Chapter 14
Vulnerability as a New Perspective on Ethical Challenges in Healthcare

Henk ten Have

And if we hate the virus for the vulnerability it exposes, we ought not for that reason conclude that the absence of the virus will eradicate that vulnerability.
Judith Butler, What world is this? A pandemic phenomenology, 2022

Abstract Vulnerability is a popular notion in recent ethics literature. It is used most often in association with globalization, global health, and pandemics. This contribution examines the use of this notion in ethical discourses concerning health and healthcare. The COVID-19 pandemic illustrates that vulnerability has two interrelated dimensions: a persistent one, reflecting that being human means being vulnerable; every human being may become infected, ill or may even die because of the viral threat; and a variable one, making some humans more vulnerable to the virus and its damaging effect, or as a result of the stringent public health measures that are taken. These two dimensions require that moral debates about healthcare have a more encompassing and differentiated approach beyond the dominating emphasis on personal autonomy and individual responsibility.

Keywords Anthropological vulnerability · Special vulnerability · Global bioethics · Globalisation · Autonomy · Responsibility

1 Introduction

Since the turn of the millennium, the notion of vulnerability is increasingly used in a broad range of scientific disciplines and practical activities. A search in PubMed shows that 'vulnerability' as a general keyword has been used 8.7 more often in

H. ten Have (✉)
Center for Global Health Ethics, Duquesne University, Pittsburgh, USA
e-mail: tenhaveh@duq.edu

Department of Bioethics, Anahuac University Mexico, Mexico City, Mexico

© The Author(s), under exclusive license to Springer Nature Switzerland AG 2023

S. Achella and C. Marazia (eds.), *Vulnerabilities*, Integrated Science 18,
https://doi.org/10.1007/978-3-031-39378-5_14

scientific publications in 2022, compared to those in 2000 (Table 1). The overall annual growth rate of publications since the beginning of scientific publishing is estimated at 4.10% [1]. Since 1952 until 2018, the annual growth rate has been 5.08%. Although these estimates are based on publications in the physical and technical sciences, as well as the life sciences (including health sciences), they might suggest that the use of the keyword 'vulnerability' expanded more than the increase in number of publications in general.

This contribution will focus on vulnerability in the context of ethics, particularly bioethics. The keywords of 'vulnerability' and 'ethics' have been used in several thousand publications since 1972, and more frequently over the last twenty years (6.1 times more often in 2022 than in 2000). Combining 'vulnerability' with the specific keyword 'bioethics' produces a lower number of publications. In this area, identifying the keyword 'vulnerability' appears for the first time in 1978. In the specific domain of global bioethics, it is first used in 2002. However, there are two interesting connections worth mentioning. One is the combination 'vulnerability' and 'globalisation,' first used in 1951, and referring to a rapidly growing number of publications in the last two decades (21.4 more in 2022 than in 2000). The other is the combination of 'vulnerability' and 'environment,' first used in 1939, and now used 16.5 times more often to label publications than in 2000 (Table 1).

Since bioethics is the scientific discipline concerned with ethical issues related to medicine, life sciences and associated technologies as applied to human beings, it is helpful to explore how often the notion of vulnerability is employed in connection to health and disease [2]. A PubMed search of the relevant notions shows that vulnerability is for the first time associated with health and disease in the 1940s (Table 2).

Table 1 Vulnerability: general and specific uses (PubMed search November 2022)

Keywords	2022	2000	First publication	>20 annual publications	Total number of publications	Multiplication factor since 2000
Vulnerability	16,809	1938	1898	Since 1968	182,673	8.7
Vulnerability and ethics	472	78	1972	Since 1988	8349	6.1
Vulnerability and bioethics	67	16	1978	Since 1995	1127	4.2
Vulnerability and global bioethics	7	0	2002	–	88	7
Vulnerability and globalization	2336	109	1951	Since 1988	17,781	21.4
Vulnerability and environment	3289	199	1939	Since 1979	31,206	16.5

Relevant publications have multiplied since 2000. Interestingly, the keyword 'vulnerability' is more often associated with health than with disease. The largest growth rate is for publications focused on global health; the number of publications with keywords 'vulnerability' and 'global health' started to increase substantially since 1999, and multiplied 71.1 times between 2000 and 2022.

A more specific search in the PubMed database aims to clarify the connection between the notion of vulnerability and infectious diseases (Table 2). Associations between the keywords 'vulnerability' and 'infections' are made in occasional publications since 1926, in more than 100 annual publications since 1991, in more than 1,000 a year since 2013, while the number of relevant publications increases steeply since 2020. The number of publications associating 'vulnerability' with 'pandemics' was significantly lower. The association is made for the first time in 1983. It is mentioned in more than 20 annual publications since 2006. The majority of this type of publications (69.5%; 746 out of 1073) appears during the past four years (2019–2022). In this same period of time, more than 11,000 publications combines the keywords 'vulnerability' and 'COVID-19'. This is 3.5% of all publications with the keyword 'COVID-19' since 2019 (a total of 309,524 according to a PubMed search with this keyword alone).

From this relatively simple search in the PubMed database it can be concluded that 'vulnerability' is increasingly used to characterize publications as a keyword, especially since 2000. Since the 1970s it is also used in combination with 'ethics' and 'bioethics'. The notion of vulnerability plays a particular role in medicine and health sciences, being associated with 'health' and 'disease', starting in the 1940s and expanding since the turn of the millennium. Since that time, it seems particularly

Table 2 Vulnerability and health or disease (PubMed search November 2022)

Keywords	2022	2000	First publication	>20 annual publications	Total number publications	Multiplication factor since 2000
Vulnerability and health	10,115	597	1949	1976	88,384	16.9
Vulnerability and global health	1422	20	1951	1999	9453	71.1
Vulnerability and disease	5346	687	1941	1975	57,376	7.8
Vulnerability and infections	4030	185	1926	1978	28,239	21.8
Vulnerability and pandemics	295	5	1983	2007	1073	59.0
Vulnerability and COVID-19	3971	0	2019	2020	11,128	3971

fruitful in publications on global health. The notion of vulnerability is furthermore associated with infectious diseases. Its association with infections is substantial and rather old, while publications relating the notion with 'pandemics' is more recent.

2 The Concept of Vulnerability

An analysis of the notion of vulnerability in the bioethical literature shows that it is initially employed in the context of research ethics but expanded into other contexts, especially after the adoption of the *Universal Declaration on Bioethics and Human Rights* in 2005 [3]. The Declaration is the first normative document that stated explicitly that respect for human vulnerability is a fundamental principle of global bioethics. Rather than sensitizing medical researchers that some individuals and groups can be exploited in research and need protection, it is now used to clarify that certain contexts such as socio-economic conditions, poverty, violence, and discrimination make individuals and groups vulnerable. This expanded application of the notion is in fact a reflection of the widening of bioethical discourse itself. While bioethics since its emergence in the 1970s developed rapidly as a new discipline it remained primarily focused on moral challenges faced by patients and physicians in clinical medicine, like medical ethics had traditionally done for centuries. The new discipline, however, changed the power balance in medical interactions from physician paternalism to patient autonomy. The concern with vulnerable subjects in medical research expressed the individualistic orientation of the new bioethics. Around the turn of the millennium, highlighted by the above-mentioned Declaration, a broader approach emerged that provided ethical perspectives beyond the individual concern of clinical medicine and bioethics, taking into account the significant role of the social context and the environment in health and disease. Van Rensselaer Potter, the researcher who coined the term 'bioethics' in 1970 argued that professional medical ethics needed to be replaced by a more encompassing ethical approach which combines knowledge of the life sciences with the wisdom of moral traditions, hence the name 'bioethics'. The primary concern of this new discipline should be the question how humankind can survive, thus locating the moral anxieties of individual patients and doctors in a wider context. However, he was disappointed that the subsequent development of the new field of bioethics continued to reiterate the individual perspective of the traditional medical ethics. He thereupon advanced since 1988 the notion of 'global bioethics' to point out that ethical challenges to healthcare and medicine are increasingly worldwide, relating to economic development, environmental degradation, poverty and deteriorating social-economic living conditions for numerous populations. These challenges require an ethical approach that goes beyond the usual individualistic perspective, and that needs to supplement the concerns with individual autonomy with ethical principles such as solidarity, social responsibility, sustainability, and justice. The emergence of global bioethics since 2000 as demonstrated in the UNESCO Declaration, gave rise to a range of ethical principles to examine and address the moral challenges of contemporary

medicine as well as life sciences. Against this background, the notion of vulnerability also expanded its individualistic focus into a wider consideration of the social and environmental context of human existence [4].

Because the notion of vulnerability became increasingly used in a broader setting and in a range of disciplines and practices, disputes about the concept are not uncommon [5]. There is no universal agreement about the concept. The UNESCO Declaration for example provides no definition or description of what vulnerability is. Nonetheless, usage of the concept in the bioethical literature demonstrates two common interpretations of the notion: an ontological one that relates vulnerability to the fact of human existence itself, and a circumstantial one that associates it to the conditions and relationship within individual human beings are living [3]. This distinction between persistent and variable vulnerability was first made by philosopher Onora O'Neill, and since then reiterated by many scholars with often different terminology [6]. However, most scholarly papers define vulnerability as either a persistent or a variable characteristic of human beings [7]. This ignores that in fact both dimensions are relevant to understand the concept of vulnerability. The first dimension explains the anthropological condition: the human condition is characterized by fragility and weakness. Human beings in general are vulnerable, because their bodies are embedded in environments that can harm them. Since being human means being vulnerable, this dimension can best be termed 'anthropological vulnerability'. At the same time, human beings are not isolated entities but embedded in relationships with other living beings and with different types of environments. This embeddedness makes individuals vulnerable, and specific individuals and groups more vulnerable because they are more exposed to threats and the possibility of harm than others. Some people are rendered vulnerable by the social and economic conditions in which they live [8]. This type of vulnerability is best termed 'special vulnerability' [5, p. 124–148].

The implications of anthropological and special vulnerability are different. The first dimension reflects the philosophical point of view that vulnerability is a generalized, inherent and shared characteristic of human beings as embodied agents [9]. The implication is that being vulnerable is not an individual feature but a generalized condition of the human species. It also articulates that being human not merely implies agency but simultaneously susceptibility and passivity; humans are often exposed to forces beyond their control, and do not have full control of their existence. Finally, vulnerability is not a negative qualification of human existence referring to weakness, frailty, and lack of power. On the contrary, it signifies potentiality, openness to change and transformation. Recognizing vulnerability as a shared condition will enable new forms of cooperation, solidarity and community [10]. Social institutions have been created in response to this type of vulnerability [11]. Anthropological vulnerability is furthermore a core notion in international human rights language. Because of their shared vulnerability humans feel pain, and can suffer. They are dependent on others to grow and mature, to become autonomous individuals and to be cared for in illness and ageing. They need social support and legal protection, and have built social and political institutions to provide collective security. Human rights have emerged because human beings share the capacity to recognize pain and suffering in others.

Common vulnerability is therefore the foundation of human rights [12]. Acknowledging anthropological vulnerability as more than an individual characteristic implies an appeal to a different set of ethical values than emphasized in mainstream bioethics: care, solidarity, justice, and international responsibility, going beyond the perspective of individual autonomy, power, protection, and damage control [13, 14].

The dimension of special vulnerability reflects a political rather than philosophical interpretation of the concept. It assumes that vulnerability can be the product of specific circumstances that require remediate action. It is not an abstract notion but manifests itself in everyday life, especially in healthcare settings. Even if human beings share the same inherent and common vulnerability as argued in the philosophical perspective, vulnerability can be exacerbated because of human interconnectedness and living conditions, making some of us more vulnerable. The political perspective emphasizes that vulnerability is made, produced, or generated within specific conditions within which individual human beings happen to exist: poverty, homelessness, discrimination, inequalities in access to healthcare and health insurance, poor socio-economic circumstances, and environmental degradation. These conditions may expose individuals and groups to exploitation, mistreatment, abuse, stigmatisation, and disrespect. They make certain groups particularly vulnerable, such as racial minorities, the economically disadvantaged, people who are disabled, very sick or institutionalized [15].

Special vulnerability is related to processes of globalization that have resulted in a world with more and new threats. At the same time, these processes have undermined traditional protection mechanisms such as social security and welfare systems, and family support mechanisms, thus eroding the abilities of individuals and communities to cope with serious threats. The fact that the world has become increasingly interconnected and interdependent has created a sense of mutual vulnerability. Being vulnerable is often the result of a range of external conditions, and therefore beyond the power and control of individuals. It is argued, for example, that the landscape of medical research has significantly changed [16]. It is now a global enterprise, requiring a broader ethical framework. Globalization has created an asymmetry of power of which vulnerability is one of the major symptoms [17]. It is also indicated that there is growing vulnerability, especially of women in developing countries, related to neo-liberal, global economic policies [18]. Failing states are blamed for increasing vulnerability due to the persistence of poverty and hunger [19]. And it is observed that the discourse of vulnerability has particularly emerged and expanded in the context of global phenomena such as natural disasters and the pandemic of AIDS [20].

The association of vulnerability to globalization requires a broader interpretation of the concept than is usual in mainstream bioethics which used to consider it primarily as impaired or failed autonomy. An influential description of vulnerability in research ethics documents is: “a substantial incapacity to protect one’s own interest” [21]. The moral principle of respect for autonomy is the framework within which the notion of vulnerability is interpreted and understood. Vulnerability is primarily regarded as an individual weakness; it indicates that certain individuals cannot protect themselves. For example, in clinical research vulnerable persons either

lack decisional capacity or lack adequate information so that they need to be protected against possible exploitation. Free and informed consent can therefore eliminate the vulnerability of potential research subjects. In this perspective, vulnerability essentially is limited autonomy. However, if vulnerability is a global phenomenon and produced by structural social, economic and political determinants that disadvantage people, it is not merely an individual affair. The notion is then more related to the ethical principles of justice, solidarity and equality than individual autonomy. The implication is that bioethics needs to adopt a broader normative framework since the ethical principles that dominated bioethical discourse during the past 50 years are no longer sufficient to provide guidance at the global level [22].

3 COVID-19 and Vulnerability

Vulnerability has become a significant concern during the COVID-19 pandemic (see Table 2). It has been identified as a core principle in many policy statements. Public health measures were often justified with the appeal to protect the most vulnerable citizens. Vaccine distribution schedules usually prioritized vulnerable populations [23]. The pandemic highlighted that some individuals and groups were more affected by the viral disease than others. It was further recognized that health professionals and care institutions themselves are vulnerable [24].

The pandemic clearly illustrates the two dimensions of vulnerability. On the one hand, anthropological vulnerability is revealed in the fact that all human beings where ever they live can be infected. Everybody is a potential patient, and therefore obliged to shelter in order to prevent infection. Human beings are necessarily embedded in natural environments; they cannot separate themselves from their biological surroundings. Micro-organisms such as viruses are essential components of the biosphere and necessary for the sustenance of life. Since humans live in a virosphere, viral infections cannot be eliminated. As key components of the living world many viruses play a positive role in the biosphere. The healthy human body is inhabited by massive numbers of viruses, and viral material is incorporated in our genes [25]. However, the anthropological dimension of vulnerability not only refers to the biological constitution but also to the fact that humans are social beings, i.e. connected to their environment and related to other beings. Vulnerability exists because human beings are open to the world, they engage in relationships with other persons, and interact continuously with the world. This openness and interaction is a positive phenomenon; it is the basis for exchange and reciprocity between human beings. We cannot come into being, flourish and survive if our existence is not connected to the existence and flourishing of others. At the same time, this world-openness is also potentially harmful and damaging, exemplified in the continuous risk of being infected. This risk can be diminished but not completely avoided since humans cannot discard their social nature [26].

On the other hand, COVID-19 has highlighted the dimension of special vulnerability; it has revealed and amplified previously existing vulnerabilities, showing

that some human beings are more susceptible to harm than others. The pandemic demonstrates that healthcare workers are more frequently infected, because of their increased exposure. In addition, several other groups are more at risk for different reasons: older people, persons with underlying conditions or compromised immune systems, socio-economically disadvantaged people, indigenous populations, and racial and ethnic minorities. In the U.S., waves of COVID-transmission revealed structural vulnerabilities, first affecting nursing homes and long-term care facilities, then minority populations and immigrants, and next correctional facilities [27]. The experience with the pandemic furthermore saw the resurgence of discriminatory practices such as racism and ageism.

COVID-19 has also created new vulnerabilities since people may become vulnerable due to the policy responses to the pandemic [28]. Lockdowns produced sudden loss of income, livelihood, and food for numerous people, especially in developing countries [29]. They initiated an abrupt disruption of social contacts, for example with visitor restrictions in long-term care facilities and stay-at home orders, exposing many to isolation, loneliness, and depression. Closing of schools deprived children not only from education but also from adequate nourishment in countries with school food programmes. Distribution of vaccines has been criticized as reinforcing global inequity, and making less-resourced countries more vulnerable to serious consequences of infection. Moreover, the priority for hospital care for COVID patients caused cancellation or postponement of interventions and treatment for patients with other diseases, making them more vulnerable to the harm of their disorders, and reducing access to healthcare for many people. At the global level, public health, medical treatment, and preventive programmes were affected or delayed [30]. For example, in 2020 tuberculosis deaths have increased since 2005. The number of people treated for drug-resistant tuberculosis decreased with 15%, and those receiving preventive treatment for tuberculosis infection with 21% [31].

4 Vulnerability After COVID

Although the notion of vulnerability has been recognised and examined since decades, the pandemic made clearly visible that in daily existence people are confronted with vulnerability at multiple levels: as individuals, as persons relating to other beings, as citizens within complex societies and fragile democracies, as consumers of globalized trade, as professionals providing healthcare, as patients within care institutions, as workers in certain enterprises, as inhabitants of low-resource countries [32]. The pervasiveness of vulnerability in pandemic experiences should instigate the development of a broader moral grammar to understand and address the normative challenges of contemporary healthcare. The reason is that these experiences articulate the significance for human existence of liminality, connectedness and community.

Pandemics are liminal events; they disrupt the normal ways of living, acting and thinking, and they call for a transition to a new phase [33]. Old patterns are

dissolving but new ones are not established, producing experiences of ambiguity, uncertainty, fear, and disorientation. Liminality indicates that we are living in a borderland where existing frames of reference have become unclear and uncertain. Human beings are always situated, i.e., they find themselves in situations of specific and concrete circumstances, dependent on gender, age, race, character, education and particular circumstances. Some situations, which Karl Jaspers has called 'limit situations' are inescapable: nobody can avoid death, serious illness and suffering. The security of existence disappears and humans are confronted with their vulnerability. In such situations, humans become aware not merely of the limitations but also of the possibilities of existence, and they can go beyond them in communication with others. Such limit situations provide the possibility of a transition to a new orientation of life [34]. There is a strong tendency to deny liminality, for example in the omnipresent use of the war metaphor during the various waves of COVID-19 and the reassurance of policy-makers to return to normal as soon as possible. Nonetheless, pandemic experiences have highlighted human vulnerability; the threat of disease and the possibility of death were no longer abstract events for many people.

The pandemic has reinforced the awareness that connectedness is a basic feature of this era of globalization. Citizens in one country will be exposed to diseases when they emerge in other countries. Closing borders, restricting travel, and concentrating on national interests have had only a limited effect on the dissemination of COVID-19. Vulnerability to infections is not confined to specific individuals, populations and nations but all humans are facing this threat together. Being situated in a web of connections is a precarious experience. Because their bodies position them in the world, human beings are exposed to the world and other persons, necessarily implying vulnerability. If human beings not merely interact with each other but belong together and are mutually dependent, the emphasis on the notion of individual autonomy is no longer sufficient to address and explain the challenges of the pandemic, but common interests, mutual support, social responsibility, cooperation and solidarity should have a significant role in inclusive and comprehensive ethical discourse. Furthermore, the experience of connectedness clarifies our dependency on the planet. Human flourishing and survival crucially depends on the material conditions provided by ecosystems and biodiversity. Without a healthy biodiversity providing water, food, security and medicine, human health is unthinkable. A rapidly increasing number of species becomes extinct because their habitat is irreversibly degraded and destructed. Humans are undermining their own existence and survival, and as the concept of Anthropocene accentuates, their survival as a species is at stake [35]. The issue of uncertain survival not only clarifies that it is impossible to abstract humanity from nature. Humans are part of a biotic community of soil, water, plants, and animals, or more broadly, part of the Earth system which they themselves are jeopardizing. Viral threats precisely illustrate that human health is intrinsically connected to planetary health. They are not natural events but produced by human behaviour, exploiting the planet and destroying biodiversity for the sake of economic growth. Environmental degradation, and the resulting risks of emerging infectious diseases, is associated with an economic world order that proceeds with the assumption that humans and nature are separated, and that nature can be regarded as a resource to be exploited

and commodified. That this assumption is completely mistaken is demonstrated in the experiences with the pandemic, showing the connectedness not only between humans but also between humans and nature [26, pp. 115–121].

Finally, pandemic experiences have articulated the importance of community for human flourishing. The notion of community (like related notions of culture, tradition, history and social practices) is usually considered to have secondary relevance from the standpoint of individualism. The COVID pandemic underlines that individuals are not isolated, abstract entities but social beings; they are flourishing within a communal context. Societies are not mere collections of individuals but have their own history and evolution, producing and determining who human beings are and what they will become; their moral status is not so much dependent on their particular individual characteristics but rather on relations and interdependencies with other beings. This point of view is not new; it has been advocated in many critical discourses over time: communitarianism, existentialist philosophy, anthropological medicine, feminist ethics, indigenous ethics, and non-Western philosophies. They focus attention on the fact of dependency and vulnerability, on sociality as a necessary condition for personal identity, and on embeddedness as a precondition for moral agency. In public and policy debates during the COVID pandemic, individual and communal interests are often opposed. Particularly when the ideology of individualism prevails, the human being is regarded as rational self-regarding actor, as *homo economicus* who is motivated by self-interest and is self-managing his or her life driven by calculations to maximize the expected utility for him or herself. In healthcare, this government of life should be encouraged by treating patients as responsible consumers who actively seek information and produce health as the outcome of their choices. What is needed is correct information and proper education because health is primarily a matter of personal responsibility. In many countries, the governments therefore appealed first of all to the individual citizens to show this responsibility in implementing public health measures. The pandemic, however, illustrates that this opposition of individual and community is false since individual behaviour affects the well-being of the community. Widespread use of face masks will protect not only the individual but also other people against possible infection. Testing will identify whether someone is infected, but it is a warning signal that others may be at risk. The aim of vaccination is not only to protect individuals but society as a whole. In a public health emergency, appeals to self-interest cannot be separated from concerns with the interests of others. Individual decisions whether or not to adhere to public health measures have an inherently social dimension. Appeals to individual responsibility will therefore not be sufficient without articulating social responsibility, and without creating the social, political and economic conditions for the exercise of responsible autonomy [36].

5 The Need for a Global Ethics Perspective

The significance of liminality, connectedness and community illustrate the need for a normative framework to understand and address the normative challenges of contemporary healthcare that is broader than the dominating current one. The COVID-19 pandemic exposes vulnerability as a shared and global phenomenon, not only of individual persons but also of populations and subpopulations, and at the same time of the systems that have been built to protect humans against vulnerability, particularly healthcare systems. One of the basic fears during the COVID-19 pandemic was that healthcare institutions might collapse. In most countries they have to learn how to be more resilient and able to cope with the surge of infectious cases, sometimes in the hard way, being unable to provide sufficient protection to care workers, having insufficient testing capacities, triaging patients for intensive care, and descaling care services necessary for non- COVID patients. The pandemic made clear that vulnerability cannot be construed as an individual affair, although it is manifested in individual persons. The notion can no longer be framed, as is usual in mainstream bioethics in terms of the ethical principle of respect for autonomy. In the broader perspective of global bioethics, the view that individual persons are autonomous and in control is challenged. Since the human conditions is inherently fragile, all human beings are sharing the same predicament. As social beings and in order to remediate the vulnerability of existence, humans have developed institutions and social arrangements to protect themselves. This is neither an individual accomplishment nor a threat. Vulnerability means that we are open to the world; that we can engage in relationships with other persons; that we can interact with the world. It is not a deficit but a positive phenomenon; it is the basis for exchange and reciprocity between human beings. The notion of vulnerability therefore refers to interdependency and mutuality, the needs of groups and communities, not just those of individuals. Other ethical principles besides respect for individual autonomy are important, such as justice, solidarity and equality.

In the perspective of global bioethics it is at the same time recognized that special vulnerability is a symptom of the growing precariousness of human existence and is exacerbated in certain conditions. This implies that the social context can no longer be ignored in bioethical analysis and that attention should go to the distribution and allocation of vulnerability at the global level. Instead of focusing on individual features, ethical analysis should examine and criticise the external determinants that expose individuals to possible damage and harm. It also means that individual responses are insufficient; what is needed is a collective response, in other words social and political action. Global bioethics therefore attempts to overcome the ambiguity of vulnerability in contemporary ethical discourse. Over the past few decades, vulnerability has become a relevant and important notion in bioethical debates because processes of globalization have widened the 'space of vulnerability' [19]. Particularly neoliberal policies have increased the precariousness of life across the world. Mechanisms of social protection have declined, and people have diminishing abilities to cope with threats and challenges. Societies have become subservient to the needs of the global

economic system. Neoliberal policies are based on the assumption that a human being is self-interested and rational, as well as responsible for his or her own well-being. As *homo economicus* the individual is motivated by minimizing costs and maximizing gain for him or herself. In this perspective, humans relate primarily to others through market exchanges. Citizenship, the public sphere and social networks erode since there are only individuals and commodities that can be traded [37].

In addressing vulnerability, contemporary bioethics is often using the same basic assumption, arguing that vulnerability should be reduced through empowering individual autonomous decision-makers and reinforcing personal responsibility. Abstracting from the social dimension of human existence, and neglecting the damaging impact of market mechanisms on social life, bioethicists contribute to policies and guidelines in the hope to redress the impact of vulnerability. What is a symptom of the negative impact of a one-dimensional view of human beings (and resulting policies) is remedied with policies based on the same type of view. As long as the problematic conditions creating and reinforcing human vulnerability are not properly analysed and criticized, bioethics will only provide palliation.

The paradox is that the ethical discourse of vulnerability has developed in association with increasing processes of globalization. It gives voice to today's experiences that everyday existence is more precarious, that we are exposed to more hazards and threats, and that our capacities to cope have decreased. But as long as the production of vulnerability itself is not critically examined, the roots of the problem will not be addressed. Framing vulnerability as deficit of autonomy presents not only one part of the whole story but it also implies a limited range of options and actions. In this sense, the mainstream ethical interpretation of vulnerability is ideological: it directs theoretical and practical attention away from the circumstances that make subjects vulnerable. The perspective of global bioethics focuses attention to the wider context that produces vulnerability; on what Powers and Faden have called "systematic patterns of disadvantage" [38]. This is only possible in an ethical framework that goes beyond the individual perspective and that includes justice, solidarity, care, and social responsibility. The experiences with the COVID-19 pandemic have also learned that directing attention to the root causes of contemporary problems is not enough. Individual security within a context of emerging infectious diseases can no longer be regarded as "a matter of individual choice" [39, p. 168]. When the major bioethical problems of today are produced by the dominance of neoliberal market ideology, and when precariousness, inequality and exclusion are characteristics of the social order of neoliberal globalization, bioethics should redefine itself as critical global discourse. Focusing attention on the social context of human life will not be enough. Bioethics must argue for a reversal of priorities in policy and society: economic and financial considerations should serve the principles of human dignity and social justice, and no longer be ends in themselves. This implies specific strategies for social inclusion but also institutional support. It will be necessary to demonstrate more vigorous advocacy and activism, supplementing academic enquiry. Social inequalities and conditions that produce vulnerability are not beyond social and political control. It will also require that the voices of the disadvantaged, the deprived and the vulnerable are more often heard within the bioethical discourse, involving vulnerable groups in

policy development and implementation. Global vulnerability is furthermore transforming the significance of cooperation. Forging global alliances and new networks of solidarity is the only way to address global threats. An individualistic perspective makes it impossible to address the root causes of vulnerability.

6 Conclusion

Vulnerability reflects on the one hand the precariousness of the human condition and the fragility of the human species, on the other hand the radical changes in contemporary human existence due to processes of globalization. Because every human is vulnerable and there is a constant possibility of harm, human beings need each other and must cooperate. They need institutions such as social networks, protective mechanisms, and human rights to survive and flourish. Vulnerability therefore is not just an individual attribute. Mainstream bioethics construes vulnerability as deficient autonomy. It does not take into account that autonomy itself demands appropriate conditions to arise, to develop and to exercise. Vulnerability therefore is misconstrued as an individual attribute whereas it does not direct attention towards the underlying conditions for human flourishing. Vulnerability is not merely inability or deficiency but most of all ability and opportunity. Experiences with vulnerability during the COVID pandemic show that a critical global ethics discourse is necessary that not only understands the root causes of vulnerability, and that is concerned with vulnerable persons but also intervenes through socio-political and economic measures, recognizing that the major bioethical problems of today are produced by the dominance of neoliberal market ideology. It is not surprising that the language of vulnerability is often used by international and intergovernmental organizations. The devastating effects of neoliberal policies are most visible in the developing world. But nowadays, existential insecurity is everywhere, as is demonstrated by the pandemic. Even in developed countries vulnerability is unequally distributed, and some individuals and groups of persons are disproportionately affected by the virus and the public health measures against it. Reflecting on the experiences of vulnerability should move ethics from the concern with individual well-being towards consideration of the social, cultural, political and economic conditions that are appropriate for human flourishing.

Core Messages

- The significance of vulnerability during the COVID-19 pandemic provides the opportunity to better understand the two dimensions of vulnerability: anthropological and special.
- Vulnerability is not only a philosophical but also political concept since it demands to address its root causes in the conditions of human life.
- Processes of globalization have increased the precariousness of human life across the world, making vulnerability a concept that is not only relevant to exceptional

circumstances or to populations in less resourced countries, but nowadays to all societies.

- Ethical discourse concerning health and disease should be redirected towards a global framework that considers vulnerability no longer as individual weakness or deficiency of individual autonomy but as manifestation of socio-political and economic inequality and structural violence.

References

1. Bornmann L, Haunschild R, Mutz R (2021) Growth rates of modern science: a latent piecewise growth curve approach to model publication numbers from established and new literature databases. Humanit Soc Sci Commun 8:224. https://doi.org/10.1057/s41599-021-00903-w
2. This characterization of bioethics is based on Article 1 of the *UNESCO Universal Declaration on Bioethics and Human Rights*, which does not provide a definition of bioethics but delineates its field of work. See: https://unesdoc.unesco.org/ark:/48223/pf0000146180
3. Mergen M, Akpinar A (2021) Vulnerability: an integrative bioethics review and a proposed taxonomy. Nurs Ethics 28(5):750–765
4. Ten Have H (2016) Global bioethics. An introduction. Routledge, London and New York
5. Ten Have H (2016) Vulnerability. Challenging bioethics. Routledge, London and New York
6. O'Neill O (1996) Towards justice and virtue. Cambridge University Press, Cambridge
7. Sanchini V, Sala R, Gastmans C (2022) The concept of vulnerability in aged care: a systematic review of argument-based ethics literature. BMC Med Ethics 23:84. https://doi.org/10.1186/s12910-022-00819-3
8. Victor E, Luna F, Guidry-Grimes L, Reiheld A (2022) Vulnerability in practice: peeling back the layers, avoiding triggers, and preventing cascading effects. Bioethics 36(5):587–596
9. Rendtorff JD (2002) Basic ethical principles in European bioethics and biolaw: autonomy, dignity, integrity and vulnerability—towards a foundation of bioethics and biolaw. Med Health Care Philos 5(3):235–244
10. Solbakk JH (2011) Vulnerability: a futile or useful principle in healthcare ethics? In: Chadwick R, Ten Have H, Meslin EM (eds) The SAGE handbook of health care ethics: core and emerging issues. Sage, London, pp 228–238
11. Fineman MA (2010) The vulnerable subject and the responsive state. Emory Law J 60:251–275
12. Turner BS (2006) Vulnerability and human rights. Penn State University Press, University Park
13. Ten Have H (2015) Respect for human vulnerability: The emergence of a new principle in bioethics. J Bioethical Inquiry 12(3):395–408
14. Delgado J (2021) Vulnerability as a key concept in relational patient-centered professionalism. Med Health Care Philos 24(2):155–172
15. Zagorac I (2016) How should we treat the vulnerable? Qualitative study of authoritative ethics documents. J Health Care Poor Underserved 27(4):1656–1673
16. Eckenwiler L, Ellis C, Feinholz D, Schonfeld T (2008) Hopes for Helsinki: reconsidering 'vulnerability.' J Med Ethics 34(10):765–766
17. Justo L (2004) Participatory research: a way to reduce vulnerability. Am J Bioeth 4(3):67–68
18. Jaggar AM (2002) Vulnerable women and neo-liberal globalization: debt burdens undermine women's health in the global South. Theoret Med 23(6):425–440
19. Watts MJ, Bohle HG (1993) The space of vulnerability: The causal structure of hunger and famine. Prog Hum Geogr 93:43–67
20. Delor F, Hubert M (2000) Revisiting the concept of 'vulnerability.' Soc Sci Med 50:1557–1570
21. CIOMS (1993) International guidelines for biomedical research involving human subjects. CIOMS, Geneva: 10
22. Ten Have H (2014) Vulnerability as the antidote to neoliberalism in bioethics. Revista Redbioetica/UNESCO 5 (1); no 9:87–92

23. Maeckelberghe E (2021) Ethical implications of Covid-19 vulnerabilities in a global perspective. Eur J Public Health 31(suppl 4):iv50–iv53
24. Blauwet CA, Brashler R, Kirschner KL, Mukherjee D (2020) Vulnerability, interdependence, and trust in the COVID-19 pandemic. PM R 12(10):1038–1044
25. Ryan F (2020) Virusphere. Ebola, AIDS, influenza and the hidden world of the virus. William Collins, New York
26. Ten Have H (2022) The covid-19 pandemic and global bioethics. Springer/Nature Publishers, Cham
27. Solis J, Franco-Paredes C, Henao-Martinez AF, Krsak M, Zimmer SM (2020) Structural vulnerability in the U.S. revealed in three waves of Covid-19. Am J Trop Med Hygiene 103(1):25–27
28. Editorial (2020) Redefining vulnerability in the era of Covid-19. Lancet 395(10230):1089
29. Bottan N, Hoffmann B, Vera-Cossio DA (2020) The unequal impact of the coronavirus pandemic: evidence from seventeen developing countries. Inter-American Development Bank. https://publications.iadb.org/publications/english/document/The-Unequal-Impact-of-the-Coronavirus-Pandemic-Evidence-from-Seventeen-Developing-Countries.pdf
30. Meyerowitz-Katz G, Bhatt S, Ratmann O et al (2021) Is the cure really worse than the disease? The health impacts of lockdowns during COVID-19. BMJ Glob Health 6:e006653
31. Pai M, Kasaeva T, Swaminathan S (2022) Covid-19 devastating effect on tuberculosis care—a path to recovery. N Engl J Med 386:1490–1493
32. Flood CM, MacDonnell V, Philpott J, Thériault S, Venkatapuram S (2020) Vulnerable. The law, policy and ethics of Covid-19. University of Ottawa Press, Ottawa
33. Bedyński W (2020) Liminality: black death 700 years later. What lessons are for us from the medieval pandemic? Soc Register 4(3):129–144
34. Thornhill C, Miron R (2020) Karl Jaspers. In: Zalta EN (ed) The Stanford encyclopedia of philosophy. https://plato.stanford.edu/archives/spr2020/entries/jaspers/
35. Ten Have H (2019) Wounded planet. How declining biodiversity endangers health and how bioethics can help. Johns Hopkins University Press, Baltimore
36. Macer D (2020) The foundation and functioning of the world emergency Covid-19 pandemic ethics committee. In: Woesler M, Sass H-M (eds) Medicine and ethics in times of corona. LIT Verlag, Zürich, pp 115–125
37. Kirby P (2006) Vulnerability and violence. The impact of globalization. Pluto Press, London/Ann Arbor
38. Powers M, Faden R (2006) Social justice. The moral foundations of public health and health policy. Oxford University Press, Oxford/New York, p 71–79
39. Harvey D (2005) A brief history of neoliberalism. Oxford University Press, Oxford/New York

Henk ten Have studied medicine and philosophy at Leiden University (the Netherlands) (MD 1976; Ph.D. 1983). He worked as a researcher in the Pathology Laboratory, University of Leiden; as a practicing physician in the Municipal Health Services of Rotterdam before being appointed as Professor of Philosophy in the Faculty of Medicine and Faculty of Health Sciences, University of Limburg, Maastricht; and subsequently as Professor of Medical Ethics and Director of the Department of Ethics, Philosophy and History of Medicine in the University Medical Centre Nijmegen (the Netherlands). In 2003 he joined UNESCO as Director of the Division of Ethics of Science and Technology. From 2010 until 2019 he was Director of the Center for Healthcare Ethics at Duquesne University in Pittsburgh (United States). In July 2019 he retired and was made Emeritus Professor at Duquesne University. His latest books are *Global Bioethics: An Introduction* (2016), *Vulnerability: Challenging Bioethics* (2016), and *Wounded Planet: How Declining Biodiversity Endangers Health and How Bioethics Can Help* (2019). He is editor of the *Encyclopedia of Global Bioethics* (3 volumes, 2016) and (with Bert Gordijn) editor of the *Handbook of Global Bioethics* (4 volumes, 2014). Since 2021 he is Research Professor at the Department of Bioethics, Anahuac University, Mexico.