

Environmental vulnerability, age and the promises of anti-age discrimination law

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Discussions on equality between age groups and the practice of anti-age discrimination law often tend to focus on the rights of the elderly on the labour market. This article is motivated by the current climate change cases, which emphasize broader age inequalities. It aims to highlight the unexplored potential of anti-age discrimination law. Moreover, it explores the possible added value of this law when other legal ways to defend environmental rights are considered. Anti-age discrimination law could thus offer a meaningful and effective ground to address age-related environmental vulnerabilities.

1 | INTRODUCTION

Age-related adverse effects of environmental degradation disadvantage the elderly and children. On the one hand, the health-related response of the elderly and progressively ageing population to environmental degradation causes great concern.¹ On the other hand, children and young generations continue to face significant environmental risks, including the effects of climate change. Hence, there is increasing awareness globally on how to foster 'sustainable and healthy environments' for young generations and 'age-friendly and healthy environments'² for elderly generations. For example, the United Nations Environment Programme (UNEP) recently held an expert workshop in Geneva about the impacts of hazardous chemicals on women and children. Leading global experts on chemicals and health asserted that a specific policy focus is needed to protect children from hazardous environmental pollution, but that this is mostly non-existent.³ Similarly, at the 2015 Paris Climate Conference and subsequently in the Paris Agreement, States acknowledged that climate change raises intergenerational equity issues.⁴

There is also legal awareness of the age-related disparate impacts of climate change. Children and the elderly constitute prominent claimant groups emphasizing age disparities in the context of climate change litigation. For example, the *Juliana v United States* case was brought by 21 young activists.⁵ There is growing youth activism with regard to environmental issues.⁶ In Norway, a climate case against the Norwegian government was brought by the Nature and Youth Organization, and the Norwegian Grandparents Climate Campaign, formed in 2006, is a co-plaintiff.⁷ Switzerland also witnessed a climate case which was brought by grandmothers.⁸ In the 2015 Dutch Urgenda climate case, the Court referred to the adverse effect of temperature rise resulting from climate change by stating: 'the temperature rise will lead to heat-related deaths, particularly among the elderly and children'.⁹ This was not an age discrimination case, but as the particular disadvantaged situation of the elderly and children in the natural environment is legally recognized, such cases may open the door for anti-age discrimination claims.

¹B Weiss (ed), *Aging and Vulnerability to Environmental Chemicals: Age-related Disorders and their Origins in Environmental Exposures* (RSC 2013).

²World Health Organization (WHO), *Global Age-friendly Cities: A Guide* (WHO 2007); WHO, 'Global Plan of Action for Children's Health and the Environment (2010–2015)' <http://www.who.int/ceh/cehplanaction10_15.pdf?ua=1>.

³UNEP, 'Women and Chemicals: The Impact of Hazardous Chemicals on Women: A Thought Starter Based on an Experts' Workshop' (UNEP 2016).

⁴UNFCCC 'Decision 1/CP.21, Adoption of the Paris Agreement' UN Doc FCCC/CP/2015/10/Add.1 (29 January 2016) para 8; Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) 55 ILM 740 preamble.

⁵See <<https://www.ourchildrenstrust.org/us/federal-lawsuit/>>.

⁶J Narksompong and S Limjirakan, 'Youth Participation in Climate Change for Sustainable Engagement' (2015) 24 *Review of European, Comparative and International Environmental Law* 171.

⁷For the case and media briefing of Norwegian Climate Case, see <<https://www.savethearctic.org/en/people/sarcticoil/background-documents/>>.

⁸See <https://www.swissinfo.ch/eng/global-warming_grandmothers-sue-switzerland-in-climate-complaint/42544428>.

⁹*Urgenda Foundation v Kingdom of the Netherlands*, ECLI:NL:RBDHA:2015:7196 [2015] Rechtbank Den Haag, C/09/456689/HA ZA 13-1396 para 4.16.

The main argument of this article is that anti-age discrimination law can be used as a strategy in environmental litigation. The main motivation is that anti-age discrimination law represents the nature of the age-related environmental problems accurately, since it is the only legal field which precisely characterizes age equality issues. In this respect, the article aims to discover the legal plausibility of an anti-age discrimination law strategy. I will adopt a *de lege lata* approach. I examine various legal systems, mainly the European Union (EU), the United States and the United Kingdom (UK). I will ask whether the age-related adverse health effects of pollution fall within the scope of anti-age discrimination law. I will also ask whether the proposed approach has added value. Doing so requires answering three main questions. First, is there a strong connection between age and vulnerability to environmental degradation? Second, if so, does anti-age discrimination law offer resources to challenge environment-related differential treatment in this respect? Third, do we have good reasons to prefer the use of anti-age discrimination law as a strategy in an environmental context?

The article shows that taking age seriously would require identifying four potentially vulnerable groups: the elderly as an age group, children as an age group, but also earlier and later birth cohorts. These four categories will be referred to as 'age-related', which encompasses both the 'age-group-related' and 'birth-cohort-related' concerns (Section 2). Then, the argument looks into material and personal scope criteria that should be met for anti-age discrimination law to be applicable to environmental cases (Section 3). To strengthen the argument, the article examines whether there is an added value in using anti-age discrimination law (Sections 4 and 5).

This article follows the vein of an argument on the use of anti-age discrimination law to address environmental vulnerability, previously developed by Gosseries.¹⁰ He explores one aspect of the personal scope and material scope of anti-age discrimination law, that is, the birth-cohort dimension. The purpose of the present article is to extend and generalize that strategy to age-group-related vulnerability in relation to environmental degradation. In addition, I also explore the added value from the point of view of causation of using an anti-age discrimination law strategy instead of toxic tort cases. Lastly, I explore the advantage of using anti-age discrimination law in combination with human rights and children's rights law.

2 | AGE-RELATED ENVIRONMENTAL VULNERABILITY: THE EVIDENCE

The extent of an individual's reaction to environmental change determines one's environmental vulnerability. Martha Fineman, a legal theorist who developed the concept of 'vulnerable subject', suggests that as we are all born, live and die within a fragile materiality, we are susceptible to destructive external forces and internal disintegration. Therefore, the vulnerable subject is a more accurate figure to

place at the core of social policy than the liberal subject, who is presumed to have competence and capability which real humans are deprived of. Fineman argues that if the vulnerable subject approach is adopted, States would be more responsive to the realities of people.¹¹ Angela Harris integrates Fineman's approach, arguing that the vulnerable subject approach is vital for redefining the State's environmental obligations. She indicates that environmental vulnerability refers to the degree to which individuals are physically, socially or materially susceptible to the adverse impacts of environmental change; therefore, all humans are ecologically vulnerable at some point.¹² Yet, there are various dynamics that contribute to our environmental vulnerability, which include genetics, gender, lifestyle and welfare. This also includes age-related factors that turn out to be a significant determinant.

Following the distinction introduced earlier, the empirical literature identifies two different sources of age-related environmental vulnerability: the fact of belonging to a given age group or to a given birth cohort. To understand the flow of the argument properly, it is crucial to grasp the age group/birth cohort distinction, as they are two ways of characterizing what the word 'generation' can mean. It refers to a standard distinction in sciences, especially in demography and epidemiology.¹³ The notion of 'birth cohort' refers to those born within a specific time span, for instance all the individuals born in the 1980s. When we express concern for future generations in environmental debates, we tend to be concerned with birth cohorts. By contrast, an age group refers to people who are at a certain age, for instance 8, 24 or 50, or in a certain age group, such as children, young adults, middle-aged adults and the elderly. When we express concern for age-related vulnerability on environmental cases, we refer to age groups rather than birth cohorts. Birth cohort and age group are distinct but interrelated concepts. For example, if a child who is born in 2018 is treated differently from an adult, this may lead to age group discrimination but not necessarily to birth-cohort discrimination if those who are recently born are not in a worse situation than previous birth cohorts. Yet, if a child is treated differently from previous cohorts, this situation may lead to birth-cohort discrimination and it can always be re-characterized as an age-based differential treatment, at least, during the period of childhood.¹⁴

Here, I will illustrate through a few examples how the age group/birth cohort distinction manifests itself mainly with regard to the health-related disparate impacts of environmental degradation. There are four possible groups: elderly as an age group, children as an age group, later birth cohorts and earlier birth cohorts.

¹¹MA Fineman, "Elderly" as Vulnerable: Rethinking the Nature of Individual and Societal Responsibility' (2012) 20 Elder Law Journal 71, 90; MA Fineman, 'The Vulnerable Subject: Anchoring Equality in the Human Condition' (2008) 20 Yale Journal of Law and Feminism 2.

¹²AP Harris, 'Vulnerability and Power in the Age of the Anthropocene' (2014) 6 Washington and Lee Journal of Energy, Climate, and the Environment 98.

¹³C Vandeschrick, 'The Lexis Diagram, a Misnomer' (2001) 4 Demographic Research 97.

¹⁴Gosseries (n 10) 8.

¹⁰A Gosseries, 'Environmental Degradation as Age Discrimination' (2015) 2 e-Pública. Revista electronica de Direito Pública 25.

2.1 | Age effects detrimental to the elderly and children

Ageing may result in many deleterious structural changes in the body which undermine the resistance of elderly people to certain types of environmental extremes, such as heatwaves. Scientific research reveals that, even in the absence of overt cardiovascular disease, the elderly are the most vulnerable age group during prolonged environmental heat exposure.¹⁵ Especially those individuals older than 65 years are considered as the most vulnerable age group with regard to climate-change-related heatwaves. For example, after the 2003 heatwave hit France, 90 percent of the 14,800 victims were older than 65 years old.¹⁶ In the Swiss climate case, which is brought by grandmothers, applicants mainly rely on the scientific data regarding the effects of heatwaves on older women.¹⁷ Studies from various parts of the world also show that individuals older than 65 years comprise a majority of the extra emergency room visits during heatwaves.¹⁸ Besides vulnerability to heatwaves, there are also age-group-related disorders that originate from environmental exposures. For instance, there is scientific evidence linking Parkinson's disease to the exposure to a number of toxins, including pesticides and metals such as manganese, lead and copper.¹⁹ Therefore, both the life expectancy and quality of life are affected by environmental exposures. It thus seems that there is strong scientific evidence pointing to the elderly's environmental vulnerability.

In addition to the elderly, children are also considered as an environmentally vulnerable age group. Epidemiological studies highlight at least two differences between children and adults in terms of environmental health risk. First, due to different daily behavioural patterns, children are exposed to environmental risks more often than adults (behaviour-related vulnerability). For example, a child may imagine a metallic radioactive material that she found on the street to be a toy and play with it.²⁰ Behaviour-related vulnerabilities stem from children's inability to fully understand the hazards around them in comparison to adults who are more conscious about the consequences of their actions. Yet, some

exposure scenarios do not apply to children. Indeed, children are less exposed to certain detrimental substances that bring along observable health risks. For example, adults who work in nuclear plants naturally experience a higher level of nuclear radiation than the children who are not allowed to work in such an environment. Yet these kinds of exceptions do not change the fact that, given their lack of full understanding of the hazards around them, children are exposed to a wide range of environmental risks more often than grown-ups. The second difference between children and adults is that, due to physiological reasons, children cannot tolerate environmental exposures in the same manner as adults (physiology-related vulnerability). Physiology-related vulnerabilities make children more vulnerable to the effects of hazards that they interact with. A typical illustration is the effects of radiation exposure on children.²¹ The United Nations (UN) Scientific Committee on the Effects of Atomic Radiation has declared that 'for a given radiation dose, children are at more risk of tumour induction than are adults'.²² The reason is that because 'children have smaller body diameters and there is less shielding by overlying tissues, the dose to their internal organs will be larger than for an adult for a given external exposure'.²³

These two vulnerabilities explain why we experience most diseases as a child and that is also why the spread of certain diseases primarily concerns children. The World Health Organization (WHO) estimates that 88 percent of the existing burden of disease as a result of climate change occurs in children under five years of age.²⁴ The WHO explains that this stems from children's physiological vulnerability in the early stages of life and their psychological dependency.²⁵ This is a serious adverse health effect of climate change on children, which is caused by both behavioural and physiological vulnerabilities.

2.2 | Cohort effects detrimental to later and earlier birth cohorts

Sustainability and concerns for the rights of future generations primarily express concerns for birth cohorts rather than age groups.²⁶ For example, the intergenerational justice literature and sustainable development principle refer to the obligation of ensuring a healthy environment (clean air, oceans, forests) for young and future

¹⁵WL Kenney, DH Craighead and LM Alexander, 'Heat Waves, Aging, and Human Cardiovascular Health' (2014) 46 *Medicine and Science in Sports and Exercise* 1891.

¹⁶InVS (Institut de veille sanitaire), 'Vague de Chaleur de L'été 2003: Relations Entre Températures, Pollution Atmosphérique et Mortalité dans Neuf Villes Françaises' (2004).

¹⁷See <https://klimasenioren.ch/wp-content/uploads/2016/10/Gesuch-um-Erlass-Verfuegung_Sperfrist.pdf> 14. In April 2017, the case was denied. For an unofficial translation of the ruling, see <https://klimasenioren.ch/wp-content/uploads/2017/11/Verfuegung_UVEK_Abschnitt_C_English.pdf>.

¹⁸FP Ellis et al, 'Mortality During Heat Waves in New York City July, 1972 and August and September, 1973' (1975) 10 *Environmental Research* 1; JC Semenza et al, 'Excess Hospital Admissions During the July 1995 Heat Wave in Chicago' (1999) 16 *American Journal of Preventive Medicine* 269.

¹⁹G Nelson and BA Racette, 'Parkinson Disease' in Weiss (n 1) 104.

²⁰In fact, this happened in Turkey. See <<http://t24.com.tr/haber/sakaryada-yasanan-radyoaktif-panik-akillara-bu-faciayi-getirdi-249-kisi-etkilenmistir.366275>> (in Turkish).

²¹P Kaatsch et al, 'Leukaemia in Young Children Living in the Vicinity of German Nuclear Power Plants' (2008) 122 *International Journal of Cancer* 721.

²²United Nations Scientific Committee on the Effects of Atomic Radiation, 'Sources, Effects and Risks of Ionizing Radiation, Scientific Annex B: Effects of Radiation Exposure on Children' (2013) <http://www.unscear.org/docs/reports/2013/UNSCEAR2013Report_AnnexB_Children_13-87320_Ebook_web.pdf> v.

²³*ibid* vi.

²⁴UNICEF, 'Unless We Act Now: The Impact of Climate Change on Children' (2015).

²⁵*ibid*.

²⁶A Gosseries, 'On Future Generations' Future Rights' (2008) 16 *Journal of Political Philosophy* 446.

generations without indicating specific age groups.²⁷ According to Edith Brown Weiss, the theory of intergenerational justice states that 'all generations have an equal place in relation to the natural system, and that there is no basis for preferring past, present or future generations in relation to the system'.²⁸ In this regard, the intergenerational justice literature discusses the boundaries of our responsibilities towards later birth cohorts, that is, how to distribute the limited resources among future and current generations in an equitable manner.²⁹ This issue has been a central topic of debate within climate discussions leading up to the Paris Agreement.³⁰

The scientific literature is clear that some of our practices, such as emitting greenhouse gases, will mainly lead to disparate impacts between children and adults not as age groups but as members of a different birth cohort in the long term. For instance, it is revealed that many environment-related chronic diseases are on the rise in children who were recently born, including asthma, malaria, developmental disorders and primary brain cancer.³¹ The long-term effects of global warming and certain chemicals that have not been controlled during the last decades are determined as the foundation of these diseases.³² It follows that those among the currently existing people who belong to the latest birth cohorts (the youngest among us) will be more affected.

Moreover, some forms of environmental hazard exhibit a lifetime distribution. The cohort studies follow a young generation that is already exposed to an environmental hazard, including diseases and chemicals, and identify the negative consequences as they grow up.

It appears that certain side effects become evident at a much later stage.³³ Therefore, given their larger expected life span, we should be more risk averse when the health of young generations is at stake. In this regard, birth-cohort discrimination claims appear to be a more plausible way to address environmental risks that only later cohorts face.

By contrast, other environmental risks are higher for earlier birth cohorts. This is clear in the case of asbestos. For example, there are several reports on the mortality experience of the birth cohort consisting of men who retired between 1941 and 1967, and who completed their working lifetime in an asbestos company in the United States. It was reported that by the end of 1980, 88 percent of this cohort was known to be dead, largely, because of cancer.³⁴ Asbestos is no longer mined in the United States but, unfortunately, a specific birth cohort became victim of the fact that mining this mineral was allowed. In such a case, there can be disparate impacts across birth cohorts due to the lack of measures taken to address the effects of an environmental hazard.

At any point in time, we can identify some cohorts that are more affected than others by a problem. Sometimes it is the current cohorts that are now reaching the end of their existence (asbestos today). Sometimes it is the current cohorts that are just starting their existence (asbestos when it started to be extracted in the past; global warming). Hence, you do not have here the distinction between front-loaded and back-loaded problems that Stephen Gardiner uses.³⁵

So far, this section has shown that the impact of environmental problems can take four different age-related forms. The heatwave examples illustrate a case in which the elderly are more vulnerable because of their age group. The nuclear exposure example illustrates a case in which children have an age-group-based vulnerability. The path-dependent future effects of global warming illustrate a case in which later cohorts have a cohort-group-based vulnerability. The asbestos case illustrates a case in which the earlier cohorts are more vulnerable (Table 1).

In each of these four types of cases, age, taken broadly, is relevant. In each of these four cases, we do not even need to involve future people. We can characterize the problem as one involving people who are already born. And in each of these four cases, there are age-related – broadly construed – effects that are different for the groups at stake. This opens the avenue for the potential relevance of anti-age discrimination law, which we will now explore.

²⁷See, e.g., UNGA 'Transforming Our World: The 2030 Agenda for Sustainable Development' UN Doc A/RES/70/1 (21 October 2015). Such concerns are recognized in international national legal instruments in the last decades. The 1972 Stockholm Declaration already introduced a concern for the justice to future generations. It suggested that we have a responsibility to 'protect and improve the environment for present and future generations'. Declaration of the United Nations Conference on the Human Environment in 'Report of the United Nations Conference on the Human Environment' UN Doc A/CONF.48/14/Rev1 (1973) Principle 1.

²⁸EB Weiss, 'In Fairness to Future Generations and Sustainable Development' (1992) 8 *American University International Law Review* 2, 20; K Shrader-Frechette, *Environmental Justice: Creating Equality, Reclaiming Democracy* (Oxford University Press 2002).

²⁹The intergenerational justice literature particularly explores the issue of how much to transfer to later birth cohorts to maintain the integrity of the relationship between the planet and humanity. There are different approaches for determining later birth cohorts' share, such as utilitarian, sufficientarian and libertarian approaches. See A Gosseries, 'Theories of Intergenerational Justice: A Synopsis' (2008) 1 *SAPI EN. S. Surveys and Perspectives Integrating Environment and Society* 61, 66–67. The legal obligations that arise within the context of age discrimination law are more adaptable to a less demanding approach like a sufficientarian one. This article does not take a stand about the proportion of each cohort's ecological share but rather tries to prove that there are legal avenues to defend a healthy environment for each age group and birth cohort.

³⁰J Morgan and D Waskow, 'A New Look at Climate Equity in the UNFCCC' (2014) 14 *Climate Policy* 17; on the Kyoto Protocol, see E Melkas, 'Sovereignty and Equity within the Framework of the Climate Regime' (2002) 11 *Review of European Community and International Environmental Law* 115.

³¹PJ Landrigan and RA Etzel, *Textbook of Children's Environmental Health* (Oxford University Press 2013); HH Askling et al, 'Management of Imported Malaria in Europe' (2012) 11 *Malaria Journal* 328.

³²L Trasande, PJ Landrigan and C Schechter, 'Public Health and Economic Consequences of Methyl Mercury Toxicity to the Developing Brain' (2005) 113 *Environmental Health Perspectives* 590; M Vrijheid et al, 'European Birth Cohorts for Environmental Health Research' (2012) 120 *Environmental Health Perspectives* 29.

³³WHO, 'Long Term Studies on Children's Health and the Environment: Identifying, Assessing and Following Up the Effects of Exposure to Environmental Factors' <<http://www.who.int/ceh/research/longtermstudies/en/>>; PJ Landrigan et al, 'The National Children's Study: A 21-year Prospective Study of 100 000 American Children' (2006) 118 *Pediatrics* 2173.

³⁴PE Enterline, J Hartley and V Henderson, 'Asbestos and Cancer: A Cohort Followed Up to Death' (1987) 44 *Occupational and Environmental Medicine* 396.

³⁵Gardiner posits that "front-loaded goods" – are such that their benefits accrue to the generation that produces them, but their costs are substantially deferred and fall on later generations. On the other hand, "back-loaded goods" – are such that their costs accrue to the generation that produces them, but their benefits are substantially deferred and arise to later generations.' See S Gardiner, 'Accepting Collective Responsibility for the Future' (2017) 5 *Journal of Practical Ethics* 22, 24.

TABLE 1 Examples of the four types of age-related environmental vulnerability

	Elderly/earlier	Children/later
Age group	Heat wave	Nuclear radiation
Birth cohort	Remaining effects of the asbestos exposure	Future effects of global warming

3 | APPLYING ANTI-AGE DISCRIMINATION LAW TO ENVIRONMENTAL CASES

3.1 | The personal scope of anti-age discrimination law

Having indicated the age-related adverse effects of environmental degradation, I will now examine the possible use of anti-age discrimination law. In this regard, to test the applicability of the law it is crucial to determine two issues. First, we should check whether the environmentally vulnerable groups are within the personal scope of anti-age discrimination law. Second, we should ascertain whether environmental issues fall within the material scope of anti-age discrimination law.

The personal scope of law determines the subjects which can be protected by the law. In this section, I will bracket for a moment the material scope, assuming that environmental issues do fall within this scope. I will test whether the personal scope of anti-age discrimination law might be broad enough to address each of the four different cases of environmental vulnerability identified in Section 2. To do so, I will begin with the narrowest possible scope and check whether it can be broadened in three ways (Table 2).

3.1.1 | Narrow scope (the elderly age group only)

A personal scope is 'narrow' if it does not apply to all age groups. It is narrow for two reasons. First, certain individuals would be excluded from the personal scope of the law. For example, if a law introduces an age threshold which excludes individuals under 20 years old, then people under this age cannot benefit from this law. Second, a law that is restricted to certain ages causally excludes cohortal reading of the law for any groups. Cohortal reading is a reading of the law that does not limit the concern for age discrimination to practices that involve age effects only, as opposed to age effects and cohort effects. If a law includes an age threshold, this indicates that the law is concerned solely with an age group.³⁶ When this is the case, it is not plausible to assume that the law has a cohortal concern, unless a given legislation specifies a special concern for cohorts.

A narrow personal scope is exemplified by US and UK anti-age discrimination laws. These laws limit the personal scope for different reasons. US age discrimination law was initially developed to protect

TABLE 2 The levels of the personal scope

	Does it apply to all age groups?	Does it allow cohortal reading?
Narrow	No	No
Intermediate	Yes	No
Broad	Yes	Yes

the elderly from possible detrimental treatment when the rapidly ageing societies revealed their serious disadvantage.³⁷ Currently, this law only protects individuals above the age of 40. US Congress stated one purpose of the 1967 Age Discrimination in Employment Act (ADEA) as: 'the incidence of unemployment, especially long-term unemployment with resultant deterioration of skill, morale, and employer acceptability is, relative to the younger ages, high among older workers; their numbers are great and growing; and their employment problems grave'.³⁸ By contrast, the UK's 2010 Equality Act introduces a lower age limit (18).³⁹ The motivation is that a lower age limit enables certain people and organizations to provide different services at different rates for children of different ages or to refuse to serve children. This means that 'no children' hotels can still exist or that newsagents can restrict the number of children entering their shops.⁴⁰ Both laws exclude children from their scope, but not the elderly.

The narrow scope means there is potential for environmental litigation, since the elderly age group can still be protected against environmental discrimination, assuming that the material scope of anti-discrimination law includes environmental issues. The reason is that there are no anti-age discrimination laws to exclude the elderly from the personal scope since there are no upper age limits. In the United States, the original ADEA protected individuals between the ages of 40 and 65, but this law was amended in 1978 and there is now no upper age limit.⁴¹ Therefore, the narrow scope would still allow for the protection of the elderly from, for example, the negative effects of heatwaves.

3.1.2 | The intermediate scope (all and only age groups)

A personal scope is 'intermediate' if it is broad on the age group front though not open to a cohortal reading. This could be the case when the law embraces all age groups but explicitly expresses a stronger concern for some of them, leaving the cohortal concerns out of the scope. In this regard, the intermediate scope allows for

³⁷S Fredman, 'The Age Equality' in S Fredman and S Spencer (eds), *Age as an Equality Issue* (Hart 2003) 21, 22–23.

³⁸29 U.S.C. Section 621, Age Discrimination in Employment (ADEA), Chapter 14.

³⁹In this regard, by narrowing their personal scope, the UK law conflicts with EU anti-age discrimination law which does not introduce any age limits.

⁴⁰Government Equalities Office, 'Equality Act 2010 Banning Age Discrimination in Services' (2012).

⁴¹<<https://www.eeoc.gov/laws/statutes/adea.cfm>>.

³⁶Gosseries (n 10) 12.

age discrimination protection for all age groups, but only for age groups. For example, the Canadian Supreme Court, in the 1999 *Law v Canada* case, expressed a stronger concern for the elderly.⁴² Alternatively, an anti-age discrimination law can explicitly leave out the cohortal concerns by providing a very narrow definition for 'age', as is the case for instance in UK law.⁴³

Here, I aim to clarify this by showing that anti-age discrimination law can also be used to protect children from the adverse age effects on their health due to environmental discrimination – again, assuming that the material scope is broad enough.

First, not all age discrimination laws exclude children from the personal scope. Unlike the US ADEA and the UK 2010 Equality Act, there are no age thresholds in EU law or in other EU Member States. In its case law, the Court of Justice of the EU (CJEU) recognizes the applicability of age discrimination laws to children. This is the case in, for example, the *Parliament v Council* ruling from 2006, which concerned Directive 2003/86 on the right to family unification.⁴⁴ This case was brought by the Parliament, which claimed that the provision in the family reunification directive which regulates that a child aged over 12 years arrives independently from the rest of the family, violates the non-discrimination principle on the grounds of age. The Court found that:

*the choice of the age of 12 years does not appear to amount to a criterion that would infringe the principle of non-discrimination on grounds of age, since the criterion corresponds to a stage in the life of a minor child when the latter has already lived for a relatively long period in a third country without the members of his or her family, so that integration in another environment is liable to give rise to more difficulties.*⁴⁵

Even if the Court believed that there is a reason to justify the age threshold in the present case, this case is still crucial, because the Court applied the anti-age discrimination principle to children.

Moreover, in the United States we can observe some state laws – Michigan, Minnesota, New Jersey and Oregon – which prohibit discrimination also towards younger people by referring to the growing evidence on the discrimination against younger workers. For example, the Oregon law declares: 'It is an unlawful employment practice for an employer, because of an individual's ... age if the individual is 18 years of age or older ... to discriminate against the individual in compensation or in terms, conditions or privileges of employment.'⁴⁶ By doing this, the law offers broader protection than the ADEA.

The two European Court of Human Rights (ECtHR) cases, *Bouamar v Belgium* and *D.G. v Ireland*, recognized age discrimination claims of children.⁴⁷ For example, the *D.G. v Ireland* case concerned a juvenile detained in a prison without having been charged or convicted. Plaintiffs argued that this amounted to discriminatory treatment when compared to the detention conditions of adults. Yet the Court found that even if there was a difference in treatment between adults and children, there is no age discrimination as this differential treatment stemmed from the protective nature of the procedure applicable to juveniles.⁴⁸ Even if the difference of treatment was considered illegitimate, this case is significant since the ECtHR recognized the application of anti-age discrimination law to children. Having said this, I will now go one step further and explore birth-cohort discrimination.

3.1.3 | The broad scope (age groups and birth cohorts)

A personal scope is 'broad' if the anti-age discrimination law applies to all age groups and also allows for cohortal reading. Unlike the 'intermediate' scope, in the 'broad' scope the age discrimination law concerns all age groups equally. Moreover, under the broad scope, relying on the word 'age' does not necessarily translate into exclusive concern for 'age effects'. It considers the correlation between age and date of birth. If we show that the case law includes under the heading 'age discrimination' situations in which what is at stake is actually a form of differential treatment between birth cohorts rather than merely age groups, then we open the possibility that a much broader set of concerns could be covered by anti-discrimination law. I will introduce two legal strategies that open an avenue to cover birth cohort concerns.

The precondition for both strategies to work is that the anti-age discrimination law should not be solely age group focused. This means that the law should protect all age groups and that it should allow cohortal reading at the same time. Under EU law, birth cohort is not a protected ground *per se*, but interestingly enough, EU law opens a possible avenue for birth-cohort-related discrimination claims. Hence, our two strategies to make a birth-cohort discrimination claim by using the anti-age discrimination law are based on EU law.

The first strategy consists of expressing a concern for birth cohorts in age discrimination cases. It has arisen in CJEU cases concerned with securing the rights of adjacent generations understood as birth cohorts. For example, in *Petersen v Berufungsausschuss* (2010), the Court ruled that introducing a mandatory retirement age does not amount to age discrimination if it will help in 'making way for the next generation'.⁴⁹ This is not only an age group concern but

⁴²*Law v Canada* [1999] 1 SCR 497; Gosseries (n 10) 12.

⁴³Equality Act 2010 c. 15. Part 2 'Chapter 2 Protected Characteristics' Section 5.

⁴⁴Case C-540/03, *Parliament v Council*, ECLI:EU:C:2006:429.

⁴⁵*ibid* para 74.

⁴⁶Chapter 659A Unlawful Discrimination in Employment, Public Accommodations and Real Property Transactions; Administrative and Civil Enforcement 659A.030.

⁴⁷*Bouamar v Belgium*, App No 9106/80 (ECtHR, 27 June 1988); *D.G. v Ireland*, App No 39474/98 (ECtHR, 16 May 2002).

⁴⁸*D.G. v Ireland* (n 47) paras 115 and 124.

⁴⁹Case C-341/08, *Petersen v Berufungsausschuss für Zahnärzte für den Bezirk Westfalen-Lippe*, ECLI:EU:C:2010:4. See also Gosseries (n 10).

also a concern about the just distribution of employment benefits among different birth cohorts. This confirms the endorsement by the CJEU of a cohortal interpretation of anti-discrimination law. The CJEU went one step further in *Commission v Hungary* (2012), also regarding the mandatory retirement age, since in this case the Court did not express an age discrimination concern but only a birth-cohort discrimination concern.⁵⁰

The second strategy would ground the cohortal concern on age by allowing for a broader definition of 'age'. It arose in *Kaltoft v Municipality of Billund* (2014). This case did not involve age as such. However, the strategy that was endorsed could be applied to age too. Here, the Court recognized that, in some cases, differential treatment on the basis of obesity can amount to disability discrimination because of obesity's specific relation with disability.⁵¹ The Court first addressed the definition of 'disability' and found that obesity can amount to 'disability' within the meaning of the directive in question.⁵² This case is of particular importance because the Court demonstrated its openness to 'new grounds' insofar as they can be linked to the definition of an existing protected ground. However, does anti-age discrimination law define what exactly 'age' is? If 'age' is defined as the length of time during which a person has existed, then the concept of 'age' can involve both age-group and birth-cohort-related concerns. In UK law, it appears that a definition for 'age' does exist, but it is too narrow to embrace 'birth cohort' issues:

Age

(1) *In relation to the protected characteristic of age – (a) a reference to a person who has a particular protected characteristic is a reference to a person of a particular age group; (b) a reference to persons who share a protected characteristic is a reference to persons of the same age group.*

(2) *A reference to an age group is a reference to a group of persons defined by reference to age, whether by reference to a particular age or to a range of ages.*⁵³

By contrast, the EU directives which regulate anti-age discrimination do not give a legal definition for 'age'. And from the CJEU's age discrimination cases mentioned above, we see that CJEU case law reveals a broad approach to the concept of 'age' by expressing the concerns of both age group and birth cohort, within the anti-'age' discrimination law. This approach of the Court to the concept of 'age' makes the *Kaltoft* case a possible strategy to allege

discrimination on the ground of birth cohort. In short, EU anti-age discrimination law is open to a broad interpretation of the personal scope. I have checked which legal system tends to have a narrow, intermediate and broad scope, and presented certain legal strategies to claim a broad scope, notably the EU law (Table 3). Now, I will test whether anti-age discrimination law could allow for protection related to the environment.

3.2 | The material scope of anti-age discrimination law

The material scope specifies the domains in which the law is applicable. Environmental cases are mostly thought to be excluded from the material scope of anti-age discrimination law as there is no anti-age discrimination law specifying 'environment' as a domain in which the law applies. In this regard, the material scope of anti-age discrimination law could be considered 'narrow' if the domains allowed are very limited. For example, the US ADEA and the EU anti-age discrimination Directive 2000/78 are restricted to discrimination in the workplace.⁵⁴ Therefore, in these legal systems, anti-age discrimination law is predominantly being used to ensure equality in the labour market, that is, equality with regard to employment, work conditions, benefits and retirement. When this is the case, even if the personal scope of anti-age discrimination law is broad, an environmental discrimination claim cannot be raised since the material scope of the law is narrow. Conversely, if the personal scope of anti-age discrimination law is narrow, an environmental discrimination claim could still be raised, for instance with regard to the elderly's environmental vulnerability, if the material scope of the law is 'broad' enough (Table 4).

As I indicated above, currently we do have non-environmental cases in Europe which protect the elderly and children as age groups as well as later birth cohorts. However, we do not have any environmental age discrimination cases, that is, there is no age discrimination case concerning the 'natural environment' in Europe. Yet, I will argue that there are at least three ways in which one can interpret the existing material scope of anti-age discrimination law as being already broader than we think. I will present three strategies to defend the proposal that anti-age discrimination law could still be used in relation to environmental issues even though the law does not specify 'natural environment' in the material scope.

First, the 'constitutional strategy' could be used when a State prohibits discrimination at the constitutional level without specifying the grounds and the domains to which anti-discrimination law applies. For example, the Constitution of the Netherlands contains a general prohibition on discrimination (Article 1).⁵⁵ The scope of this legislation is not limited in its material scope. Hence, age-related

⁵⁰Case C-286/12, *Commission v Hungary*, ECLI:EU:C:2012:687. For a detailed analysis of this case, see AF Colla and A Gosseries, 'Discrimination Par L'âge et Droit Transitoire. Réflexions à Partir de Commission C. Hongrie (C-286/12)' (2013) 43 *Journal des Tribunaux du Travail* 69; A Gosseries, 'What Makes Age Discrimination Special? A Philosophical Look at the EJC Case Law' (2014) 43 *Netherlands Journal of Legal Philosophy* 59, 76–77. For a parallel EU age discrimination case, see Case C-152/11, *Johann Odar v Baxter Deutschland GmbH*, ECLI:EU:C:2012:772. For a very recent parallel UK age discrimination case, see *Air Products plc v Cockram* [2018] EWCA Civ 346, CA.

⁵¹Case C-354/13, *Kaltoft v Municipality of Billund*, ECLI:EU:C:2014:2463.

⁵²*Ibid.*

⁵³Equality Act 2010 (n 43).

⁵⁴Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation [2000] OJ L303/1 preamble; US ADEA (n 38) preamble.

⁵⁵All persons in the Netherlands shall be treated equally in equal circumstances. Discrimination on the grounds of religion, belief, political opinion, race or sex or on any other grounds whatsoever shall not be permitted.' Constitution of the Kingdom of the Netherlands (2008) art 1.

TABLE 3 The levels of the personal scope (Table 2 revisited)

	Does it apply to all age groups?	Does it allow cohortal reading?
Narrow	No US ADEA UK 2010 Equality Act	No (causally – by introducing age threshold)
Intermediate	Yes <i>Bouamar v Belgium</i> <i>D.G. v Ireland</i>	No (non-causally – by directly excluding cohortal reading of the law) <i>Law v Canada</i>
Broad	<i>Parliament v Council</i> Directive 2000/78	Yes <i>Petersen v Berufungsausschuss</i> <i>Commission v Hungary</i> <i>Kaltoft v Municipality of Billund</i>

TABLE 4 The levels of the personal scope and material scope

Personal/material scope	Narrow	Broad
Narrow	No	Yes
Intermediate	No	Yes
Broad	No	Yes

environmental discrimination claims could be alleged. Another example is the principle of non-discrimination on the grounds of age, which is recognized as a general principle of EU law both in CJEU case law⁵⁶ and in the Treaty on the Functioning of the European Union.⁵⁷ In *Mangold v Helm* (2005), the CJEU declared that '[t]he principle of non-discrimination on grounds of age must thus be regarded as a general principle of Community law'. Hence, anti-discrimination law on the grounds of age might have wider implications within the material scope of EU law, although it is not widely used.

Second, the 'goods and services strategy' could be used when the anti-discrimination law recognizes 'goods and services' as a protected domain, and allows for an extensive interpretation of it. For example, the UK's 2010 Equality Act, considers 'environmental health' as a sub-category of the 'public goods and services'. Therefore, discrimination issues in relation to the environment can be brought into the goods and services context.⁵⁸

Third, the 'housing strategy' could be used when the anti-discrimination law is particularly concerned with discrimination taking place as part of private and family life or housing. This could be an effective strategy when the anti-discrimination law excludes public goods and services from the material scope and is only concerned with private goods and services instead. For example, the ECtHR adopts a broad interpretation of the right to respect for private and family life under Article 8 of the European Convention on Human Rights (ECHR). According to the Court, Article 8 ensures protection from environmental pollution.⁵⁹ The ECtHR applies Article 8 in

conjunction with Article 14 (non-discrimination clause) in non-environmental cases.⁶⁰ Therefore, an environmental degradation case which also alleges 'age discrimination' can be brought before the Court. Moreover, there is one non-age-based ECtHR discrimination case against the Romanian State in which the Court concluded that there was a violation of Article 14 in conjunction with Article 8, since Romani people had to live in an unsanitary environment.⁶¹

In contrast with ECtHR law, EU law seems to endorse a narrower approach to 'housing'. For example, Directives 2000/43 and 2004/113 address discrimination with respect of housing that is 'available to the public'.⁶² This means that, unlike the ECtHR approach, these directives are understood to have no bearing on transactions that take place as part of 'private or family life'. However, this does not mean that a legal strategy cannot be developed to include environmental issues within the material scope of EU law. After all, it is recognized that the failure of authorities to ensure decent housing, also during the 'occupation of a property', constitutes one form of discrimination in housing.⁶³ In this regard, several complaints have been made to the European Committee of Social Rights about the failure by various states to ensure a healthy living environment for the Romani people.⁶⁴ These States have all been found to be in violation of the European Social Charter. The Committee of Social Rights noted that their attitude constituted discrimination in the enjoyment of the right to housing.⁶⁵ Even if we do not find such indication within the case law of the CJEU, this approach of the Committee is worth considering for future cases.

⁵⁶*Abdulaziz v United Kingdom*, App No 9214/80 (ECtHR, 28 May 1985).

⁵⁷*Moldovan and Others v Romania*, App No 41138/98 and 64320/01 (ECtHR, 12 July 2005).

⁵⁸Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin [2000] OJ L180/1 art 3(h); Directive 2004/113/EC of 13 December 2004 implementing the principle of equal treatment between men and women in the access to and supply of goods and services [2004] OJ L373/37 preamble 13.

⁵⁹J Ringelheim and N Bernard, 'Discrimination in Housing Thematic Report of the European Network of Legal Experts in the Non-discrimination Field' (European Commission 2013).

⁶⁰*ERRC v Bulgaria* [2006] Complaint No 31/2005; *ERRC v Greece* [2004] Complaint No 15/2003; *ERRC v Portugal* [2011] Complaint No 61/2010; *ERRC v Italy* [2005] Complaint No 27/2004.

⁶¹*ibid*.

⁵⁶Case C-144/04, *Mangold v Helm*, ECLI:EU:C:2005:709 para 75; Case C-555/07, *Kucukdeveci v Swedex GmbH & Co. KG*, ECLI:EU:C:2010:21.

⁵⁷Consolidated Version of the Treaty on the Functioning of the European Union Official Journal [2012] OJ C326/1 art 10.

⁵⁸See <<https://www.citizensadvice.org.uk/discrimination/discrimination-in-the-provision-of-goods-and-services1/discrimination-in-services-provided-by-a-public-authority/discrimination-in-services-and-public-functions-what-s-meant-by-public-functions/>>.

⁵⁹*Lopez Ostra v Spain*, App No 16798/90 (ECtHR, 9 December 1994); *Taskin v Turkey*, App No 46117/99 (ECtHR, 10 November 2004).

Up until this point, I suggested that while there are no environmental age discrimination cases there is room within anti-discrimination law to allow environmental age discrimination cases. I will now explain the 'automaticity claim' to show that the three strategies (constitutional, goods and services, housing) apply equally to each of the three types of personal scope (narrow, intermediate, broad). As soon as the personal scope is greater than or equal to the narrow scope for non-environmental cases if material scope applies to the 'environment' for one of the protected grounds, it will automatically apply to all. The reason is that unlike the three variables in personal scope, we have one value in material scope (environment) that we are trying to include in the scope of law. Therefore, as soon as the material scope allows for environmental claims, then all the groups that are protected by anti-age discrimination law can benefit from such a broad interpretation (automatically). I have further introduced three different strategies to highlight the possibility of such broad interpretation with regard to the material scope.

As this section has tried to clarify, there are reasons to believe that anti-age discrimination law applies to environmental concerns. I will lastly explain that there are even reasons to believe that it is going to be more open to environmental concerns than to other concerns. The reason is that some reasons why differential treatment may not amount to discrimination do not apply to environmental cases with regard to children. A good example is autonomy-related concerns. In the *D.G. v Ireland* case, the ECtHR accepted the application of age discrimination claims of children, but declared that age discrimination is justified for reasons of autonomy.⁶⁶

D.G. v Ireland confirms that while it is universally accepted that children have human rights, including the right to equality and non-discrimination, there are legitimate reasons to deny children certain rights that are available to adults, such as voting, entering into a legally binding contract, marrying and driving. Age discrimination towards children can be justified while conferring such rights because of children's incompetence and limited autonomy, which prevents them from taking the responsibility of having those rights.⁶⁷ The law is concerned with protecting children both from themselves and from adults who can take advantage of the immaturity of younger people.

What is strong about a discrimination allegation with regard to the environmental rights of children is the implausibility of denying these rights by claiming lack of autonomy or likewise vulnerability of children. For example, whether children should have a right to clean air obviously differs from whether children should have a right to smoke of their own free will. The latter is about the cognitive vulnerability of children, so giving children fewer rights than adults can be justified on the basis that it is inappropriate to allow children to make their own mistakes. On the contrary, the former requires stronger rights for children than adults as both the biological capacity of children and their lack of full understanding of the hazards around them makes children more vulnerable to environmental risks,

including and not limited to chemical threats,⁶⁸ climate change effects⁶⁹ and air pollution.⁷⁰ The age-related vulnerability of children to such risks might cause significant health damage if they are not granted the same and, in some cases, a wider range of environmental rights. Therefore, if the anti-age discrimination law allows for the protection of children, the differential treatment of children in environmental matters cannot be legitimized by the same justification in previous cases, such as *D.G. v Ireland*, which denied the age discrimination claims of juveniles for their own protection.

So far, this article has explored the degree to which anti-age discrimination law could apply to environmental cases. The article now proceeds to explain why relying on anti-age discrimination law might be of interest and present advantages compared to other legal strategies.

4 | CAUSATION, TOXIC TORTS AND THE ADDED VALUE OF ANTI-AGE DISCRIMINATION LAW

4.1 | The moderate and the strict causation test

The causation test in discrimination law aims at determining whether there is a sufficient link between the action/inaction of the respondent and the claimant's protected ground.⁷¹ To establish this link it usually suffices to prove that a protected ground played some part in the discriminatory treatment (directly) or discriminatory effect (indirectly). In this regard, we could apply two very different causation tests, one in which age is a necessary but not sufficient condition, and another one in which age is a necessary and sufficient condition for the existence of the harm. The two tests can be framed as follows:

- *Strict causation test*: Does the age alone generate the allegedly wrongful treatment?
- *Moderate causation test*: Did age play a role in generating the allegedly wrongful treatment?

In US anti-age discrimination law, the US Supreme Court, in the case of *Gross v FBL Financial Services, Inc.*, required the strict causation test (also called 'but-for' or 'factual' standard of causation) to cases brought under the ADEA.⁷² The Court held that:

⁶⁸Commission for Environmental Cooperation (CEC), 'Toxic Chemicals and Children's Health in North America' (CEC 2006); WHO, 'Chemical Safety and Children's Health: Protecting the World's Children from Harmful Chemicals Exposures' (WHO 2016).

⁶⁹S Bartlett, 'Climate Change and Urban Children Impacts and Implications for Adaptation in Low- and Middle-income Countries' (2008) 20 *Environment and Urbanization* 501; UNICEF (n 24).

⁷⁰J Schwartz, 'Air Pollution and Children's Health' (2004) 113 *Pediatrics* 1037; WHO, 'Effects of Air Pollution on Children's Health and Development' (WHO Europe 2005).

⁷¹This definition is derived from the causation definition in tort law. See WL Prosser, *Handbook of the Law of Torts* (4th edn, West 1971) 236–237, 241.

⁷²*Gross v FBL Financial Services, Inc.*, 557 US 167, 129 S. Ct. 2343, 174 L. Ed. 2d 119 (2009). Australian anti-age discrimination law also contains a higher standard of causation compared to other Australian anti-discrimination laws. Under Australian law, the plaintiffs must prove that age was the 'dominant or substantial reason' for discrimination. See Section 16 of Australia Age Discrimination Act, No 68, 2004.

⁶⁶*D.G. v Ireland* (n 47).

⁶⁷J Herring, 'Children's Rights for Grown-ups' in Fredman and Spencer (n 37) 145.

*A plaintiff bringing an ADEA disparate-treatment claim must prove, by a preponderance of the evidence, that age was the 'but-for' cause of the challenged adverse employment action. The burden of persuasion does not shift to the employer to show that it would have taken the action regardless of age, even when a plaintiff has produced some evidence that age was one motivating factor in that decision.*⁷³

This strict causation test standard obliges the claimants to prove that they were suffering discrimination only because of age and for no other reason. *Gross v FBL Financial Services, Inc.* eliminated the moderate standard of mixed motives, which shifts the burden of proof to the respondent once the claimant proves that age was one of the reasons for discrimination.

In environmental age discrimination cases, such a standard of evidence would require showing that age is the only cause of environmental vulnerability. This standard would make it difficult to bring an age discrimination claim, because even if age appears to be a substantive factor in age-related environmental health problems, most of the health issues arise in combination with other factors, such as genetics, bad habits, etc.

This difficulty also exists in toxic tort cases, which lead to two interrelated challenges about finding the responsible unlawful treatment and, therefore, the responsible entity. The toxic exposure harms can be usually identified in the long term and, therefore, the alleged injury may be arising from a variety of potentially harmful substances that affected the victim over a long period of time.⁷⁴ Various legal techniques have been developed both in US and EU tort law to ease the burden of claimants, at least in some specific situations, such as negligence and failure to warn.⁷⁵ For example, the dangers of working in a mine are known, therefore most of the regulations require employers to provide for rescue chambers. If that precaution is not taken, the burden of proof shifts to the employer in case of an accident. Apart from that, the strict causation test generally applies in US and EU tort law.⁷⁶

In this regard, the anti-age discrimination law strategy in environmental cases has an added value in certain legal systems. In contrast to the US anti-age discrimination law, in EU and UK anti-age discrimination law, the moderate causation test applies. When children or the elderly are negatively affected by environmental pollution, the moderate causation test asks: how likely it is that the same health issues would have arisen in the absence of the influence of the age

effect? A strict causation test instead asks whether the health issues arise only because of the influence of the age effect. In EU law, if a claimant can establish *prima facie* that age played a part in the less favourable treatment, then the burden of proof reverses to the respondent who must prove that age was not a motivating factor or that its consideration was justified. Article 10 of the Age Discrimination Directive states that:

*Member States shall take such measures as are necessary, in accordance with their national judicial systems, to ensure that, when persons who consider themselves wronged because the principle of equal treatment ... it shall be for the respondent to prove that there has been no breach of the principle of equal treatment.*⁷⁷

UK law similarly departs from the approach which demands that claimants prove that they were unfavourably treated solely because of the claimed protected characteristic.⁷⁸ In *Sharma and others v Manchester City Council*, the Employment Appeal Tribunal (EAT) was asked to interpret the EU Part Time Workers Directive 98/23/EC which says '... part time workers shall not be treated in a less favourable manner than comparable full time workers solely because they work part time ...'.⁷⁹ EAT held that 'in our judgment, once it is found that the part timer is treated less favourably than a comparator full timer and being part time is one of the reasons, that will suffice to trigger the Regulations'.⁸⁰ This judgment demonstrates that the term 'solely' was not interpreted in a strict manner.

There is one more advantage of EU anti-age discrimination law, which helps to establish the causal link between the alleged discriminatory treatment and protected ground. Unlike US law, EU law allows for the use of statistical data as a means to prove causation.⁸¹ Such an approach can be very helpful in environmental age discrimination cases, because statistical evidence is widely used. The statistics can, for instance, be used to show that even if the claimant was not personally injured, there is statistical evidence that children are particularly disadvantaged by climate change. Therefore, the claimant is the victim of a distinct impact as a child.

In short, if tort law requires a strict causation test and anti-age discrimination law also requires a strict test, then anti-age discrimination law strategy has no extra advantage (like in US law). However, anti-discrimination law can still be used as an alternative legal strategy to deal with environmental injustices. Yet if tort law requires a strict causation test whereas anti-age discrimination law requires a moderate causation test, then the anti-age discrimination law

⁷³*ibid* para 2.

⁷⁴DA Farber, 'Toxic Causation' (1986) 71 Minnesota Law Review 1219, 1226–1228; GW Boston, 'A Mass-exposure Model of Toxic Causation: The Content of Scientific Proof and the Regulatory Experience' (1993) 18 Colombia Journal of Environmental Law 181.

⁷⁵K Oliphant, 'Uncertain Factual Causation in the Third Restatement: Some Comparative Notes' (2010) 37 William Mitchell Law Review 1599.

⁷⁶Most of the environmental injustices are brought today as administrative complaints because of the challenge posed by strict causation test. Therefore, the responsible entities and people cannot realize the seriousness of the problem; the fact that environmental pollution directly disadvantages individuals by harming their personal integrity, not only indirectly affecting them through the administrators.

⁷⁷Directive 2000/78/EC (n 54) art 10.

⁷⁸*Sharma and others v Manchester City Council* [2008] UKEAT/0561/07.

⁷⁹*ibid* para 29.

⁸⁰*ibid* para 51.

⁸¹See, e.g., *Hoogendijk v the Netherlands*, App No 58641/00 (ECtHR, 6 January 2005); *D.H. and Others v the Czech Republic*, App No 57325/00 (ECtHR, 13 November 2007). For a comparison of US law and EU law on the issue, see K Linos, 'Path Dependence in Discrimination Law: Employment Cases in the United States and the European Union' (2010) 35 Yale Journal of International Law 115.

strategy has a significant added value for environmental cases. This added value is especially important, because environmental damages usually occur as a result of several factors.

4.2 | The comparator test objection

One could object that there is a potential weakness of the anti-age discrimination law strategy with respect to proving the causal link, since anti-discrimination law involves a comparator test requirement. To support the existence of a causal link, claimants need to find a comparator in the age discrimination cases under EU law. For example, if an elderly person thinks she is disadvantaged because of her age in the recruitment process, she needs to find somebody who was employed with similar capabilities but with a younger age. This helps courts to determine whether age is a substantive factor in the wrongful treatment. The comparator test requires finding a comparator person/group who is in materially similar circumstances with the discrimination victim(s), while not belonging to the group with protected characteristics. Numerous age discrimination cases stumble at this hurdle.⁸² The main difficulties in the context of age was determined by Colm O'Cinneide as the 'fluid nature of a person's age, the uncertain and shifting nature of "age groups", the changing expectations that accompany changes in age, and the differences in position and expectations that often exist even between persons of very similar ages'.⁸³ O'Cinneide argues that, for this reason, a comparator should not be required.⁸⁴ Below, I will present legal strategies to deal with this requirement in environmental age discrimination cases.

Legal theorists draw attention to two different possible goals underlying anti-discrimination law: equality and liberty.⁸⁵ While the former expresses that a law discriminates when it fails to treat people as equals (comparative dimension), the latter claims that a law discriminates when it deprives some of the liberty which all are entitled to (non-comparative dimension).⁸⁶

Imagine only children facing the negative consequences of a nearby industrial facility. According to the liberty account we would frame the discrimination problem as follows. This facility threatens the health of an individual on the basis of her 'age'. By contrast, according to the equality account we would first ask compared to whom children are in a more disadvantaged situation? Here, 'adults' may not be a straightforward answer as the adverse effect is caused by the physiological difference between adults and children. Adults and children could be considered in materially different situations, that is, non-comparable.

The need for a comparator has not been consistently required in the ECtHR's case law on Article 14. However, EU anti-discrimination

directives and CJEU case law have explicitly required meeting the comparator test for discrimination to occur (both in direct/indirect discrimination).⁸⁷ There is still hope for environmental age discrimination claims since there are some signs of a shift away from a strict comparative approach, in at least three respects. First, in the cases where a real comparator cannot be identified, the use of a hypothetical comparator is allowed under EU law.⁸⁸ Second, in cases where the discrimination is evident but identifying comparators appear as an important challenge the CJEU seems inclined to analyse the context of the case without requiring a comparator. This approach has been taken in exceptional situations such as pregnancy.⁸⁹ The particularity of pregnancy is the non-existence of a comparator who is not pregnant but in materially similar situation with the pregnant woman, that is, it is not clear whether a non-pregnant woman or a man should be the comparator. Similar uncertainty also appears in multi-discrimination cases. For example, in *Galina Meister v Speech Design* (2012) the CJEU admitted the comparator identification problem of Galina Meister who alleged discrimination based on the combination of her gender, age and ethnicity.⁹⁰ Environmental discrimination cases could be seen in line with such specific exceptions when discrimination is evident in the context of the case, but a comparator cannot be identified. Third, the other types of discrimination which are recognized by EU law, namely harassment and victimization, do not require a comparability test for discrimination to occur. Therefore, their use in environmental matters can be discussed if identifying comparators turns out to be difficult.

This section has presented the causation test requirement as a potential advantage of anti-age discrimination law strategy over toxic torts. While the comparability test obligation of anti-age discrimination law is a possible weakness in establishing the causal link, there are strategies to overcome this weakness. The article now turns the advantage of anti-age discrimination law in combination with human rights and children's rights.

5 | HUMAN RIGHTS, CHILDREN'S RIGHTS AND THE ADDED VALUE OF ANTI-AGE DISCRIMINATION LAW

This section will explore why relying on anti-age discrimination law in combination with human rights law and children's rights law has an advantage in environmental cases. Other than tort law, human

⁸²*Bartram v East Sussex County Council, Claverham Community College* [2011] UKEAT 3102389; *Ms L Palmer v The Royal Bank of Scotland PLC* [2014] UK EAT 0083140108.

⁸³C O'Cinneide, 'Age Discrimination and European Law' (European Commission 2005) 6.

⁸⁴*Ibid.*

⁸⁵D Hellman and S Moreau, *Philosophical Foundations of Discrimination Law* (Oxford University Press 2013); T Khaitan, *A Theory of Discrimination Law* (Oxford University Press 2015).

⁸⁶Hellman and Moreau (n 85) 72–76.

⁸⁷JH Gerards, *Judicial Review in Equal Treatment Cases* (Martinus Nijhoff 2005).

⁸⁸Case 129/79, *Macarthy Ltd v Smith*, ECLI:EU:C:1980:103.

⁸⁹Case C-177/88, *Dekker v Stichting Vormingscentrum voor Jong Volwassenen (VJV-Centrum) Plus*, ECLI:EU:C:1990:383.

⁹⁰Case C-415/10, *Galina Meister v Speech Design Carrier Systems GmbH*, ECLI:EU:C:2012:217. See also M Jonker, 'Comparators in Multiple Discrimination Cases: A Real Problem or Just a Theory?' in M van den Brink, S Burri and J Goldschmidt (eds), *Equality and Human Rights: Nothing But Trouble?* (SIM 2015) 211, 213–214. In parallel, UK law also departs from a strict approach to the comparator test in direct discrimination cases, where discrimination is evident but identifying comparators is not possible, with the decision of the EAT regarding disability discrimination in *High Quality Lifestyles v Watts* [2006] UKEAT/0671/05/ZT.

rights law and children's rights law are often the two non-anti-discrimination-based legal strategies used to defend a clean environment.⁹¹ The first and the most straightforward one is the human rights strategy.⁹² It consists mainly of relying on the 'right to life' and the 'right to health' and in some cases the 'right to a healthy environment'.⁹³ These rights are the fundamental rights of all human beings, including the elderly and children. In particular, the 'right to a healthy environment' is recognized as a primary right in the case law of the ECtHR and in more than 100 national constitutions.⁹⁴ Here, I will argue that in Europe, the anti-age discrimination law approach has an advantage when it is coupled with other human rights under the ECHR. Article 14 of the ECHR, the Convention's non-discrimination clause, only functions in conjunction with another fundamental right. In such cases one needs to claim that, for example, a child suffered discrimination in trying to exercise her right to a healthy environment. Yet, the ECtHR has been widening the threshold of Article 14.⁹⁵ Article 14 can be invoked if a case can be considered within the ambit of a substantial right in the Convention without proving the breach of that particular article. According to the Court:

*Article 14 of the Convention has no independent existence, since it has effect solely in relation to the rights and freedoms safeguarded by the other substantive provisions of the Convention and its Protocols. However, the application of Article 14 does not presuppose a breach of one or more of such provisions and to this extent it is autonomous. For Article 14 to become applicable it suffices that the facts of a case fall within the ambit of another substantive provision of the Convention or its Protocols.*⁹⁶

The advantage of using Article 14 in conjunction with another right can be seen in certain cases that came before the Court.⁹⁷ These cases did not involve substantial evidence about the breach of a human right. Yet since the cases could be framed as being about discrimination, the Court accepted that there was sufficient evidence about the case's relevance to a human right. In terms of environmental cases, it is not easy to convince the Court of a State's responsibility under right to respect for private and family life of the Convention (Article 8) which is invoked in environmental cases.⁹⁸

The Court has declared that 'the State's obligations under Article 8 come into play in that context only if there is a direct and immediate link between the impugned situation and the applicant's home or private or family life'.⁹⁹ Therefore, in environmental cases where claimants do not have enough evidence to prove the breach of Article 8, it could be plausible to use Article 14 in conjunction with Article 8 if that particular case can be redefined as an environmental age discrimination issue.

The second strategy is the children's rights strategy. It consists of protecting the rights of children that entail collective responsibility by the natural/legal guardians and the State. They should ensure that children are protected from various kinds of risks and environmental risks.¹⁰⁰ Articles 4 and 5 of the United Nations Convention on the Rights of Children and Article 24 of the EU Charter of Fundamental Rights, as well as numerous national laws indicate the responsibilities towards minors.¹⁰¹ Anti-discrimination law can be used to strengthen the arguments about children's rights. The reason is that many environmental regulations and cases which concern children refer to the disadvantaged situation of children and the distinct effects of pollution on them. For example, in the EU, Article 23 of Directive 2008/50 on 'air quality plans' includes specific measures aimed at protecting sensitive population groups, including children.¹⁰² The CJEU also recognizes children's environmental vulnerability under this Directive. The Court declared that 'the air quality plans may additionally include specific measures aiming at the protection of sensitive population groups, including children'.¹⁰³ Moreover, there are cases in the United States in which the complainants express their worries about the distinct effect of certain environmental action/inaction on children.¹⁰⁴ For an instance, in *Mississippi v Environmental Protection Agency* (2013), the Court of Appeals for the District of Colombia declared that '[the US Environmental Protection Agency] acted arbitrarily and capriciously by, for example, failing to give appropriate consideration to key aspects of the "margin of safety" inquiry, such as how pollution thresholds might impact sensitive sub-populations, such as asthmatics, children, or the elderly'.¹⁰⁵

Apart from a few recent cases, for example *Juliana v United States*, anti-discrimination law is not invoked.¹⁰⁶ However, the particular position of children is recognized. It appears that the US courts have dismissed some cases which were brought against the

⁹¹See, e.g., *Urgenda Foundation v Kingdom of the Netherlands* (n 9).

⁹²This strategy had a recent success in a Dutch climate case which went before the Court of Appeal. See A Gosseries and RK Kaya, 'L'Arrêt Urgenda, un Espoir Face à L'Inertie des Politiques Climatiques' (The Conversation, 30 October 2018).

⁹³The right to life is protected under Article 2 of the ECHR and has been applied in environmental cases: *Öneriyildiz v Turkey*, App No 48939/99 (ECtHR, 30 November 2004). For the use of other environmental human rights, see A Boyle, 'Human Rights and the Environment: Where Next?' (2012) 23 *European Journal of International Law* 613.

⁹⁴*Taskin v Turkey* (n 59); see, e.g., *Constitution belge coordonnée* [Belgium] (17 February 1994) art 23.

⁹⁵S Fredman, 'Emerging from the Shadows: Substantive Equality and Article 14 of the European Convention on Human Rights' (2016) 16 *Human Rights Law Review* 275.

⁹⁶*Thlimmenos v Greece*, App No 34369/97 (ECtHR, 6 April 2000).

⁹⁷See, e.g., *Konstantin Markin v Russia*, App No 30078/06 (ECtHR, 22 March 2012).

⁹⁸See, e.g., *Ivan Atanasov v Bulgaria*, App No 12853/03 (ECtHR, 2 December 2010).

⁹⁹*Ibid* para 66.

¹⁰⁰United Nations Convention on the Rights of the Child (adopted 20 November 1989, entered into force 2 September 1990) 1577 UNTS 3 (UNCRC) art 24.

¹⁰¹See, e.g., *Bunreacht na hÉireann* (Constitution of Ireland, enacted in 1937) art 31.

¹⁰²Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe [2008] OJ L152/1.

¹⁰³*Case C-404/13, ClientEarth v The Secretary of State for the Environment, Food and Rural Affairs*, ECLI:EU:C:2014:2382.

¹⁰⁴*Redland Soccer Club v Dept. of Army* No: 55 F.3d 827 (3d Cir. 1995); *Grace Christian Fellowship v KJG Invs., Inc.* No: 07-C-0348 (2009); *Mississippi v Environmental Protection Agency* No: 08-1200 (2013); *Allen v United States* No: 588 F. Supp. 247 (1984).

¹⁰⁵*Mississippi v Environmental Protection Agency* (n 104) 9.

¹⁰⁶*Juliana, et al v United States of America, et al* No: 6:15-cv-01517 (D.Or. 2018) proceeding; see also *Youth for Environmental Justice et al v City of Los Angeles et al* Council File: 16-1027 (2015).

Environmental Protection Agency's specific toxic emission measures that are more protective than those measures which are statutorily authorized. In this respect, US courts recognized 'affirmative action-like' justifications for non-statutory measures aimed at protecting sensitive population groups, including children.¹⁰⁷ For example, in *NEDA/CAP v EPA*, the Court of Appeals for the District of Columbia refers to the definition of public health by the US Congress whose objective is to 'protect not only average healthy individuals, but also sensitive citizens, such as children ...'.¹⁰⁸ The Court concluded that, vulnerable populations would suffer more serious health effects if the State did not set special standards for them. These cases are important, since they can constitute a basis for the recognition of anti-age discrimination claims of children in environmental matters. This recognition would be used to support children's rights claims and it would be a strong alternative avenue in the cases which can be reframed as age discrimination issues.

6 | CONCLUSION

This article explored the potential of anti-age discrimination law to address age-related adverse health effects of environmental degradation on four groups: the elderly, children, later birth cohorts and earlier birth cohorts. It presented the scientific and legal facts which reveal the age-related discriminatory impacts of environmental degradation. It defended an extensive reading of anti-age discrimination law by introducing certain strategies to argue that the personal and the material scope of anti-age discrimination law can be broader than we think. It demonstrated that the anti-age discrimination laws in Europe are good examples of how broad the interpretation of the personal scope can be. In this respect, the CJEU anti-discrimination case law in *Commission v Hungary* and *Kaltoft v Municipality of Billund* reveals that children can be protected as an age group, opening a possible avenue to address cohort concerns. In terms of the material scope, the national laws in Europe seem to provide a broader basis for environmental claims through constitutional protections, as in the Netherlands, and allowing the protection from age discrimination in the domain of goods and services, as in the UK.

Moreover, the article argued that there is added value in using an anti-age discrimination law strategy. First, the causation test requirement makes EU anti-age discrimination law more advantageous than EU toxic tort law. Compared to EU tort law, EU anti-discrimination law is less demanding with regard to establishing a causal link. EU anti-discrimination law also allows for the use of statistical data, which can be extremely helpful in environmental cases. Second, anti-age discrimination law can help strengthen environmental claims when it is used in combination with human rights and children's rights law.

The article was not restricted to one legal system to present a broad range of possible strategies to use anti-age discrimination law. One shortcoming of the approach put forward in this article is that since environmental age discrimination case law is not yet fully developed, it raises concerns about legal certainty. Even if we are able to map out certain legal strategies, it is not easy to predict the reaction of the judges applying anti-age discrimination law. Yet, faced with serious environmental degradation it is important to develop and use new ways of analysing and overcoming the shortcomings of existing legal strategies. Anti-age discrimination law is worth considering as a potential public litigation avenue for public litigation.

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¹⁰⁷*National Environmental Development Ass'n Clean Air Project v Environmental Protection Agency*, Opinion No: 10-1252 (2012).

¹⁰⁸*ibid* 13.