

## Epistemological Probabilism and the Ethics of Equilibrium: Rethinking Environmental Policy in a Complex World

Probabilizm epistemologiczny i etyka równowagi:  
Rewizja polityki środowiskowej w złożonym świecie

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**Abstract:** The relationship between human epistemology and environmental ethics has long influenced formulation of policies aimed at mitigating ecological crises. Among these, epistemological probabilism, an approach that acknowledges the uncertainty and variability inherent in predicting environmental outcomes, has profoundly shaped debates on environmental policy. This paper argues that probabilistic interpretations of ecological data, often characterized by opposing claims and speculative forecasts, contribute to policy indecision and hinder the adoption of coherent and effective environmental strategies. These divergences can result in either overly cautious or insufficiently responsive measures, both of which have adverse effects on global ecological health. To address these challenges, the paper proposes an *ethics of equilibrium*, a dynamic and context-sensitive ethical framework designed to navigate the uncertainties inherent in environmental decision-making. By emphasizing balance, adaptability, and context-specificity, this framework advocates for policies that align with the immediate and long-term ecological realities of particular societies while fostering global sustainability. The *ethics of equilibrium* rejects one-size-fits-all solutions and instead encourages a pragmatic yet ethically grounded approach to environmental governance. Through a critical examination of probabilistic reasoning in environmental epistemology, this paper highlights the need for an integrated ethical and policy model that transcends binary or static paradigms. By embedding flexibility and equilibrium within environmental policies, societies can better address the complexity and unpredictability of ecological challenges while remaining committed to ethical stewardship of the planet.

**Keywords:** epistemological probabilism, environmental ethics, environmental policy, ethics of equilibrium, sustainability

**Streszczenie:** Relacja między epistemologią, a etyką środowiskową od dawna wpływa na formułowane polityki mające na celu łagodzenie kryzysów ekologicznych. Wśród nich epistemologiczny probabilizm, czyli podejście, które uznaje niepewność i zmienność jako nieodłącznie związane z przewidywaniem skutków środowiskowych, w znacznym stopniu ukształtował debaty na temat polityki środowiskowej. Autorzy niniejszego artykułu

argumentują, że probabilistyczne interpretacje danych dotyczących środowiska, często prezentujące sprzeczne twierdzenia i spekulatywne prognozy, przyczyniają się do braku zdecydowania w polityce i utrudniają wprowadzanie spójnych i skutecznych strategii środowiskowych. Takie rozbieżności mogą prowadzić do wdrażania rozwiązań, które są zbyt ostrożne, czy też niewystarczająco reaktywne, a każda z tych rozbieżności ma negatywny wpływ na dobrostan środowiska naturalnego na świecie. Aby sprostać tym wyzwaniom, niniejszy artykuł przedstawia propozycję przyjęcia *etyki równowagi* (*ethics of equilibrium*), czyli dynamicznych i zależnych od kontekstu ram etycznych tworzonych w celu ułatwienia poruszania się po obciążonym niepewnością obszarze podejmowania decyzji środowiskowych. Podkreślając potrzebę zachowania równowagi, możliwości adaptacji i dostosowania do kontekstu, ramy te pozwalają na dostosowanie polityk do średnio i długookresowych realiów ekologicznych poszczególnych społeczeństw, jednocześnie wspierając zrównoważony rozwój na świecie. Etyka równowagi odrzuca rozwiązania uniwersalne i zamiast tego zachęca do pragmatycznego, ale zarazem etycznie umocowanego podejścia do zarządzania środowiskiem. Poprzez krytyczną analizę rozumowania probabilistycznego w epistemologii środowiskowej, niniejszy artykuł podkreśla potrzebę wprowadzenia zintegrowanego modelu etycznego i politycznego, który wykracza poza binarne lub statyczne paradygmaty. Poprzez oparcie polityk środowiskowych na zasadach elastyczności i równowagi, społeczeństwa mogą lepiej radzić sobie ze złożonością i nieprzewidywalnością wyzwań ekologicznych, pozostając jednocześnie w zgodzie z etycznym podejściem do zarządzania planetą.

**Słowa kluczowe:** probabilizm epistemologiczny, etyka środowiskowa, polityka środowiskowa, etyka równowagi, zrównoważony rozwój

## Introduction

The notion of probabilism is prominent in physical sciences and it is used to convey the idea of uncertainty. As used in this paper, the concept has a similar meaning. Beyond expressing the idea of uncertainty or inexactitude, it also refers to the lack of unanimity on the positions scholars hold regarding reality. In other words, the fact that scholars do not agree on a particular issue, shows that the various conceptions they hold either lack the truth or carry only part of it. This kind of situation makes it difficult to agree on a principle of action.

Chisholm Hugh (1911, 376) conceives probabilism as a principle of action grounded on the premise that, when an individual is not sure if an action will be permissible or non-permissible, s/he may rely on probable opinion for its permissibility even though a more probable opinion might call it non-permissible. Hugh further identifies two kinds of epistemic probabilism, namely, intrinsic probability and extrinsic probabilism. According to him, if an opinion has in its favour, sound and logical arguments, it can be described as intrinsic probabilism. But if an opinion has in its favour the support of recognized authorities, it is described as extrinsic probabilism (Hugh 1911, 376). What this means is that probabilism entails undecidedness or

lack of consensus among scholars on any epistemological issues. This points to the undecidedness as well as the lack of consensus among scholars, i.e., environmental ethicists, philosophers of the environment, and policymakers, as to the right approach to maintaining an ecological balance between humans and other elements of the environment.

Environmental probabilism, therefore, refers to a condition where the characteristics of a given environment provide clues as to the probability of certain outcomes. In other words, the environment presents an entity with what is possible and with choices that could likely be made under particular circumstances. Similarly, Alisdair, Rogers, Noel, Castree and Rob, Kitchin (2013) refer to epistemological probabilism as the idea that humans can choose how they interact with the physical environment, though not freely due to the fact that nature has made some choices more likely than others. What this means is that, in the absence of certitude, absolute truth, or certainty of knowledge, plausibility or what Karl Popper (1963) described as truth-likeness becomes the yardstick or criterion for determining a line of action to be taken.

As regards the present topic of discourse, it is implied that the divergent positions held by scholars regarding how humans should relate to the environment are affecting the efficacy of environmental policy. Since the various positions are making claims to having true knowledge regarding the best principles for the maintenance of the ecosystem, it is difficult for policymakers who rely on these epistemological positions to adopt principles of action. This throws up a lot of ethical questions bordering on the right environmental policies to adopt for the sustenance of environmental virtues. For example, are the environmental policymakers to adopt one position at the expense of others? What criteria will they use to determine the best of the many available knowledge bases? Should they adopt the traditional knowledge or the Western-scientific type with all its prototypes? Should they adopt all available knowledge bases? Should they do so, will it not result in arbitrariness? The problem is even made worse by the sceptic angle of the debate that supposes that environmental crises are normal phenomena that are part of nature or do not exist at all. This kind of epistemic problem makes environmental policy-making some sort of a herculean task.

The paper begins with a demonstration of the relationship between epistemology and the environment and epistemological prototypes for environmental ethics. Next, the extent of the impact of different epistemic claims on environmental issues will be unveiled, and finally, the difficulties that epistemological probabilism ensues for environmental policy-making and possible ways of confronting such difficulties will be unveiled.

## **1. Correlation between Epistemology and the Environment**

Epistemology deals with the theory of knowledge or truth claims about the nature of reality. Whatever is related to knowledge falls within the realm of epistemology. Every discipline has its epistemic foundation, which determines the truth claims about it. As an emerging discipline with remarkable attention across the globe, environmental ethics, in whichever forms it appears, is the product of the knowledge claims behind it. The knowledge claims determine, to a large extent, the interpretation of the environment and the mapping of the best attitude towards it. This line of thought is not difficult to understand because whatever is considered as the environment by a person or group of persons underpins or determines the interpretation that is derived from it. A good knowledge of one's surroundings is a prerequisite for a proper understanding of one's relationship with his/her environment and the best possible ways to relate or interact with it. Being human in contemporary times is inclusive of how we relate to our environment and the various elements that also inhabit our space (Enyimba 2019a, 126-131). This is the reason many people who seem to lack the knowledge of the symbiotic relationship that ought to exist between humans and their environment tend to mismanage the virtues of the environment by their hostility and mistreatment of these non-human elements of the environment. Environmental epistemology, which can also be referred to as epistemology of the environment, is an aspect of the study on the nature of knowledge and the environment that is concerned with the examination and understanding of the correlation between epistemology and the environment as well as with different epistemological theories and their relevance to the environment.

## **2. Exposing the Epistemological Prototypes for Environmental Ethics**

Since the emergence of Environmental Ethics, scholars have attempted to underscore their opinions regarding its nature and scope. This is a representation of the different knowledge bases on environmental ethics because, as it has been noted, "environmental ethics takes up epistemology insofar as it concerns questions about how one would know what the relation between human beings and nature is or what value nature has in itself" (Tfreeman.net 2021). These submissions are responsible for the diversified understanding given to the field of environmental ethics. Beyond that, the concern regarding the impact of the environment has come with divergent propositions about the extent of its consequences, leading many to environmental scepticism. The concern of this section is two-fold: an exposition of different conceptions of the relations of humankind to the environment and the analysis of the extent of the consequences of human activities on the environment.

## **Epistemological Conceptions for Environmental Ethics**

Epistemological conceptions for environmental ethics are diverse in nature. However, this work classifies them into two broad categories, namely, anthropocentrism and non-anthropocentrism. This classification simply reveals the extent of moral considerability in matters of environmental ethics. Anthropocentrism limits moral consideration for environmental ethics to human beings, that is, the *Anthropocene*, while non-anthropocentrism extends moral consideration beyond human beings and allows room for all non-human beings. It is worthwhile to briefly examine these epistemological positions in order to understand their peculiar, inherent characteristics.

Anthropocentrists emphasize human centrality because humans are the only species who have an intrinsic value and a moral standing. Two versions of anthropocentrism must be distinguished in this context, that is, strong and weak anthropocentrism. Strong anthropocentrism presupposes the despot-like attitude of human beings towards nature, while weak anthropocentrism includes environmental values within the anthropocentric purview.

Non-anthropocentrists claim that other living things as well as nature are intrinsically valuable. (Sarkar 2021, 70-71). This theory of environmental ethics has many other sub-theories, namely, animal rights, biocentrism, ecocentrism or holism. The concept of animal rights calls for a moral consideration of animals which demands that animals be treated with respect and as having intrinsic value of their own (Singer 1975; Regan 1983). It is predicated on the idea that the rights of nonhuman and human animals are, basically, the same (Lu, Bayne and Wang 2013, 351). Biocentrism holds that human being's attitude towards nature must be evaluated on the basis of how they affect living beings including humans and other individual species (Sarkar 2021, 71; Taylor 2011). According to biocentrists, apart from human individuals, other individual organisms are under the moral purview. In other words, biocentrism "believes that humans along with other species should be seen as parts of the interdependent life on Earth" (Smith 2018, 46). Ecocentrism or holism locates value on the entire components of the ecosystem, human, non-human, living and non-living alike. Here, the emphasis is on the ecosystem as a whole. Thus, all the living and non-living components of the ecosystem constitute members of the ecological community. Ecocentrism holds that people's attitude towards nature should be evaluated on the basis of how they affect species, the whole ecosystem, but not merely individual living beings (Sarkar 2021, 71).

### **3. Extent of the Impact of Environmental Crises**

There is a serious debate raging on the certainty of environmental crises as proposed by its epistemological heirs. One of the leading excoitations on the certainty of the impact of environmental crises comes from the environmental sceptic Bjørn Lomborg (2001), who has aired out his views regarding the supposed impact of environmental crises. Contrary to what had been estimated by national and international statistics, Lomborg notes that we are not running out of renewable energy or natural resources; fewer people were starving; people lived longer than yesteryear; the total global warming impact will not pose a devastating problem for our future, and we will not lose 25 to 50 percent of all species in our lifetime since we are losing probably only 0.7 percent; and acid rain does not kill the forest etc. (2001, 2). Lomborg concluded that all humankind's lot has actually improved in terms of almost all measurable indicators.

The impact of climate change is an important area that is replete with uncertainties. Projections regarding the effects and impact of climate change showcase great uncertainties. It is on account of this that Mehta et al. have submitted: "Uncertainties in climate projections are particularly high, and the Intergovernmental Panel on Climate Change (IPCC) has moved away from an initial confidence in the ability to deal with uncertainties in the climate system towards acknowledging, accepting and embracing it" (2019, 1534). They went ahead to identify three types of uncertainties associated with climate change issues, namely, ecological or ontological uncertainties, i.e., ecological systems characterized by a high degree of variability and disequilibrium dynamics and thus having unknown effects; knowledge or epistemic uncertainties, which refers to indeterminate knowledge about changes and their impacts; and uncertainties linked to larger political economy conditions (2019, 1535). In fact, such uncertainties are evident in other supposed environmental problems, which boost the position of environmental sceptics.

### **4. Impact of Epistemic Claims on Environmental Policy Making**

The divergent conceptions regarding the best practices for environmental ethics have made coordinating efforts at caring for the environment difficult. Human beings have remained key actors in environmental ethics as they determine the epistemic stronghold to forge environmental ethics. The lack of agreement on the knowledge of how best to care for the environment makes environmental efforts futile. It had already been noted that environmental ethics boasts of schools such as anthropocentrism, animal-centred ethics, life-centred ethics, or holism, as the case may be. The variety of schools makes it clear, that scholars do not agree,

especially on the scope of human responsibility towards others (Yang 2006, 26). This makes it difficult to know which epistemic theory best treats environmental concerns. Should the care for the environment be done only for the good of humankind or animals or all living beings or all components of the ecosystem, living and non-living alike? When the anthropocentric approach is adopted, how does this impact other life forms? The same questions may arise when we limit ethics to animal life. Do we equate human life with animal life? What happens to plants that also have life? If we limit our concern to only living beings in the ecosystem, what do we make of non-living components? Is it justifiable to destroy mountains, rocks and other non-living aspect of the ecosystem? Whichever approach is adopted, there still remain questions to answer.

The other impact that epistemic probabilism has on the environment bothers on the unstable and inexact nature of the effect of climate change. It is worthwhile to note that the problem has been complicated more by the fact that there are sceptics about the issue. Environmental skepticism, according to Jacques, is a “counter movement based on the premise that global environmental challenges have been grossly exaggerated, misguided or maliciously fabricated” (2009, 1). Without even looking at the sceptic debate(s) on climate change, scientists and, indeed, environmental ethicists have been inconsistent about the nature of impact associated with climate change. Attfield highlights this when he writes: “Certainly, there are scientists who offer rival explanations of global warming, but their theories remain highly speculative...” (2014, 203). Northcott nails it all when he states: “But great uncertainties remain in the prediction of the effects of climate change” (2001, 5). Global warming is an important aspect of the climate change discourse assuming that the release of greenhouse gases such as carbon dioxide, methane, and chlorofluorocarbons (CFCs), results in the rise of temperatures through the greenhouse effect. There is no consensus as to the cause of global warming, even though the consequences for the present and future generations are inevitable. The speculative expressions in the reports of the Intergovernmental Panel on Climate Change (IPCC) across the years have given the climate change sceptics more reasons to doubt human responsibility for it as can be seen from the following quotation:

“Besides, while not quite everyone agrees that human activity is the main cause of these increases, the vast majority of scientists agree that this is overwhelmingly likely, and this belief is reflected in reports of the Intergovernmental Panel on Climate Change (IPCC). In 1995, IPCC affirmed that human responsibility for global warming was ‘more likely than not.’ By 2001, they declared it ‘likely’, and by 2007 ‘very likely’. By 2013 they concluded that it is ‘extremely likely’” (Attfield 2018, 107).

The above expressions only confirm the uncertainty in the knowledge base concerning the cause of global warming. This allows opening for the sceptics to strengthen their arguments. Who knows, maybe further expression may be something like “extremely likely”. It is disheartening that even the IPCC is aware of these uncertainties in many climate-issues and has decided to take this as a permanent normal by holding thus: “there are uncertainties that we will never know and that the best response is to understand and cope with them” (Mehta, Adam and Srivastava 2019, 1530). This means the climate change agenda is, to some extent, pursued with epistemic assets that are only probable.

In addition to the foregoing challenges, the excogitations of Jim Moran on the challenges of environmental philosophy are pertinent here. Moran identified three major challenges, namely, overcoming anthropocentrism, our place in nature and defining moral status (2012, 9-11). The first challenge is on the possibility of advancing environmental ethics that will be devoid of anthropocentric trappings. The second challenge bothers on pegging the place of human beings in nature, that is, whether human beings are part of nature or not. Finally, there is the challenge of moral status and what defines it. Different perceptions are associated with the different critical areas pinpointed by Moran. The divergent positions that could possibly emerge from epistemological productions of environmentalists could breed confusion as to the most appropriate position to adopt. This alone is capable of hampering progress in possible environmental policies and policy making process.

## **5. Locating a Way Forward**

There is no gainsaying the fact that identifying the feasible approach to environmental care has remained a herculean task. In the face of the raging uncertainties regarding environmental issues as evident in the polarized positions already highlighted, it is only worthwhile to track a way out. In spite of the conflicting epistemological claims that exist, it will be insensitive to keep a blind eye to the reality of environmental challenges rocking the globe. While caution needs to be taken about exaggerating the impact of environmental challenges, it is pertinent to underscore here that arriving at a unanimous approach may be a distant dream to come true. This is because not all societies share the same magnitude of environmental challenges such that what could work for one society may not work out for others. It is worthwhile to note that mapping the best approach to environmental problems is not the sole responsibility of ethical philosophers; it requires a multivalent approach. It is on account of this that this paper suggests that environmental ethics should shy away from limiting its concerns to the rhetoric of anthropocentrism and non-anthropocentrism as the case may be. Such discourses always



leave the engagement with conflicting positions that hardly provide any headway. Thus, this paper proposes an ethics of equilibrium to ensure that environmental issues are properly catered for, and right from the policy formulation state.

The ethics of equilibrium proposed here is based on the principle of balance. Balancing here entails that each society evolves environmental policy that properly handles its peculiar challenges. It is a fact that environmental challenges differ across cultures. These differences may make certain approaches more appropriate than others. This approach will better locate environmental challenges in their peculiarity than imagining a global approach. The idea of balance is pertinent too because it helps to contain the suspicion of most environmental sceptics who view most of the existing environmental policies as ploys to perpetrate the injustice within the globe that have left some other continents richer than others. Finally, the ethics of equilibrium advocated here is dynamic and allows societies to adjust to different approaches as the times and environmental challenges demand. This approach also takes into cognizance the reality of nature as a self-regulating system, as it underscores that there are limits to what society can do regarding environmental challenges. Achieving an equilibrium ethics will require the collective efforts of all stakeholders for an encompassing environmental agenda. This is similar to, but different from what some scholars have referred to as environmental eclecticism, i.e., an approach that harnesses the positive aspects of each environmental ethical theory to yield sustainability and development of the environment or symbiotic interaction between humans and other elements of the environment (Ephraim and Maduka 2020, 150; Enyimba 2019b,153). Indeed, ethics of equilibrium discussed in this work differs remarkably from the idea of environmental eclecticism. Whereas ethics of equilibrium on the one hand, advocates for balance among different and diverse theories and approaches to confronting environmental challenges and policy issues facing humanity, environmental eclecticism, demands the appropriation of the viable aspects of different and diverse theories and approaches in an attempt to proffer solutions to the challenges and policy problems facing the human environment. In other words, while it is important to identify, select and utilize aspects of environmental theories and approaches that are relevant to solving specific environmental ethical and policy problems in the society, the manner of applying them is equally important, hence, the need for balance. This will ensure complementarity, where no relevant theory or approach is excluded nor prioritized, thus fostering environmental harmony.

## Conclusion

This work took as its starting point, the probabilistic nature of the epistemic foundation of environmental ethics. It also expressed the uncertain dimensions of the epistemic fabrics of environmental ethics, a phenomenon that has resulted in serious problems as regards envisioning a feasible environmental policy. References were made to the conflicting positions of the knowledge bases of environmental theories which breed confusion as to the most appropriate approach to adopt. Beyond that, attention was also drawn to the uncertain submissions regarding the impact of environmental crises as has been noted in the case of climate change. Obviously, these uncertainties have made it difficult to imagine a univocal environmental approach for the relationship between humans and nature. In the end, the work has proposed an ethics of equilibrium which in its dynamic and flexible nature will always seek balance by ensuring that societies adopt environmental approaches that are peculiar to the situations in given time. Emphasis must be made at this point that while this approach navigates epistemic uncertainties, it does not dovetail into relativism or inaction. Instead, the ethics of equilibrium, integrates the precautionary principle in decision-making despite uncertainties. It does this by offering a normative foundation that is strong enough to counter the risk of environmental inaction due to epistemic hesitation.

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