more prone to certain epistemic postures such as denying anthropic climate change. Such individuals, who are more susceptible to misinformation²⁴, lack knowledge regarding both the core concepts of climate science and the current state of scientific research.

All this is exacerbated by disinformation intentionally manufactured by corporations, political parties, and information agencies serving national states²⁵. As Lawrence Torcello points out: “Crucially, disinform-

²⁰ N. Rescher, *Ignorance: On the wider implications of deficient knowledge*, cit., p. 11.

²¹ F. Pongiglione, C. Martini *Epistemic Harm Social Consequences: A Reply to Torcello on Climate Change Disinformation*, cit.

²² A. Tanesini, *The Mismeasure of the Self. A Study in Vice Epistemology*, Oxford University Press, Oxford 2021.

²³ Eurostat, *Living Conditions in Europe – Poverty and Social Exclusion*, 2021 Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Living_conditions_in_Europe-poverty_and_social_exclusion#Key_findings.

²⁴ J. Fetzer, *Information: Does it Have To Be True?*, in “Minds and Machines”, 14, 2, 2004, pp. 223-229.

²⁵ N. Oreskes, E. M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. A&C Black, Edinburgh 2010; L. Torcello, *Climate Change Disinformation and Culpability: A Sympathetic Reply to Pongiglione and Martini*, in “Social Epistemology Review and Reply Collective”, 11, 9, 2022, pp. 29-37.

mation exists to mislead non-experts. This is its deliberate design, by definition”²⁶.

This deliberate coordination of disinformation for strategic purposes undermines the pursuit of informed decision-making, as individuals are unwittingly guided toward conclusions that align with the disinformation’s creators. Consider, for instance, the scenario where citizens remain unaware of their nation’s failure to adopt sustainable practices and policies that would secure a greener future. While striving to make sense of complex global issues, individuals may inadvertently be swayed by disinformation campaigns that obfuscate the true extent of environmental inaction. This applies also to the positive green policies pursued by states, and continents, which, due to the ongoing spread of false information, are generally unknown. Consumers might unknowingly persist in using products that contribute to environmental degradation due to misleading claims or selective presentation of data by corporations seeking to protect their commercial interests²⁷. Citizens may inadvertently continue to trust political parties and public institutions that present certain policies as “green”, hiding the environmental damages behind them. A perfect example is the greenwashing, the deceptive or misleading practice of making a product, service, or organization appear environmentally friendly or sustainable when, in reality, it lacks meaningful environmentally responsible practices²⁸. Supranational institutions, governments, and private entities have collaborated to present certain activities as sustainable, camouflaging their adverse environmental repercussions. This is the case with the green technology industry and clean energy²⁹. The transition to renewable energy sources, such as wind and solar power, is not without its environmental damages, as well as the extraction and processing of rare earth metals and minerals required for clean energy technologies have detrimental environmental impacts. However, the consequences and the environmental impact of these activities are often overlooked or kept hidden. This misrepresentation not only misguides the public but also impedes effective solutions to the very environmental damages these activities contribute to³⁰. These instances underscore the

²⁶ L. Torcello, *Climate Change Disinformation and Culpability: A Sympathetic Reply to Pongiglione and Martini*, cit., p. 34.

²⁷ J.W. Wieland, *Responsibility for Strategic Ignorance*, in “Synthese”, 194, 11, 2017, pp. 4477-4497.

²⁸ G. Pearce, *Greenwash: Big Brands and Carbon Scams*. Black Inc., Melbourne 2012.

²⁹ G Pitron, *The Dark Cloud: how the digital world is costing the Earth*. Scribe, London 2023.

³⁰ European Commission, *Proposal for a Regulation of the European Parliament and of the Council establishing a common framework for media services in the internal market (European Media Freedom Act) and amending Directive 2010/13/EU*, 2022. Available at: [https://ec.europa.eu/transparency/documents-register/detail?ref=SWD\(2022\)286&lang](https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2022)286&lang)

precarious position of the epistemic processes of citizens and consumers. The barrage of disinformation, meticulously crafted to distort reality and manipulate perceptions, complicates the already challenging task of arriving at well-informed conclusions. The implications are far-reaching, as long as orchestrated disinformation not only thwarts the individual's ability to make informed choices but also corrodes the foundations of a well-functioning democratic society that relies on informed citizen participation. Considering these complexities, the veracity of the epistemic processes of citizens and consumers becomes doubtful – although it is not an indictment of individual intentions. As Lawrence Torcello claims: “Disinformation would not be a problem if it were ineffective. It is because disinformation is effective and indeed often sophisticated that we cannot assume citizens who conduct an honest inquiry will come to the right conclusions on climate change”³¹.

In conclusion, following Nicholas Rescher, it is the personal efforts of individuals to obtain information that permits us to distinguish between excusable from culpable ignorance. This is because ignorance of citizen-consumers is contingent upon external conditions beyond their efforts, such as disinformation³², the excess of information³³, or low levels of education³⁴.

The question is: if it is not possible to hold individuals entirely responsible for their epistemic vices and virtues because of this profusion of information, which subject is responsible for an incorrect interpretation of data? Who is responsible for the imprecise understanding of climate change? Which actor could epistemically help us in the transition to a sustainable world?

2. The epistemic role of institutions

According to Steve Vanderheiden, while the cognitive limits of individuals may warrant cases of excusable ignorance, the same cannot be said

=en; É. Morena, *Fin du monde et petit fours. Les ultra-riches face à la crise climatique*. La Découverte, Paris 2023.

³¹ L. Torcello, *Climate Change Disinformation and Culpability: A Sympathetic Reply to Pongiglione and Martini*, cit., p. 34.

³² N. Oreskes, E. M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*, cit.; L. Torcello, *Climate Change Disinformation and Culpability: A Sympathetic Reply to Pongiglione and Martini*, cit.

³³ D. Dennett, *Information, Technology, and the Virtues of Ignorance*, cit.; I. Persson, J. Savulescu, *Unfit for the future: The Need for Moral Enhancement*, cit.; S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, cit.

³⁴ F. Pongiglione, C. Martini *Epistemic Harm Social Consequences: A Reply to Torcello on Climate Change Disinformation*, cit.

for states and other large-scale institutions. Such entities possess significantly greater capacities to process both information and disinformation compared to individual persons.

In the case of climate change, for example, states face a much higher threshold of expected information processing before they can validly claim to have been reasonably ignorant about their contributions toward climate-related harm. Given their power to affect domestic greenhouse pollution as well as their command of scientific expertise in the service of environmental protection, states in their corporate capacities ought by Recher's standard to exercise far greater efforts to avoid factual ignorance about anthropogenic harms like climate change than would apply to individual persons [...] ³⁵.

After all, institutions' capacity to process phenomena like climate change is on average far greater than that of the average citizen-consumers, both in their knowledge of climate science and access to data about climatic risk and harm. Since the first IPCC report was made the requisite knowledge for policymakers concerning the causes and effects of climate change and it was adequately available to institutional sides, it ended all further claims of excusable ignorance on their behalf. In this regard, Steve Vanderheiden claims that "One might expect and thus excuse more ignorance complex scientific issues from individual persons than from large organizations like states" ³⁶. In contrast to Derek Bell's ³⁷ and Simon Caney's ideas ³⁸ – which do not describe the epistemic responsibility of states in collective terms, but as referring to the obligations of individuals – Steve Vanderheiden's position is that institutions have "a higher epistemic burden than do persons". ³⁹ The guilt of a single individual for ignoring scientific reports intended for policymakers cannot be the same as that of states that refuse to act to reduce greenhouse gas emissions after 1990, especially since scientific reports on climate change are not so readable by non-experts.

The same point of view is shared by Anna Hartford. States and intergovernmental institutions have a greater obligation to be consistent in information than individuals, and for this, they can lift some of the burdens of the obligation from the individual. The rationale behind assigning episte-

³⁵ S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, cit., p. 306.

³⁶ *Ibidem*.

³⁷ D. Bell, *Global climate justice, historic emissions, and excusable ignorance*, in "Monist", 94, 3, 2011, pp. 391-411.

³⁸ S. Caney, *Climate Change and the Duties of the advantaged*, in "Critical Review of International Social and Political Philosophy", 13, 1, 2010, pp. 203-28.

³⁹ S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, cit., p. 307.

mic obligations primarily to states and institutions stems from the idea that these collective entities should possess the epistemic authority, resources, influence, and reach to facilitate and disseminate information on a broader scale. By actively engaging in educational initiatives, policy implementations, and knowledge dissemination, states and institutions can create an environment conducive to informed decision-making among citizens. In turn, this can alleviate the burden on individuals to acquire all-encompassing knowledge on complex matters such as climate change, sustainability, and other pressing global issues the epistemic burden. There are hundreds of thousands of organizations that strive to foster empirical research to better guide information. This is not just about sustainability research. Today it is possible to browse “over 25 million titles on Google Books; look at the 160 million papers on Google Scholar; study reports from the United Nations, Human Rights Watch, and Amnesty International [...]”⁴⁰. Anna Hartford proposes a stronger version of Steve Vanderheiden’s idea, which argues that the state “ought to relieve individuals of a great many of their obligations to know”⁴¹, and thus generates a more modest, not over-demanding individual obligation. If this is correct an ethical citizens-consumer would only need to make sure that the state is taking these epistemic obligations seriously. Unfortunately, institutions do not, and their political inaction conduct leads us to darker and darker climate scenarios⁴². Since our institutions do not, we might be held morally responsible to act as their proxies. This is why it is hard to define what one’s individual obligations become in circumstances in which the state is defaulting on its obligation epistemic obligations. According to Anna Hartford,

[...] often it seems that rather than being relieved of our obligations to know by the state, we actually have more obligations to know which *concern* our states, and the moral problems they are contributing to (rather than resolving) in our names. Appealing to the epistemic obligations of states therefore does not seem to resolve the threat of demandingness when it comes to our individual obligations to know⁴³.

We have concluded that, from an epistemic perspective, states are the most responsible actors concerning the proper use of information. Not

⁴⁰ A. Hartford, *How Much Should A Person Know? Moral Inquiry and Demandingness*, in “Moral Philosophy and Politics”, 6, 1, 2019, p. 51.

⁴¹ Ivi, p. 57.

⁴² IPCC, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2023, cit.

⁴³ A. Hartford, *How Much Should A Person Know? Moral Inquiry and Demandingness*, in “Moral Philosophy and Politics”, cit., p. 58.

only do the institutions face inherent difficulties in processing information about climate change, but they also default on their responsibility of effectively disseminating it. In this framework of extreme epistemic and moral complexity, to avoid the threat of demandingness of individuals, constantly at risk of drowning in an ocean of overabundant and false information, it is necessary for institutions to play the role of “epistemic facilitators”. The term refers to the epistemic duty of institutions concerning conveying information in sensible domains of interest including sustainability and climate change. This appears as the most reasonable pathway to make sure that the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda do not remain just abstract goals but can be achieved.

However, how can institutions optimally achieve their responsibility as “epistemic facilitators”? What strategies can they use? How can they fulfill their epistemic responsibility, which, in addition to their role as “epistemic facilitators”, is also expressed through policies aimed at contrasting climate change?

3. Institutions and sustainability: A brief analysis

Qian Tang, the current Assistant Director-General for Education at UNESCO, emphasizes that addressing global challenges, including but not limited to climate change, demands an imperative alteration in our daily practices and a fundamental reconfiguration of our cognitive and behavioral patterns. Realizing this transition necessitates new skills, values, and attitudes in individuals, to lead to more sustainable societies⁴⁴. To effectively address this need, the educational system must promptly formulate pertinent educational goals and instructional materials, incorporate instructional methods that enhance learners’ autonomy, and advocate for the integration of sustainability principles into the administrative frameworks of their institutions. So, the discussion about the role of institutions in sustainability brings into play the concept of education.

Are states and institutions able to educate citizens about sustainability? Can they truly fulfill the role of “epistemic facilitators”? Today humankind seems to ignore what sustainability or sustainable action is. According to Arjen Wals,

It seems that most, if not all, contributing authors agree that we do not and cannot know what the most sustainable way of living is. There are many ideas about what is sustainable, but none of them can be authoritatively prescribed

⁴⁴ UNESCO, *Education for sustainable development goals: Learning objectives*, 2017. Available at: <http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>.

to others because what might seem sustainable now might turn out not to be later and what might be sustainable here might not be sustainable elsewhere⁴⁵.

In a similar vein, Helge Kminek⁴⁶ argues that the present coexistence of numerous divergent approaches within institutional environmental education poses a significant problem. Effectively, the green growth strategy pursued by governments around the world in recent years does not seem to be a way to achieve the goal.

Among the various causes, the increasing spread of fake news⁴⁷ and its capacity to polarize and divide public opinion⁴⁸ is one of the main reasons for citizens' and consumers' ignorance regarding sustainability, despite the challenge of sustainability should pertain to all, regardless of political or social divisions. At the same time, it is increasingly challenging to distinguish experts from non-experts and therefore understand which institutional entities to show deference to and which not to⁴⁹. This situation inevitably impedes the comprehensive investigation of the fundamental principles underlying sustainable development.

In the present circumstances, it seems that states and institutions are unable to fulfill their role as "epistemic facilitators" to the point that the concept of sustainability seems more and more a utopian ideal⁵⁰ than an achievable goal. From this perspective, simplifying complex climate change and sustainability information is highly necessary. Simultaneously, the coexistence of disparate theories on sustainability, often resulting from excessive internal scientific debates, complicates this simplification process⁵¹. Striking a balance between depth in scientific discourse and accessibility for wider audiences remains a key challenge in translating correct knowledge into effective sustainable education.

To be fair, it must be mentioned that some agencies and organiza-

⁴⁵ A.E.J. Wals, *Between knowing what is right and knowing that is it wrong to tell other what is right: On relativism, uncertainty and democracy in environmental and sustainability education*, in "Environmental Education Research", 16,1, 2010, p. 144.

⁴⁶ H. Kminek, *Concept of Education in Education for Sustainable Development – The Necessity of Exposing the Uncertainty*, in Kminek, H., Bank, F., Fuchs, L. (eds.), *Kontroverses Miteinander. Interdisziplinäre und Kontroverse Positionen zur Bildung für eine nachhaltige Entwicklung*, Johann W. Goethe Universität, Frankfurt am Main 2020.

⁴⁷ T. Piazza, M. Croce, *Che cosa sono le fake news*. Carocci, Roma 2022.

⁴⁸ C. H. Achen, L. M. Bartels, *Democracy for Realists: Why Elections Do Not Produce Responsive Government*. Princeton University Press, Princeton 2016.

⁴⁹ N. Levy, J. Savulescu, *After the Pandemic: New Responsibilities*, in "Public Health Ethics", 14, 1989, 2020, pp. 1-14.

⁵⁰ C. Berg, *Sustainable Action: Overcoming the Barriers*, Routledge, New York 2020.

⁵¹ P. Hunter, *The communication gaps between scientists and public: More scientists and their institutions feel a need to communicate the results and nature of research with the public*, in EMBO Reports, 17, 11, 2016, pp. 1513-1515.

tions have for long recognized and perhaps already fulfilled this need in the field, for instance in the case of UNESCO through the “learning objectives”. This document establishes the goals of sustainable education: “The sustainability key competencies represent what sustainability citizens particularly need to deal with today’s complex challenges”⁵². About the goals of education for sustainable development (ESD), the document states:

ESD aims at developing competencies that empower individuals to reflect on their own actions, taking into account their current and future social, cultural, economic, and environmental impacts, from a local and global perspective. Individuals should also be empowered to act in complex situations in a sustainable manner, which may require them to strike out in new directions; and to participate in socio-political processes, moving their societies towards sustainable development⁵³.

In the same way, at the core of WWF’s (World Wide Fund for Nature) activities, there are environmental education programs, such as Panda Passport or Earth Hour, just as there are in the case of UNDP (United Nations Development Programme) with the GEF Small Grants Programme (SGP). The same commitment to environmental education is pursued by many other organizations of this kind, such as Greenpeace, as well as by smaller ones, like 350.org or Earthjustice.

However, the impact of these initiatives on supranational entities and states remains limited, yielding relatively modest outcomes⁵⁴. So, despite the meritorious work done by these aforementioned organizations, this type of responsibility as “epistemic facilitators” can only belong to national states and supranational institutions. This is because only these subjects have the strength and authority to effectively counter the spread of fake news on climate change, especially when deliberately created by other actors (corporations, information agencies, and political parties). At the same time, as asserted by several authors⁵⁵ only states and

⁵² UNESCO, *Education for sustainable development goals: Learning objectives*, 2017. Available at: <http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>, p.11.

⁵³ Ivi, p. 7.

⁵⁴ G. Montani, *Antropocene, nazionalismo e cosmopolitismo*. Mimesis, Milano-Udine 2022.

⁵⁵ N. Oreskes, E. M., Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. A&C Black, Edinburgh. 2010; M. E. Mann, *The Hockey Stick and the Climate Wars: Dispatches from the Front Lines*. Columbia University Press, New York 2013; N. Klein, *This changes everything: Capitalism Vs. The Climate*. Simon and Schuster, New York 2015; G., Wagner, M.L. Weitzman, *Climate Shock: The Economic Consequences of a Hatter Planet*. Princeton University Press, Oxford 2016.

international institutions can clarify the vast amount of information and disinformation on climate change that individuals must deal with. These scholars highlight the importance of these entities in both managing information and upholding the integrity of climate science. Within the context of their role as “epistemic facilitators”, states and supranational institutions have the duty to engage with climate science conscientiously and comprehensively. This engagement is crucial to ensure the accurate dissemination of information to the citizens and consumers.

Recovering the definition of “epistemic responsibility” by Miranda Fricker, the duty of states and institutions is not only to educate individuals about sustainability but also to actively counter the phenomenon of climate change. States and institutions must adopt evidence-based policies, supporting climate agreement and taking decisive action to reduce greenhouse gas emissions. But how can they do that? By actively aligning themselves with the goals and commitments set forth in recent supranational agreements and pacts related to climate change. This includes not only recognizing the importance of these agreements but also taking concrete and meaningful actions to fulfill their obligations and contribute to global sustainability. By proactively participating in the pursuit of goals outlined in agreements like the Glasgow Climate Pact, the Global Methane Pledge, or the Race to Zero Campaign, governments have the potential to transform “sustainability” from a mere rhetorical expression into a tangible and achievable reality. This involves not only acknowledging these commitments but also implementing comprehensive and effective strategies to make genuine progress towards a more sustainable world. Realizing this goal hinges on states forging collaborative partnerships with influential supranational institutions actively involved in the fight against climate change. These include institutions such as the United Nations Framework Convention on Climate Change (UNFCCC), the European Union (EU), the African Union (AU), the World Health Organization (WHO). By working hand-in-hand with these organizations, governments can harness collective expertise and resources, amplifying their impact in the battle for climate change mitigation and adaptation. States and international entities are the only two actors holding epistemic and moral responsibility to combat individuals’ ignorance regarding climate change and sustainability. Their role is pivotal in addressing climate change, both through the dissemination of accurate information and the development and implementation of climate policies. Their collaborative efforts are crucial for advancing green policies and achieving global sustainability goals in the face of the climate crisis.

Conclusion

In this paper, I have explored the epistemic responsibilities and obligations of both individuals and institutions regarding climate change and sustainability. In the definition of epistemic responsibility⁵⁶ I mentioned in the Introduction, individuals and institutions bear a moral obligation to seek accurate information on global challenges, employing critical thinking but also using knowledge ethically for informed decision-making and societal well-being.

In this article, I have demonstrated that while this can be applied to states and institutions in addressing climate change, the same cannot be easily asserted for citizens and consumers. In the case of citizen-consumers, the epistemic responsibility is comparatively lower in contrast to that of institutions. Individuals may have cases of excusable ignorance due to the abundance of information, the diffusion of disinformation, and the low level of education. On the contrary, institutions, such as states and supranational organizations, have a higher epistemic burden and should strive to avoid factual ignorance.

Institutions may play a crucial role as “epistemic facilitators” by effectively disseminating information and guiding citizens toward informed action. The current state of education regarding sustainability hinders comprehensive understanding. This is the reason why the efforts of organizations such as UNESCO or WWF in promoting education for sustainable development are commendable, therefore an ongoing improvement is required. It is the responsibility of Institutions to simplify information, promoting epistemic clarification of what a sustainable way of life is. However, these sustainability education initiatives must be accompanied by active policies to contrast climate change. It is only through such actions that states, and major intergovernmental institutions can fulfill their epistemic responsibility and perhaps, create a more sustainable world.

Bibliography

- C. H. Achen, L. M. Bartels, *Democracy for Realists: Why Elections Do Not Produce Responsive Government*. Princeton University Press, Princeton 2016.
<https://doi.org/10.2307/j.ctvc7770q>.
- D. Bell, *Global climate justice, historic emissions, and excusable ignorance*, in “Monist”, 94, 3, 2011, pp. 391-411.
- C. Berg, *Sustainable Action: Overcoming the Barriers*, Routledge, New York

⁵⁶ M. Fricker, *Epistemic Injustice: Power and the Ethics of Knowing*. Clarendon Press, New York 2007.

- 2020.
- S. Caney, *Climate Change and the Duties of the advantaged*, in “Critical Review of International Social and Political Philosophy”, 13, 1, 2010, pp. 203-28. <https://doi.org/10.1080/13698230903326331>.
- R.M. Chisholm, *Theory of Knowledge*. Prentice Hall, New York 1977.
- L. Code, *Epistemic Responsibility*, Brown University Press, Brown 1987.
- Cook, J., et al. *Consensus on consensus: A synthesis of consensus estimates on human-caused global warming*, in “Environmental Research Letters”, 11, 4, 2016, pp. 1-7. <https://doi.org/10.1088/1748-9326/11/4/048002>.
- D. Dennett, *Information, Technology, and the Virtues of Ignorance*, in “Daedalus”, 115, 3, 1986, pp. 135-153.
- European Commission, *Proposal for a Regulation of the European Parliament and of the Council establishing a common framework for media services in the internal market (European Media Freedom Act) and amending Directive 2010/13/EU*. 2022. Available at: [https://ec.europa.eu/transparency/documents-register/detail?ref=SWD\(2022\)286&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=SWD(2022)286&lang=en).
- European Union, *Standard Eurobarometer 99 – Spring 2023*, 2023. Available at: <https://europa.eu/eurobarometer/surveys/detail/3052>.
- Eurostat, *Living Conditions in Europe – Poverty and Social Exclusion*. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Living_conditions_in_Europe-poverty_and_social_exclusion#Key_findings, 2021.
- J. Fetzer, *Information: Does it Have To Be True?*, in “Minds and Machines”, 14, 2, 2004, pp. 223-229. <https://doi.org/10.1023/B:MIND.0000021682.61365.56>.
- M. Fricker, *Epistemic Injustice: Power and the Ethics of Knowing*, Clarendon Press, New York 2007.
- L. Floridi, *La quarta rivoluzione. Come l'infosfera sta trasformando il mondo*, Raffaele Cortina Editore, Milano 2017.
- Y.N. Harari, *Homo Deus: A Brief History of Tomorrow*, Random House, Manhattan 2016.
- A. Hartford, *How Much Should A Person Know? Moral Inquiry and Demandingness*, in “Moral Philosophy and Politics”, 6, 1, 2019, pp. 41-63. <https://doi.org/10.1515/mopp-2018-0056>.
- P. Hunter, *The communication gaps between scientists and public: More scientists and their institutions feel a need to communicate the results and nature of research with the public*, in EMBO Reports, 17, 11, 2016, pp. 1513-1515. <https://doi.org/10.15252/embr.201643379>.
- IPCC, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2023. Available at: <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>.
- N. Klein, *This changes everything: Capitalism Vs. The Climate*, Simon and Schuster, New York 2015.
- H. Kminek, *Concept of Education in Education for Sustainable Development – The Necessity of Exposing the Uncertainty*, in Kminek, H., Bank, F., Fuchs, L. (eds.), *Kontroverses Miteinander. Interdisziplinäre und Kontroverse Positionen zur Bildung für eine nachhaltige Entwicklung*, Johann W. Goethe Universität, Frankfurt am Main 2020.

- H. Kornblith, *Justified Belief and Epistemically Responsible Action*, in “The Philosophical Review”, 92,1, 1983, pp. 33-48. <https://doi.org/10.2307/2184520>.
- A. Leiserowitz, et al., *Climate Change in the American Mind: November 2019*, 2019. Available at: <https://climatecommunication.yale.edu/publications/climate-change-in-the-american-mind-november-2019/>.
- N. Levy, J. Savulescu, *After the Pandemic: New Responsibilities*, in “Public Health Ethics”, 14, 2, 2020, pp. 1-14. <https://doi.org/10.1093/phe/phab008>.
- M. E. Mann, *The Hockey Stick and the Climate Wars: Dispatches from the Front Lines*. Columbia University Press, New York 2013.
- J. Marlon, et al., *Yale Climate Opinion Maps 2021*. 2022. Available at: <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>.
- G. Montani, *Antropocene, nazionalismo e cosmopolitismo*. Mimesis, Milano-Udine 2022.
- É. Morena, *Fin du monde et petit fours. Les ultra-riches face à la crise climatique*, La Découverte, Paris 2023.
- N. Oreskes, E. M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. A&C Black, Edinburgh 2010.
- G. Pearce, *Greenwash: Big Brands and Carbon Scams*. Black Inc., Melbourne 2012.
- I. Persson, J. Savulescu, *Unfit for the future: The Need for Moral Enhancement*. Oxford University Press, Oxford 2012.
- T., Piazza, M. Croce, *Che cosa sono le fake news*. Carocci, Roma 2022.
- G. Pitron, *The Dark Cloud: how the digital world is costing the Earth*. Scribe, London 2023.
- F. Pongiglione, C. Martini, *Epistemic Harm Social Consequences: A Reply to Torcello on Climate Change Disinformation*, in “Social Epistemology Review and Reply Collective”, 11, 11, 2022, pp. 42-48.
- B. Purvis, Y. Mao, D. Robinson, *Three pillars of sustainability: in search of conceptual origins*, in “Sustainability Science”, 14, 3, 2019, pp. 681-695. <https://doi.org/10.1007/s11625-018-0627-5>.
- N. Rescher, *Ignorance: On the wider implications of deficient knowledge*, University of Pittsburgh Press, Pittsburgh 2009. <https://doi.org/10.2307/j.ctt6wr89>.
- G. Rosen, *Culpability and Ignorance*, in “Proceedings of the Aristotelian Society”, 103, 1, 2003, pp. 61-84. <https://doi.org/10.1111/1467-9264.00128>.
- A. Tanesini, *The Mismeasure of the Self. A Study in Vice Epistemology*, Oxford University Press, Oxford 2021.
- L. Torcello, *Climate Change Disinformation and Culpability: A Sympathetic Reply to Pongiglione and Martini*, in “Social Epistemology Review and Reply Collective”, 11, 9, 2022, pp. 29-37.
- UNESCO, *Education for sustainable development goals: Learning objectives*. 2017 Available at: <http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>.
- S. Vanderheiden, *The Obligation to Know: Information and the Burdens of Citizenship*, in “Ethical Theory and Moral Practice”, 19, 2, 2015, pp. 297-311. <https://doi.org/10.1007/s10677-015-9618-0>.
- G. Wagner, M.L. Weitzman, *Climate Shock: The Economic Consequences of a Hatter Planet*. Princeton University Press, Oxford 2016.

- A.E.J. Wals, *Between knowing what is right and knowing that is it wrong to tell other what is right: On relativism, uncertainty and democracy in environmental and sustainability education*, in “Environmental Education Research”, 16,1, 2010, pp. 143-151. <https://doi.org/10.1080/13504620903504099>.
- J.W. Wieland, *Responsibility for Strategic Ignorance*, in “Synthese”, 194, 11, 2017, pp. 4477-4497. <https://doi.org/10.1007/s11229-016-1145-6>.