

SUBMITTED PAPER

Prospection as a Sustainability Virtue: Imagining Futures for Intergenerational Ethics

Susana Cadilha · Sofia Guedes Vaz

Accepted: 24 July 2023 / Published online: 16 August 2023

© The Author(s) 2023

Abstract This paper explores the relevance of intergenerational ethics in the context of climate change and argues that virtue ethics provides a suitable framework for addressing these ethical concerns. We suggest the inclusion of a new virtue, called *prospection*, which involves cultivating the ability to think and care deeply about the future, navigate its inherent uncertainties constructively, and ensure the availability of sustainable options for future generations. We suggest that thinking and imagining sustainable futures trigger good dispositions towards future humans, non-humans and nature and that ought to be part of the definition of a good life. We posit that fostering this disposition can inspire and motivate present actions that effectively mitigate climate change. Virtue ethics implies an element of timelessness in morality because the future tends to be there by default; with *prospection*, the future will be there by design, reinforcing its importance in intergenerational ethics.

Keywords Intergenerational ethics · Climate change · Prospection · Virtue ethics · Future

☑ Susana Cadilha · Sofia Guedes Vaz
IFILNOVA, Nova University of Lisbon, Lisbon, Portugal

E-Mail: susanacadilha@fcsh.unl.pt

Sofia Guedes Vaz

E-Mail: sofia.vaz@cairo.unl.pt

Sofia Guedes Vaz

NOVA Cairo at the Knowledge Hub of Universities, Cairo, Egypt



1 Introduction

Climate change is already impacting our planet and it is expected that it will have an even wider range of impacts in the future, such as more frequent and severe weather events, rising sea level, changes in agriculture, extinction of species, human health impacts, economic impacts, forcing migrations, just to name a few. Those impacts are already felt widely, and will continue affecting especially vulnerable populations, low-income communities, indigenous people, most developing countries (who often contributed least to the problem), and future generations. The resulting harm to people and the planet raises ethical questions about our moral responsibility, to our fellow humans, to other species, to the planet itself and to future generations. Climate change ethics implies therefore thinking about questions of intra- and interspecies, intra- and intergenerational justice. This paper focuses only on problems of intergenerational ethics raised by climate change.

In debates on intergenerational ethics, most concepts and institutions are often discussed within a deontological or utilitarian framework (Gardiner 2021; Gosseries & Meyer 2009; Page 2006; Dobson 1999; Visser 't Hooft 1999; De-Shalit 1995; Partridge 1981). Inquiries into moral duties towards future generations, the welfare of future persons, and equal consideration of the interests of future people provide good illustrations of this general preference for deontology and utilitarianism. In this paper the canvas theme is exploring how environmental virtue ethics can specifically deal with moral relations that have the future in view.² We will consider the problem of intertemporal moral relations both from a *practical angle* and against a *theoretical background*. The practical problem is climate change and its consequences for people and the planet in the future, and the theoretical background is environmental virtue ethics.

Environmental virtue ethics has been developed for the past 40 years identifying and developing virtues that make us think, feel, and act in a caring way towards the environment. Many virtues have been proposed, both as an extension of anthropocentric virtues (caring, responsibility, friendship) and as new virtues explicitly created to answer specific environmental conundrums (ecological citizenship, stewardship). Even if virtues have, by default, an impact not only in the present, but also in near future, and sometimes further in the future, they are all virtues of the present. As Aristotle, the Stoics and then Cicero remarked, there are emotions for the present and others specific for the future (e.g. joy is a present emotion while desire is an emotion geared towards the future; fear is a present emotion, caution is related to the future). In this paper, we will also follow this sort of distinction and propose an environmental virtue specifically pitched to the future. Virtues of the "present" have often and almost by default, a positive externality in the future, but we will propose a virtue specifically designed to have impact in the future. We will

² It is worth noticing that not all proponents of virtue ethics view it as a specific moral theory that must compete in the 'market' of moral theories (along with deontological and consequentialist approaches). See for instance Chappell 2020.



¹ Gardiner (2006) dubs it the "perfect moral storm", and further developed this idea in Gardiner (2011).

dub it a sustainability virtue, rather than an environmental virtue, to better mirror the embedded future that characterizes it.

We suggest that the disposition for generating and evaluating mental representations of possible sustainable futures is a virtue and we will name it - prospection - as a virtue especially apt for dealing with normative issues regarding the future. We propose that having a disposition for prospection triggers us to think and care thoroughly about the future, to deal with its uncertainty in a constructive way: not being indecisive or paralysed by not knowing how the future will unfold, and embrace it by developing an ability to adapt, to be flexible and to keep on adjusting, ensuring that a wide range of sustainable options remains open for future generations.

The remaining of the paper will paint the whole canvas, presenting and arguing for *prospection* as a sustainability virtue specially fit to intergenerational ethics. In section 2 we will begin by briefly looking at intergenerational ethics' challenges and the various ways of responding to them; in section 3 we will assess the vantage point of environmental virtue ethics; in section 4, we will look at Future Studies to help justify how, in order to face the challenges posed, the focus of any environmental virtue has to be the future, and in section 5 we will show how proposing a new virtue, *prospection*, which targets the future, is useful and necessary. In the last two sections we analyse the cognitive, emotional, motivational and moral components of this new virtue and explain what makes this virtue part of a virtuous character.

2 Intergenerational ethics

When the subjects of morality are people who do not coincide in time, a challenging set of problems arises, revealing the extent to which the concepts and principles commonly adopted in practical philosophy are not always easily adapted to intergenerational issues.³ One then faces the necessity of reconfiguring key concepts in order to assess their viability in a world order that must expand the temporal horizons of individual and collective decision-making to solve some of its most pressing problems.

Such concepts and institutions tend to emerge in debates about intergenerational justice or about the priority of the long term. The landscape of intergenerational questions includes an irregular moral topography, caused by the time lag between our present actions and decisions related to climate change and its impacts on unknown future generations; by the spatial disconnection between where the actions take place and where the impacts are felt; and because all the uncertainty that characterizes the future.

The question of justice for future generations regarding environmental issues has already been extensively discussed from different perspectives (Partridge 1981; De-Shalit 1995; Dobson 1999; Visser 't Hooft 1999; Sandler 2004; Page 2006). Unlike previous approaches, however, in this paper we do not aim to tackle the

³ Of course, intergenerational issues also arise between overlapping generations. In this paper, we will be tackling what we think is the most interesting and difficult case: the relation to future, yet-to-exist generations. We also think this is a more appropriate angle for our particular focus: climate change.



problem in terms of justice (or in terms of what we owe to future people). Even if we consider that different sorts of considerations can (and should) be part of moral thinking – considerations about justice, principles and duties, obligations and contracts, interests and consequences, virtues and vices – here we will argue that although virtue ethics is not usually considered in debates on intergenerational ethics,⁴ it may be an appropriate approach. Analysing the moral bonds between generations that do not co-exist in time through the prism of virtue ethics is not only appropriate but also provides us with useful insights to tackle the uncertainty that the future is imbedded in.

First, virtue ethics allows us to think that nature has inherent value, and this is reflected in a set of virtues that the relationship with nature itself inspires in us, such as the notion of reverence or awe. An ideal of human excellence could integrate forms of environmental sensitivity. Some contemporary virtue ethicists argue that a reinterpretation of established virtues is possible (and desirable), as gratitude, care, responsibility, friendship related to environment or the formulation of new virtues concerning our connection with the environment such as ecological sensitivity, eco-citizenship or ecological integrity. Along these lines, Paul Taylor speaks of 'respect for nature' (1986); Louke van Wensveen (2000) discusses the role of new ecological virtues such as 'earthiness' and 'attunement' to nature; and Melissa Lane (2011) revisits Plato's model of the relationship between the individual and society, redesigning the notion of civic virtue. Being concerned with nature for its own sake is another way of being indirectly concerned with the world we will leave to future generations. Second, virtue ethics allows to shift the focus from the action to the agent, from isolated actions to character formation and from acts to dispositions, and thus it contains an element of timelessness - since the focus is not what I should do, in this specific occasion, but what kind of person should I be. And yet answering this question is not merely a theoretical or abstract issue but has direct implications on action. As Matt Zwolinski and David Schmidtz observe: "virtue ethics tells us that what is right is to be a certain kind of person, a person of virtue: courageous, modest, honest, even-handed, industrious, wise. A virtuous person will, of course, express his or her virtue through action" (Zwolinski and Schmidtz 2013: 221). Moreover, virtue ethics is not only about personal values and virtues but interpersonally connected virtues. It is about THE good life (not only my good life).5

Environmental virtue ethics (EVE) has thus focused mainly on three arguments: the intrinsic value of nature; the idea that the flourishment of human lives is intrinsically linked to nature; and the idea that we should care about the future. Basically, we care about the environment because nature has value in itself and because we

⁵ A proposal by Jenkins (2016) shifts "good for a life" into "good for the species", broadening the dimensions of virtue to impact also on humanity.



⁴ Jamieson (1992) tackled it briefly claiming that virtue ethics might help changing the inappropriate existing value system to be able to deal with global warming. Gaba (1999) and Solum (2001) related virtue ethics to intergenerational ethics, but only as an example among other ethical theories and within the scope of legal questions. Virtue ethics and climate change is a widely discussed theme in the literature, from different perspectives, but here our focus is specifically intergenerational ethics.

care about "us" and "our" children.⁶ The latter, caring about future generations (and maintaining ecological integrity over time), has therefore been one of the main reasons justifying the development of all different perspectives within EVE. Most virtues proposed within EVE, even if mainly thought in the realm of the present of the agents, do in a way or another incorporate some sort of care and responsibility towards the future.

3 Environmental virtue ethics

Stunned by the behaviour of a neighbour who cut down a leafy tree in his garden and paved over it with asphalt, Thomas Hill Jr. (1983) concluded that the central task of environmental ethics was not to query whose rights had been infringed, or whose interests had been ignored, but rather: "what sort of person would do that?" Environmental virtue ethics (EVE) was then set in motion, answering not this question but its opposite: "what sort of persons should we be, so that we think, feel and act in a respectful and caring way towards the environment?". Ronald Sandler (2007) has likewise insisted on a virtue-oriented approach to environmental ethics, van Wensween (2000) pointed out the importance of a virtue language in the environmental conversation, and Hursthouse (1999, 2007) emphasised that especially for environmental virtue ethics, virtues must include feelings and emotions and that merely changing attitudes towards the environment is not enough.

In the specific case we are dealing with, when it comes to intertemporal moral relations applied to the problem of climate change, the focus may well be the same. If the central question of virtue ethics is "what kind of person do I want to become", in this specific setting it turns into "do I want to be the kind of person who cares about future generations?" and we may add that the question itself already shows virtue.

When the question pops up, when the next generations become real in our minds, when we understand that if we fail to care about the future we are also failing to care about the people living in that future, then we might think that we want to be people who are just and generous enough to care about the planet we leave for others, regardless of who those people might be, whether they have rights or what their preferences are. We want to live, perhaps even selfishly, in a state of "inward peace of mind", but the upshot is that it will benefit future people. Cultivating this state of mind in the present, and developing *prospection* as a sustainability virtue, may lead to a more favourable and sustainable situation for all in the future. This is not alien to EVE, as Phil Cafaro already observed this sort of altruism: "[e]nvironmental virtue ethics ... asks people to see their own goodness as tributary to the goodness of larger wholes and encourages them to keep their own prosperity within bounds in

⁷ David Hume (1972/1777) finishes the *Enquiry* by acknowledging that acting virtuously is a source of happiness: "Inward peace of mind, consciousness of integrity, a satisfactory review of our own conduct; these are circumstances, very requisite to happiness, and will be cherished and cultivated by every honest man, who feels the importance of them" (Hume, Enquiry, Sec. IX, Part II: 283).



⁶ By "us" we mean current generations and by "our" children we mean future generations.

order to allow the flourishing of others, both human and non-human" (Cafaro 2015: 440).

This new proposed virtue is developed exclusively around the problems of intergenerational relations, and therefore, more than an environmental virtue it is a sustainability virtue, and it ensures that our current decision-making process considers the future in an explicit way and even with high priority. Greta Thunberg and the youth movement "Fridays for future" have been asking that this priority becomes reality in policy and in our lives. It is true that we all care about the future, it is in our nature, as Rousseau (2008/1754) would say, but it is rarer that we consider it, both at a personal or political levels as a sufficient reason to determine our present acts. This is understandable as the future is uncertain and far way, and the present is here and now, and we might never even see the impacts of our future caring actions in our lifetime. At the political level, there is much discussion about the 4 - 5 years electoral cycle with the need to have policies that deliver results in a further time span. With the impacts of climate change the situation is even worse, because the time lag (20, 30, 50, 100 years) makes current policy decisions geared to the future almost invisible. It is not difficult to predict what a policy maker will do if he must decide between building a hospital or a highway vs building a water reservoir that will ensure management of water when there will be too much of it (avoiding floods) or too little of it (avoiding draughts) in the future. Furthermore, if the reservoir succeeds in the management of the fluctuations of water availability, the negative impacts will not be felt, making again almost invisible the merits of the previous decision in building it.

The environmental virtue ethical stance for dealing specifically with the future cannot be sustained with the hope that our present virtuous outlook has a positive externality in the future. It becomes obvious that the future will benefit if we develop virtues that are explicitly geared towards it. When thinking in political or moral terms about climate change, the future is already here.

Thus, our point is that when it comes to ethical questions related to climate change, the relevant issue is the choice one must make between policies that will have implications for future persons, even if nothing specific can be said about those persons, i.e. who they will be, what interests or ambitions will they have, and what will matter to them. It can be argued that we currently lack sufficient information to make those choices. People in the future may have enhanced capacities, such that their interests and concerns are significantly different from ours. But there is at least one type of question that we can coherently ask: what kind of life will be available, given this or that policy? Regardless of what people will be like in the future and what their preferences will be, leaving them a planet with more resources and greater biodiversity implies leaving them a world with more possibilities, a more open future. Regardless of what future generations may want for their lives, what we can do is to expand their possibilities of a sustainable future, i.e., leave options for a sustainable life as open as possible. Indeed, this is at base the orientation we take towards our own children in our personal lives: not knowing what kind of people they will be, we try to keep their options open, for e.g. through education.



4 Future Studies

Some aspects of the future are predictable, some are marked by incremental progress, and others remain uncertain, potentially determined by disruptive processes that could change the course of life abruptly. This is true of business and the economy (sub-prime crisis), public health (COVID 19), geopolitics (war in Ukraine), and, of course, the environment. The question though is whether these disruptive processes are truly unexpected and uncertain or whether we can gain a glimpse, an early warning (EEA 2001), into what is likely to come. If so, then we can actively develop a proactive and flexible mindset to navigate the possibilities and challenges that lie ahead.

Environmental problems like climate change, loss of biodiversity, pollution and the use/abuse of natural resources have long-term implications that require long-term thinking. Thus, it is both common and prudent in the environmental realm to think strategically and beyond the short term. Policy-wise, it is crucial to make informed decisions that anticipate the future, even if on a reality check mood, we (and Greta Thunberg) can say it has been quite unsuccessful, as one of the causes of our predicament is exactly the lack of appropriate forward-looking policies. Nevertheless, ignored or not, the precautionary principle (EEA, 2001) and future studies, including scenarization, have become the norm in environmental policy.

Environmental scenarios that try to address how the future will unfold, notwithstanding all its uncertainties, have been developed with the objective of facilitating the design of robust policies, or at least more informed policies. It became usual for international organizations, private companies, research institutions, think tanks, non-governmental organizations to work on scenarios, on imagining the future.

The long-term emission scenarios of the Intergovernmental Panel on Climate Change (IPCC) are perhaps some of the most famous of such undertakings and are assisting climate change policy by supporting international negotiations on setting long-term targets. They tend to set the scene for the UNFCCC COPs. The Paris Agreement is based on the scenario that determined that 2 degrees Celsius warming is the limit the planet can tolerate. The European Environment Agency produces outlook reports associated with its 'state of environment' reports, and its last one (EEA 2019) states that Europe faces environmental challenges of unprecedented scale and urgency. The United Nations Environment Programme (UNEP) uses its Global Environment Outlook scenarios to frame its long-term analyses (UNEP 2019). The World Bank (WB), the International Energy Agency (IEA) and the Organization for Economic Co-operation and Development (OECD) are also international organizations that produce and publish long-term projections and analyses.

Even if in general, they all agree that the future looks dim if we keep to the current course, what governments do with them might vary substantially, for several reasons, but that is another discussion that we will not tackle in this paper. We are interested in understanding and learning why did scenarios become the most common tools for thinking about the future. In general, they are of two types:



Table 1	Tarro	trinoc	of	coon	orion
Table 1	IWU	LVDCS	OΙ	SCCII	arios

	71	
	Forecasting	Back casting
Description	n Collect past and present data, analyse what might influence it and then extrapolate that data into the future, usually with mathematical models	Define what we want from the future and construct a vision, collect past and present data, determine what can be changed to attain that vision, and then develop policies or strategies to get there
Objective	To understand what the future will be like	To determine what we want the future to be like
Action	If we do not want that future, we must determine what we must do to change it	Create narratives that are strong enough to enact/ inspire strategies and policies that take us to the future we want and that we have envisioned

- 1. Some are merely descriptions of how the future may unfold and are based on if—then propositions. These descriptive scenarios involve analysis of past and present data/situations and the extrapolation of observed trends.
- 2. Alternatively, one can create a vision of a desirable future and then strategically determine how to get there, actively changing the so-called "business-as-usual" (BAU). Such a projection would be a normative or prescriptive scenario that presents an attainable (if certain actions or policies are taken) imagined future (Table 1).8

These two methodologies are complementary and allow us to gain an informed view of possible futures. With such a view in hand, we could work on the most appropriate strategies for achieving a sustainable future, diminishing uncertainties and unintended surprises. These methodologies may serve different objectives at a policy level; the first may be more informative and ideal for generating awareness of the impact of our present predicament, while the second is more prescriptive, normative, and even inspiring. This plays out at the policy/collective level, but at the individual level we can also carry out similar exercises. What can each one of us do, to ensure a better future for the next generations?

The important point here is to acknowledge that environmental problems do not always call on us to engage in private/personal in-depth reflections on the future and therefore we propose that we need to develop traits that prompt us to worry about the future. Virtue ethics promotes a shift from the outer to the inner world, from the question "What should I do?" to the reflexive question "What sort of person do I want to be?". Working with the future, we might also shift from the forecast question "What will the future be like?" to the back casting question "What do I want the future to be like?". An environmental virtuous person should be someone concerned not only with the present but also about the future. Environmental virtues that have already been discussed – such as care, respect and humility – are related with developing ethical character traits that inspire people to behave in environmental responsible ways, but even more important for our conversation is developing a timeless sense of environmental stewardship. Given the speed with

⁸ In 2021/22 the EU has organized a <u>Conference of the Future of Europe</u>, involving thousands of citizens in citizen engagement sessions (800 participants) and in an online platform. This shows that the future is also in our (citizens'/individuals') hands.



which the world is currently changing and the uncertainty that populates the future, the development of a new virtue, with specific characteristics, is needed. To be able to reflect on what we want the future to be like, we need to develop a sensibility of being able to imagine a sustainable future. In the remainder of this paper, we will develop the disposition for *prospection*, as the generation and evaluation of mental representations of possible sustainable futures. We claim it should be considered a (new) virtue, a sustainability virtue – one that is especially well suited to thinking about intergenerational ethical issues related to climate change.

5 Prospection as a sustainability virtue?

The aim of developing *prospection* as a sustainability virtue is to facilitate our reflection on how we might avoid unwanted situations for the planet and future beings (humans and non-humans) and how to develop a sense of reverence and protectiveness towards nature that will maintain ecological integrity over time and keep options for sustainability open.

For environmental questions (most notably climate change) whose consequences lie in the future, our central hypothesis is that *prospection* as a virtue is important for inspiring and informing us about how we can incorporate caring for the future into our current life projects. Those who can imagine sustainable futures are more likely to accept delayed outcomes over immediate ones and thus more likely to increase their pro-environmental behaviour without internal strife. The question is whether this ability to imagine a sustainable future – *prospection* – can be considered a new virtue.

Virtues are character traits that are beneficial to the moral life of the agent regarding her standing towards herself, towards humanity, and towards nature. There is no single, definitive, right way to live, act, or be. Life is too complex, human nature too diverse and rich, and the future too uncertain to allow for a recipe for how one ought to live. Nevertheless, the capacity to imagine a desirable, sustainable future provides a framework for speculation that allows one to initiate a process of backcasting that can help one to take meaningful steps towards building that future. It is a morally charged virtue because it includes benefits for the Other, (even if far away in time and space, and even interspecies), at the same time as it is beneficial to one's life in the present.

The literature is rich⁹ in proposing and discussing new and old virtues and a new collection of essays on neglected virtues (such as ambition, pride, magnificence, creativity, humour, wonder) has been published recently (Pettigrove and Swanton 2022). In fact, environmental virtue ethics was developed because we needed new virtues for the new reality of environmental degradation, that became so obvious back in the seventies. Forty years later, the situation is much worse, and climate change impacts on the planet and humanity justify rethinking how the moral relationship between humanity, nature and the future should be conceptualized. We are on a transition phase, where virtues and decisions to live/to have a good life must



⁹ See Schroth 2023.

mirror this new situation: the future is now part of the present, it's embedded in the present decisions and actions. In that sense, it seems justifiable to propose a virtue specifically thought to deal with that integration of the future in the present: *prospection* has a value added in a world with the climate change predicament pending over our heads.

The question of what entitles a disposition or a trait to be considered a virtue is not set in stone and even if *prospection* may sound a bit technocratic (thinking on scenarios), the way we conceptualize it involves an emotion of wanting a good and sustainable future for next generations (and the planet). Imagining the future with such a sentiment is the opposite of someone who never thinks about the Other (human, non-human, near or far in space and time), someone who does not care what will happen, and lives focused on the present and on short-term objectives. Coming back to how we might see parenting, we also tend not to waste or jeopardise goods (property or money for example) because we are disposed to think and care for our children's future.

All currents of environmental ethics are, in a way or another, based on the premise that we do not own nature, natural resources, or the planet, we just are its stewards. While utilitarianism or deontology consider stewardship as a relevant value, environmental virtue ethics, develops this stewardship as a virtue, as a character trait. In our proposal this stewardship implies that the imagined sustainable future is implicitly incorporated in the present. If we are disposed to think and imagine a narrative (like in forecast scenarios) on that future, for our *inward peace of mind*, but also for more goodness in the future then *prospection* is not some neutral capacity but a disposition that enters the realm of morality.

Aristotle distinguished between virtues of character and virtues of thought: "Virtue, then, is of two sorts, virtue of thought and virtue of character. Virtue of thought arises and grows mostly from teaching, and hence needs experience and time. Virtue of character results from habit" (2000, NE 1103 a 15). These two types of virtue are not independent of each other, and in developing *prospection* as a virtue we propose that we conceive of it as a mixture of character and thought. Thus, in working on achieving harmony between one's emotions and one's reasoning, developing *prospection* would entail working both on cognitive states (e.g., knowledge and belief) and on affective states (e.g., desires, feelings, and emotions) within a moral framework.

6 Knowing, imagining, and caring

In this context of exploring *prospection* as a virtue fit for intergenerational ethics and to the conundrum of climate change, the cognitive component would require us to be aware of it and understand its long-term impact. This would involve de-

¹¹ For Aristotle, the virtues of character were bravery, temperance, generosity, magnificence, and magnanimity; the virtues of thought were *episteme*, *techne*, *phronesis*, *nous*, and *sophia*.



¹⁰ The iconic watch advertisement comes also to mind: 'You never actually own a Patek Philippe. You merely look after it for the next generation.'.

veloping a type of informed environmental citizenship: a willingness to actively participate in the polity and to acknowledge our own responsibility towards the present and the future. Being an informed citizen implies knowing and learning, as the means to achieving a cognitive state that is compatible with exercising environmental citizenship. If one lacks knowledge of a particular sort, for example, one may inadvertently harm the environment. To avoid this, agents need to develop an interest in learning and create opportunities to do so through environmental empowerment. As Avner de-Shalit (2000) suggests, this empowerment could take place on three different levels: environmental literacy (accessing available information); environmental awareness (acknowledging that the environment affects our lives); and environmental consciousness (a deeper level of concern). At least the first level must be obtained if one is to achieve the cognitive component of *prospection*. Interestingly, de-Shalit (2004) recommends teaching political philosophy as the best way to empower citizens.¹²

Imagining what the planet will or would be in the future is neither obvious nor linear insofar as ignorance and uncertainty are always around the corner. Timothy O'Riordan (2000) considers three types of uncertainty in environmental science: data shortage, model deficiencies and factors that lie beyond the knowable. Whereas the first two are potentially solvable, the third always comes as a surprise, which might trigger some sort of powerlessness.

One of the emotional components includes dealing with our feelings about how to contend with a future that has a high degree of uncertainty. Working on this emotional component implies overcoming uncertainty as a paralysing feature. At a scientific level, there are different dimensions of uncertainty, ¹³ but when it comes to our life decisions, it is more of a personal attribute, independent of knowledge and connected essentially with an emotional state of mind. The reality is that uncertainty is not unique; subsequently, there is no single 'recipe' for dealing with it, and there is no 'one size fits all' approach that will be satisfactory in all contexts and circumstances. If it is acknowledged, discussed and communicated, it could lead to greater humility, greater care and deliberation in making and carrying out decisions, all of which will be important attributes of *prospection* as a virtue. Another emotional element of *prospection* is this feeling of caring for the future, of feeling responsible for it, of even feel gratitude for the meaning of life that the future offers us.¹⁴

¹⁴ P.D. James wrote "The Children of Men", a novel where it becomes obvious that only when there is a future, we can develop a meaningful life. The future gives meaning to our present lives and so even if the future is dependent on us, we are also dependent on the future.



¹² "When political philosophers teach, write and research, they can help to empower citizens. They help their audience not so much to know the right answer to certain questions, but to benefit from being autonomous, rational, more critical, more attuned to political events and to better comprehend politics" (de-Shalit 2004: 803).

¹³ Van der Sluijs provides a helpful account of the multidimensionality of uncertainty: "Uncertainty can be seen as a multi-dimensional concept involving quantitative (technical: inexactness) and qualitative (methodological: unreliability, epistemological: ignorance and societal: limited social robustness) dimensions and it can manifest itself at different locations in risk assessments (for instance, context, problem frames, indicator choice, model assumptions, model structure, model parameters, and data)" (2006: 73).

This brings us to the moral component of *prospection*. As members of societies that are fixed on progress and growth, we tend to look at the present and the future with a sort of hubris supported by a 'technological fix' mindset. One way to counteract this, may be imagining the future with greater care and humility. We need to nurture the conditions necessary for thinking about a future in which humans and non-humans can thrive on a planet with sufficient resources, for creating a (perhaps utopian) vision of an informed, sustainable future, and for creating an atmosphere in which people feel comfortable imagining the future they want. *Prospection* could also serve as a baseline virtue that allows other environmental moral virtues to thrive. This capacity to imagine, care and think about the future would allow other virtues pertaining to the environmental spectrum – such as gratitude, care, responsibility, ecological sensitivity, eco-citizenship and ecological integrity – to become our compass in the uncertain terrain that is the future.

7 Motivation

One might wonder: how should I care about something that is not there yet? Imagining futures through the virtue of *prospection* has another striking advantage that has to do with practical motivation. In intergenerational ethics, the so-called motivation problem arises: if one does not know and has no relationship whatsoever with future people, what could motivate one to adopt practices that are likely to reduce one's current comfort level but are also necessary to reduce gas emissions, for example? Imagine that a person firmly believes that she should reduce her carbon footprint because this means leaving a better planet to future generations. Imagine that she also believes she has a moral obligation to do so. This may not be enough to motivate her not to take the next plane to the Maldives. The internalist vs externalist debate in moral philosophy addresses this issue; the problem is whether having moral reasons necessarily implies being motivated to act accordingly (Williams 1979; Korsgaard 1986).

This problem becomes particularly pressing when we are dealing with issues that affect future people, whom we do not know and are not connected with on a personal level. This has been demonstrated empirically (Leiserowitz 2006). As Dieter Birnbacher suggests, "[m]oral motives [for instance a feeling of duty] are usually too weak to effect appropriate action unless supported by quasi-moral and non-moral motives [altruistic motivations such as sympathy, solidarity, compassion, love] pointing in the same direction. ... [But given that] future generations are faceless and invisible" (Birnbacher 2009: 282), such altruistic motivations play little to no role in decision-making about actions or policies that could affect future people.

By taking *prospection* as this capacity to think, imagine, and care about the future, there is no gap between accepting that some course of events is the best one (because it is the just one, or the generous one) and being disposed to follow it, because accepting some course of action as the most favourable is not a purely intellectual achievement. On the contrary, acting according to a virtue involves conceptual, cognitive, and emotional dimensions. Displaying a virtuous trait as this one involves not only perceptual and conceptual abilities but also a trained sensibility



and an adequate emotional response. It consists in a particular way of perceiving things, of feeling about them and acting upon them. In a more general sense, virtues are dispositions that involve emotions, both in the sense that they give rise to certain emotions or reactions and in the sense that they shape them. As John McDowell argues (1995), the motivation to act accordingly stems from the fact that we see things a certain way. It is not an extra ingredient that can be added (or not) to our (purely epistemic) evaluation of the situation.

In the case of climate change, if it is apparent to one that global warming is threatening life on the planet as we know it, and if one wants to be the kind of person who is generous and just enough not to be solely preoccupied with one's own life or with one's own immediate future, then one will clearly see what needs to be done and the motivation to do it will stem directly from that perception (which is never value-free or evaluatively inert). The sustainability virtue proposed, *prospection*, will better predispose people to be morally motivated agents, acting in the present to avoid any imagined disruptive futures. In this sense, if one's main concern is how to become a virtuous person, then the fact that future generations are faceless and invisible ceases to be a motivational problem, and the future (planet, humans and non-humans) will benefit from our present acts.

Moreover, when our mindset is geared also towards caring for the future, whatever the future might be, other environmental virtues that belong to the present might implicitly become future-oriented as well. If so, they will turn into new versions of themselves fit for this transition phase of redefining what is the good life, how might *eudaimonia* be nurtured, of how the future is already present in our life and decisions.

There is no blueprint on how to deal with the future and what to develop to be able to get in tune with what it takes to incorporate *prospection* in our life project. Nevertheless, being aware and attentive to the future might be our best bet and be open to deal with it in a virtuous manner. That's why we suggest that imagining sustainable futures is part of the process of flourishing; it is a complex undertaking insofar as the components of *prospection* involve a mixture of habit, thinking, learning, experience, deliberation, and motivation, thus incorporating features of thought and character. Developing this virtue to deal with the future might incorporate the following four components:

- Looking at reality; considering multiple perspectives; avoiding a narrow understanding of its complexity. Keep the future open by considering alternative futures based on different variables. Gaining a broad understanding of the future by engaging with diverse worldviews and consider alternative futures being openminded.
- 2. Even though our predicament is unparalleled, to have insights into how societies and individuals navigated challenges and changes in the past provides always valuable lessons *looking at the past*.
- 3. Trying to understand the impact and long-term implications of present actions and decisions *being strategic and analytical*.



4. Collaborating with others and creating networks; learning from others and opening the range of opportunities for the future. Being open to new ideas, new experiences – *don't be alone in this endeavour*.

The ultimate objective is to realize the Aristotelian vision of a virtuous life: doing the right thing, at the right time, for the right reasons and in internal harmony. What we propose is that developing and exercising the virtue of prospection is part of living virtuously in a way that has a positive impact on the future. This implies that the definition of flourishing or of a good life must be re-adapted to the reality we face with climate change. Thompson (2020) tackles this need to rethink the conception of human good to cope with the environmental changes, and Jenkins (2016) when mentioning good for the species, might also have enlarged the scope of the "good" to encompass a good for everybody, everywhere, in any time. By proposing that caring for the future is part of this new conception of a good life, it becomes more obvious that prospection might be seen as a virtue.

It may be objected that for virtue ethics the focus is the moral agent and how her present actions shape her character and accord (or not) with a particular virtue, and thus this approach might be accused of presentism. How can such an approach help to address intergenerational ethical issues if the direct focus of concern and attention is the present actions of the moral subject? That's why we think proposing prospection as a new virtue makes sense, in this context, since it is precisely a virtue that has the future in view. What distinguishes this approach lies at the level of the motivation for this concern: our concern for the future need not be justified by complex theoretical problems such as defining whether non-existent people have rights or can be recipients of obligations, or even defining what their interests will be. This concern for the planet we will leave to future generations can instead be grounded in another motivation: the fact that we want to be a certain kind of people and that our actions mirror this ideal. From a purely pragmatic perspective, the fact that my direct motivation relates to how I want to live my life does not imply that future generations cannot benefit. Even if my direct motivation is a desire to give a coherent shape to my life, the fact is that future lives and the planet can benefit from this. Indeed, our central point in this article is precisely that a virtuous, well-formed person must necessarily be concerned about the future. In addition, it is important to stress that on a virtue ethics approach, short-term thinking is considered both an epistemic and a moral vice.

8 Conclusion

That virtue ethics can be fruitfully applied to environmental issues is obviously no novelty (e.g. Sandler and Cafaro 2004; Chappell 2020). We have shown that virtue ethics can be successfully used to think about a more specific problem – the moral relations between generations with regard to climate change – and also that it is possible to propose a new virtue, specifically geared towards future generations. We do not wish to suggest that virtue ethics can solve every problem related to cross-temporal moral relations, insofar as we do not assume that there is one –



and only one – moral theory that says everything there is to say about specific moral issues. We believe that different sorts of considerations can (and should) be part of moral thinking – considerations about principles and duties, obligations and contracts, interests and consequences, virtues and vices. This article was motivated by a rather perplexing observation: the fact that the virtue ethics approach is the least represented in the literature on intergenerational ethics. We have tried to show that this underrepresentation ought to be remedied, as virtue ethics offers arguments and resources that can be very useful in this debate.

Even if we cannot know what the desires and interests of future people will be, it is surely the case that, at least to a certain extent, they will be determined by our present decisions. So, for instance, if we now decide that the Amazon Rainforest should no longer be considered a protected area, this will close off a certain set of possibilities for future people. If we chose to ignore the decarbonization needed in our lives and economies, this will limit a sustainable future. If we continue the path of unsustainable production and consumption, food waste, depletion of resources, ignoring threats to biodiversity among other unsustainable practices, then the future will certainly look dimmer. This closing off or narrowing of possibilities is what we should at least try to avoid by practicing *prospection* – being open-minded, learning from the past, being strategic and analytic, and collaborating with others.

We thus have stressed the importance of *prospection* as a virtue that encompasses cognitive, emotional, and moral dimensions. By developing the virtue of *prospection*, we can cultivate a flourishing life that prioritizes the well-being of all living beings, including nature, humans, and non-human creatures. By doing so, we can effectively address the philosophical challenges posed by competing ethical frameworks in intergenerational ethics. Ultimately, we argue that nurturing the ability to envision sustainable futures and incorporating care for future generations into our daily lives will ensure a wider range of sustainable possibilities in the future – and this can only be seen as a virtue, a sustainability virtue.

Acknowledgements This research work is supported by national funds through FCT – Fundação para a Ciência e a Tecnologia, I.P., in the context of the celebration of the program contract foreseen in the numbers 4, 5 and 6 of article 23.° of D.L. no. 57/2016 of 29 August, as amended by Law no. 57/2017 of 19 July.

Funding Open access funding provided by FCTIFCCN (b-on).

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.



References

Aristotle. 2000. *Nicomachean Ethics*, translated and edited by Roger Crisp. Cambridge: Cambridge UP. Birnbacher, Dieter. 2009. What Motivates Us to Care for the (Distant) Future? In *Intergenerational Justice*,

eds. Axel Gosseries and Lukas H. Meyer, 273-300. Oxford: Oxford UP.

Cafaro, Philip. 2015. Environmental Virtue Ethics. In *The Routlede Companion to Virtue Ethics*, eds. Lorraine Besser and Michael Slote, 427-444. Abingdon: Routledge.

Chappell, Sophie-Grace. 2020. Virtue Ethics and Climate Change. *Moral Theory and Climate Change. Ethical Perspectives on a Warming Planet*, eds. Dale E. Miller and Ben Eggleston, 177-192. Abingdon: Routledge.

De-Shalit, Avner. 1995. Why Posterity Matters. Environmental Policies and Future Generations. Abingdon: Routledge.

De-Shalit, Avner. 2000. The Environment. Between Theory and Practice. Oxford: Oxford UP.

De-Shalit, Avner. 2004. Political Philosophy and Empowering Citizens. *Political Studies* 52: 802-818. https://doi.org/10.1111/j.1467-9248.2004.00509.x.

Dobson, Andrew. Ed. 1999. Fairness and Futurity. Essays on Environmental Sustainability. Oxford: Oxford UP.

EEA. 2001. Late Lessons from Early Warnings: the Precautionary Principle 1896-2000. Environmental Issue Report 22. Copenhagen: EEA.

EEA 2019. The European Environment – State and Outlook 2020. Knowledge for Transition to a Sustainable Europe. Luxembourg: Publications Office of the European Union.

Gaba, Jeffrey M. 1999. Environmental Ethics and Our Moral Relationship to Future Generations: Future Rights and Present Virtue. Columbia Journal of Environmental Law 24: 250-288.

Gardiner, Stephen M. 2006. A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption. Environmental Values 15/3: 397-413.

Gardiner, Stephen M. 2011. A Perfect Moral Storm: The Ethical Tragedy of Climate Change. Oxford: Oxford UP.

Gardiner, Stephen M. Ed. 2021. *The Oxford Handbook of Intergenerational Ethics*. Online Edition. Oxford Academic [10 March 2021].

Gosseries, Axel and Lukas H. Meyer. Eds. 2009. Intergenerational Justice. Oxford: Oxford UP.

Hill, Thomas. 1983. Ideals of Human Excellences and Preserving Natural Environments. Environmental Ethics 5/3: 211–224.

Hume, David. 1972 [1777]. Enquiry Concerning the Human Understanding and Concerning the Principles of Morals. Edited by Lewis Amherst Selby-Bigge, Second Edition of 1902. Oxford: Clarendon Press. Hursthouse, Rosalind. 1999. On Virtue Ethics. Oxford: Oxford UP.

Hursthouse, Rosalind. 2007. Environmental Virtue Ethics. In Environmental Ethics, eds. Rebecca L. Walker and Philip J. Ivanhoe, 155-172. Oxford: Oxford UP.

Jamieson, Dale. 1992. Ethics, Public Policy, and Global Warming. Science, Technology, & Human Values 17/2:139-153. https://doi.org/10.1177/016224399201700201

Jenkins, Willis. 2016. The Turn to Virtue in Climate Ethics: Wickedness and Goodness in the Anthropocene. Environmental Ethics 38: 77-96. https://doi.org/10.5840/enviroethics20163816.

Korsgaard, Christine M. 1986. Skepticism about Practical Reason. Journal of Philosophy 83/1: 5-25. https://doi.org/10.2307/2026464.

Lane, Melissa. 2011. Eco-Republic: Ancient Thinking for a Green Age. Oxford: Peter Lang.

Leiserowitz, Anthony. 2006. Climate Change Risk Perception and Policy Preferences: The Role of Affect, Imagery, and Values. *Climatic Change*, 77: 45-72. https://doi.org/10.1007/s10584-006-9059-9

McDowell, John. 1995. Might there be external reasons? In *World, Mind and Ethics: Essays on the Ethical Philosophy of Bernard Williams*, eds. James Edward John Altham and Ross Harrison, 68-85. Cambridge: Cambridge UP.

O'Riordan, Timothy. Ed. 2000. Environmental Science for Environmental Management. London: Routledge.

Page, Edward. 2006. Climate Change, Justice and Future Generations. Cheltenham: Elgar.

Partridge, Ernes. Ed. 1981. Responsibilities to Future Generations. Environmental Ethics. New York: Prometheus.

Pettigrove, Glen and Christine Swanton. Eds. 2022. Neglected Virtues. Abingdon: Routledge.

Rousseau, Jean-Jacques. 2008 [1754]. Discourse on the Origin of Inequality. A Discourse on a Subject Proposed by the Academy of Dijon: What is the Origin of Inequality Among Men, and is it Authorised by Natural Law? Translated by George Douglas Howard Cole. Online available at:



- https://www.files.ethz.ch/isn/125494/5019_Rousseau_Discourse_on_the_Origin_of_Inequality.pdf, accessed 15.07.2023.
- Sandler, Ronald. 2004. Towards an Adequate Environmental Virtue Ethics. *Environmental Values* 13/4: 477-495. https://doi.org/10.1177/096327190401300405.
- Sandler, Ronald. 2007. Character and Environment: A Virtue-Oriented Approach to Environmental Ethics. New York: Columbia UP.
- Sandler, Ronald and Phil Cafaro. Eds. 2004. *Environmental Virtue Ethics*. Lanham: Rowman & Littlefield. Schroth, Jörg. 2023. Bibliography on Virtue Ethics. Online available at: http://www.ethikseite.de/bib/bvirtue.pdf, accessed 15.07.2023.
- van der Sluijs, Jeroen. 2006. Uncertainty, Assumptions and Value Commitments in the Knowledge Base of Complex Environmental Problems. In *Interfaces between Science and Society*, eds. Ângela Guimarães Pereira, Sofia Guedes Vaz and Sylvia Tognetti, 67-84. Sheffield: Greenleaf.
- Solum, Lawrence B. 2001. To Our Children's Children's Children: The Problems of Intergenerational Ethics. Loyola of Los Angeles Law Review 35: 163-233. https://digitalcommons.lmu.edu/llr/vol35/ iss1/5/
- Taylor, Paul W. 1986. Respect for Nature. Princeton: Princeton UP.
- Thompson, Allen. 2020 Adaptation, Transformation, and Development: Environmental Change and Rethinking the Human Good. *Environmental Ethics* 42: 5-20. https://doi.org/10.5840/enviroethics2020 4213.
- UNEP. 2019. Global Environmental Outlook GEO 6 Healthy Planet, Healthy People. Cambridge: Cambridge UP. https://www.unep.org/resources/global-environment-outlook-6.
- van Wensveen, Louke. 2000. Dirty Virtues: The Emergence of Ecological Virtue Ethics, Amherst, NY: Humanity.
- Visser 't Hooft, Hendrik Philip. 1999. Justice to Future Generations and the Environment. Dordrecht: Kluwer.
- Williams, Bernard. 1979. Internal and External Reasons. In *Rational Action*, ed. Ross Harrison, 101-113, Cambridge: Cambridge UP.
- Zwolinski, Matt and David Schmidtz. 2013. Environmental Virtue Ethics. In *The Cambridge Companion to Virtue Ethics*, ed. Daniel C. Russell, 221-239. Cambridge: Cambridge UP.

