

## *Vulnerability*

### *A Key Principle for Global Bioethics?*

THIAGO CUNHA and VOLNEI GARRAFA

**Abstract:** Collating the concepts of vulnerability through five regional perspectives on bioethics from the United States, Europe, Latin America, Africa, and Asia, this article proposes a means of integration between the different approaches in order to seek a theoretical and normative basis for the field of global bioethics. It argues that only through opening continuous, critical, and self-critical dialogue within the international bioethical community will it be possible to achieve a sufficiently global understanding of vulnerability that is capable of identifying the means needed for addressing the conditions that leave certain groups and individuals more susceptible to “wounding” than others.

**Keywords:** vulnerability; bioethics; global bioethics

### **Introduction**

The simultaneous emergence of bioethics reveals one of its main characteristics: the capacity to encompass within a single field of applied ethics different theoretical and normative approaches that, in many cases, have in common only the historical context of increasing public discussion of the relationship between ethics, science, medicine, and the humanities.<sup>1,2</sup>

Since the 1990s, the growing globalization of economic, political, environmental, social, and cultural discussions has led to various characterizations of a so-called global bioethics.<sup>3,4,5,6</sup> In this context, questions have arisen regarding the pertinence of establishing universal ethical principles and norms while concomitantly ensuring respect for cultural and moral particularities.<sup>7,8,9</sup> In addressing this topic, different authors<sup>10,11</sup> have suggested that vulnerability might be considered to be an appropriate principle to form the basis of global bioethics—given that this concept expresses certain characteristics that are shared universally by human beings—and that, at the same time, it would allow respect for the variety of specific contexts within which vulnerabilities might materialize.

The present article examines this argument, starting from an analysis of the concept of vulnerability as it is expressed in the perspectives of five regional approaches toward bioethics: from the United States, Europe, Latin America, Africa, and Asia. Subsequently we propose a means of integration between the different approaches in order to provide an appropriate theoretical and normative basis for the field of global bioethics.

### **Vulnerability**

The dictionary entry for the word “vulnerability” states that it is a noun derived from the Latin *vulnus* (wound), via the adjective “vulnerable,” which is used to

describe something that is “susceptible to physical or emotional attack or damage.”<sup>12</sup> However, when applied to different fields or topics, the word has a variety of implications. In economics, for example, “external vulnerability” relates to a country’s capacity to maintain financial reserves to pay its external debt.<sup>13</sup> In discussions on climate change, it can be defined as the “tendency for an entity to suffer damage due to environmental causes.”<sup>14</sup> Despite these differences, the variations in the concept always revolve around an etymological core that correlates vulnerability with conditions of exposure or susceptibility to *wounding*.

Within bioethics, vulnerability presents very varied nuances, although many of the definitions could be considered “too vague and too broad.”<sup>15</sup> The following sections demonstrate how the concept varies, depending on the regional perspective within which it is addressed, and how such variations present challenges to the proposal to use vulnerability as a key principle for the basis of global bioethics.

### Vulnerability in the Bioethics of U.S. Origin

In the commonest perspective of bioethics produced in the United States, vulnerability can essentially be described as a relationship with the principle of autonomy: a vulnerable person is one who is incapable of making decisions regarding his own interests.<sup>16</sup> This approach derives from the conditions under which bioethics emerged in that country and goes back both to the discussion about moral conflicts involving participants in biomedical research and to an ethos that has a history of favoring the individual, freedom, and individual autonomy over values and interests of a more collective nature.<sup>17</sup>

The first document to correlate vulnerability and autonomy was the Belmont Report, produced with the objective of establishing ethical principles to guide research involving human subjects in that country.<sup>18</sup> Its text had a strong influence on the concept of vulnerability that would come to be adopted for bioethics in the United States. Although this concept was included among the topics that the report termed some “special instances of injustice,” a more attentive analysis reveals the close connections between vulnerability and the principle of autonomy. This occurs, for example, when there is reference to certain groups that are vulnerable, which are identified as “racial minorities, the economically disadvantaged, the very sick, and the institutionalized.”<sup>19</sup> The problem is that in indicating the prescriptive characteristics for protecting these groups, the report highlights that “given their dependent status and their frequently compromised capacity for free consent, they should be protected against the danger of being involved in research solely for administrative convenience, or because they are easy to manipulate as a result of their illness or socioeconomic condition.”<sup>20</sup> In other words, what the document announces as a “special instance of injustice” is revealed basically to be a question of autonomy and consent.

In any event, despite the influence of this report—both on bioethical development and on the texts of subsequent documents, such as the one published by the Council for International Organizations of Medical Sciences (CIOMS)—this perspective is not unanimously accepted in the United States.<sup>21</sup> For example, C. Levine et al.<sup>22</sup> argued that research ethics should abandon its focus on vulnerable groups, which are categorized as such a priori, in favor of concern for some specific types of study that are potentially more damaging. Thus they took the

view that some forms of research deserve special scrutiny, independent of the conditions to which the individuals or groups involved would be subjected.

Thomas Beauchamp and James Childress also criticized the notion of vulnerable groups adopted in the Belmont Report, arguing that this category might imply unjustified paternalism toward individual members of the groups who might nonetheless be capable of autonomously making decisions. According to these authors, the inclusion of “economically disadvantaged” as a vulnerable group could be used to exclude such individuals from certain investigations, which would constitute “an unjust and paternalistic form of discrimination that may only serve to further marginalize, deprive, or stigmatize them.”<sup>23</sup> However, it is interesting to note that even the criticisms of the collective concept of vulnerability are continually linked to a presumed (in)capacity to obtain adequate consent, which reinforces the characteristic of U.S. bioethics of assimilating the concept of vulnerability through its connection with the principle of autonomy.

In pointing out these limitations, Ruth Macklin<sup>24</sup> advocated construction of a wide-ranging “theory of vulnerability” that would take into account both the aspects of the intrinsic vulnerability of certain groups, such as women, and the social and cultural determinants that make some women even more vulnerable than others. However, she recognized that this approach toward vulnerability differed from the perspective that is more generally accepted with regard to bioethics in the United States.

### **Vulnerability in the Bioethics of European Origin**

Bioethics was institutionalized in Europe as early as in 1975, when, after having participated in the first activities of the Kennedy Institute of Ethics, the Spanish Jesuit priest and obstetrician Francesc Abel founded the Borja Institute of Bioethics in Catalonia. The creation of this institute was directly supported by André Hellegers, one of the fathers of bioethics in the United States.<sup>25</sup> Even though the origin of European bioethics was closely linked to the perspective of the United States, several European authors have argued that, today, bioethics as developed in Europe presents a distinct identity. The main difference would be an emphasis on and comprehension of certain broad principles and values that are fundamental to the field, including human rights, respect for human dignity, and vulnerability itself.<sup>26,27</sup>

In this regard, Maria Patrão-Neves highlighted that, in European bioethics, the concept of vulnerability has substantive or “noun-like” attributes, whereas in the U.S. approach, it has a descriptive or “adjective-like” attribute. This is because whereas vulnerability is taken as having a “contingent” nature in the United States, it is viewed as a “universal and indelible condition” of all human beings in Europe.<sup>28</sup> According to this author, this is a direct reflection of the influence of two European philosophers: Emmanuel Levinas and Hans Jonas. According to Levinas, vulnerability is the foundation of subjectivity and indeed of ethics itself, insofar as the existence of a “first person” will always depend on “nonviolent” recognition of another person. In other words, individuals are vulnerable in their most basic dimension, which is linked to recognition of their own existence. According to Jonas, vulnerability is an attribute of all living things that can die. However, he prescribes a special duty of responsibility among human beings, among one another and toward nature, given that among living beings humans are the ones with the greatest power to cause distress and pain to other beings.<sup>29</sup>

Jan Solbakk<sup>30,31</sup> has signaled that the consolidation of vulnerability as a normative principle characteristic of European bioethics refers back to the project Basic Ethical Principles in European Bioethics and Biolaw (1994–98), which involved representatives of 22 European countries. This group was responsible for presenting to the European Community the four principles that would be fundamental for guiding the topics of bioethics and biolaw in this region: namely, autonomy, dignity, integrity, and vulnerability. Jacob Rendtorff, one of the leaders of the project, argued that vulnerability should be understood as “ontologically prior” to the other principles, insofar as it expresses an attribute that precedes any other norm, including those derived from the principles of dignity or autonomy itself.<sup>32</sup>

Solbakk also proposed a distinction between minimalistic approaches toward vulnerability, aimed basically at issues of research ethics and consent, and wider-ranging approaches aimed at the ontological condition of the human being. He drew attention to the recent trend toward stratified formulations of vulnerability that make it possible to take into account different degrees of protection norms, for both wide-ranging vulnerability and minimalistic vulnerability.<sup>33</sup>

Likewise, analyzing the implications of globalization for the field of bioethics, Henk ten Have<sup>34</sup> has argued that the principle of vulnerability expressed in the Universal Declaration on Bioethics and Human Rights makes it possible to take into consideration the ontological and contingent aspects of vulnerability, which would qualify this document to form a foundation for global bioethics. Though reached by a different analytical path, this was the same conclusion advocated by Solbakk.

### Vulnerability in the Bioethics of Latin American Origin

José Mainetti divided the history of bioethics in Latin America into three stages: reception, assimilation and re-creation.<sup>35</sup> The first stage took place in the 1970s, when bioethics was “transplanted” from the United States. The second stage, during the 1980s, was when bioethics became institutionalized in this region. The third and current stage was characterized as the re-creation phase, in which, after the end of the dictatorships in Central and South America, Latin American bioethics acquired an identity of its own. According to Mainetti, the fact that the United States directly supported most of the military coups in this region meant that bioethics would come to be characterized “more as a political movement or social reform movement than as an academic discipline restricted to the domain of healthcare.”<sup>36</sup>

In fact, the *Latin American Dictionary of Bioethics* states that the so-called critical Latin American bioethics is recognized precisely because, in analyzing bioethical conflicts, it takes into consideration the historical processes and power relationships that are reflected in social and collective inequalities such as poverty, iniquity, and social and/or environmental exploitation.<sup>37</sup>

This characteristic can be found in the work of Volnei Garrafa and Mario M. Prado, for example. In discussing the revisions of the Declaration of Helsinki, they took the view that vulnerability “encompasses various forms of exclusion or sidelining of population groups, in relation to events or benefits that may be occurring within the worldwide process of development.”<sup>38</sup> These authors also analyzed the application of the adjective “vulnerable” to the field of ethics within research on human beings and took it to mean “the weaker side of a subject or issue” or “the

point through which someone can be attacked, harmed or wounded,” thus putting the term in a context of “frailty, lack of protection, disfavor and even helplessness or abandonment.”<sup>39</sup>

Along similar lines, Fermin Roland Schramm<sup>40</sup> proposed a distinction between the concepts of vulnerability, and what he terms being “vulnerated” and “vulneration.” He reasoned that whereas vulnerability is still a “potential,” a vulnerated state is one in which an “act” has taken place. In other words, all living beings are susceptible to wounding (vulnerability), but only those who have actually been wounded can be considered to have been vulnerated. Schramm gave the term “process of vulneration” to the passage from potential to act, from vulnerable to vulnerated.

In his work, Miguel Kottow<sup>41</sup> sought to politicize the difference between vulnerability as an ontological condition and vulnerability as a contingent situation. He named the latter “susceptibility” and characterized this as a socially produced situation that threatens certain groups, which justifies protective action by the state.

Also calling attention to the political implications of bioethical reflection, Cláudio Lorenzo pointed out that there is a need to take into consideration the influence of “social vulnerability”—which he takes to mean the “limits of self-determination and increased exposure to risk created by a situation of social exclusion”—in clinical research.<sup>42</sup> Lorenzo and colleagues<sup>43</sup> highlighted the need for specific protection measures for participants in research conducted in peripheral countries, by demonstrating that social vulnerability produces certain concealed risks that cannot be identified through the traditional evaluations of research ethics.

On the other hand, Wanderson Nascimento<sup>44</sup> took the view that, even in Latin American bioethics, vulnerability is used inappropriately when the aim is to characterize an “abstract subject,” thus making effective identification of the conflicts involving the main agent impossible. For this reason, he argued that it is indispensable to characterize vulnerable subjects, who are almost always situated within society in states of fragility or exclusion in relation to the “colonial” pattern of power that has structured the world system since the beginning of the modern era, a pattern that favors men, whites, Euro-Americans, Christians, young adults, and heterosexuals. In a subsequent study, in partnership with Leandro Martorell, Nascimento came to the conclusion that not all individuals and groups are equally susceptible to the effects of colonial hierarchization, but that, even so, it is important to take into account that generally “the process of vulneration results in cross-linking of vulnerability factors.”<sup>45</sup>

What these approaches indicate is that in the context of Latin American bioethics, the concept of vulnerability is strongly related to the social dimension of vulnerability, in which socioeconomic differences among different segments of the population are highlighted, thus particularly influencing practices relating to the ethical control of research involving human beings.

### **Vulnerability in the Bioethics of African Origin**

Different specialists in bioethics on the African continent have questioned the existence of “African bioethics” and have suggested a variety of ways in which the concept could be fundamentally distinct from the Western approaches.<sup>46,47,48,49,50,51,52</sup>

According to Karori Mbũgua,<sup>53</sup> if African bioethics is taken only to be an institutionalized field, it does not in fact present any identity of its own, given that in

universities in this region, the discipline is mostly discussed in the light of references to Western bioethics. However, also according to Mbũgua, if it is taken to be a field of reflection on moral topics relating to health and disease, it would be possible to identify a genuinely African bioethics, as there are particular principles, values, and norms that are expressed in a wide variety of cultural sources in this region, such as traditional medicine, popular sayings, proverbs, songs, mythology, folklore, or religious rites.

Munyaradzi Murove<sup>54</sup> emphasized that many inhabitants of the African continent make use of distinct forms of traditional medicine and that many of the ethical implications are modulated by specific cultural values. In other words, according to Murove, even when the canonical Western bioethics is applied to Africa, it ends up having to accommodate to the specific features of this region.

Kevin Behrens<sup>55</sup> took the view that African bioethics mostly reproduces the discourse of Western bioethics, especially with regard to topics within research ethics, and that this can be explained by the reaction to the invasive clinical studies that have been conducted in Africa since the 1990s. The problem, according to Behrens, is that this approach is less concerned about taking the philosophical tradition of the region into account than about importing the ethical systems developed in the United States and Europe. For this reason, this author advocated founding a typically African form of bioethics based on Ubuntu, a tradition within African thinking that includes a set of values and thoughts from this continent (especially from sub-Saharan Africa) that might provide the basis for an African bioethical approach as an alternative to the Western canon.

Although Behrens did not deal directly with vulnerability, he established a general backdrop for it, based on understanding the attribute of “personality” as the harmonic relationship between individuals and their community. Based on this proposal, this author advocated adapting the “principlism” of Beauchamp and Childress, including the principle of harmony in the place of the principle of justice, and reestablishing the principle of respect for the individual as a replacement for autonomy.<sup>56</sup>

Segun Gbadegesin<sup>57</sup> advocated a construction of African bioethics based on the religious tradition of the Yoruba. This approach would identify a normative dimension for bioethics from a comprehension of the relationship between the person and the body, as established through the integration between the physical, psychological, and spiritual elements of individuals within their communities. This author took the view that the attribute of personality from the Yoruba perspective is only confirmed if the “body” assimilates the social norms of its community through undertaking the community’s religious rites and practices.

On the other hand, Conceição Carvalho<sup>58</sup> recognized that bioethical production in Africa still does not present any specific basis for the concept of vulnerability. For this reason, she argued that the Universal Declaration on Bioethics and Human Rights was an appropriate instrument for filling that gap, especially because this document is aimed both at the protection of people who are more vulnerable and at the promotion of quality of life in harmony with the environment. Also analyzing the Universal Declaration on Bioethics and Human Rights, Adèle Langlois<sup>59</sup> pointed out that for this to be applicable to African realities, it would be necessary to take into consideration their particular features and problems, especially racism and the consequent repercussions with regard to obtaining consent, social responsibility, and vulnerability itself.

## **Vulnerability in the Bioethics of Asian Origin**

Not only is Asia the world's largest continent, but it is also the most diverse region in cultural and religious aspects. It is the historical birthplace of four major world-wide religions—Islam, Christianity, Judaism, and Buddhism—which makes this region particularly influential with regard to moral issues with a religious foundation that involve bioethics.<sup>60</sup>

Different specialists in this region have claimed that Asia has its own form of bioethics.<sup>61,62,63,64</sup> Neil Pembroke,<sup>65</sup> for example, weighed the contributions of Buddhist and Christian morality and emphasized the role that values such as compassion, empathy, and hope could have in constructing a local form of bioethics.

Hyakudai Sakamoto<sup>66,67</sup> argued that many Asian peoples have a long tradition anchored in animist religious perspectives, specifically Buddhism, Taoism, and Tantrism, which confer very particular values and perspectives on the bioethics of this region. In this regard, this author advocated that there is a need for a “new global bioethics” with a more holistic basis, in contrast to the individualistic pattern of the West. Along the same lines, in reflecting on the principle of consent, M. C. Tai and C. S. Lin<sup>68</sup> argue that application of Western bioethics is often inappropriate on the Asian continent because it ignores the value that the peoples of that continent place on the role of the family in making decisions.

On the other hand, Akira Akabayashi, Satohsi Kodama, and Brian Slingsby<sup>69</sup> argued that it is not possible to discern any clear trend toward the existence of any single Asian perspective on bioethics, taking the view that family-oriented approaches toward consent would be important not only in Asia but also in all other countries around the world, including the United States. Expressing a similar opinion, Soraj Hongladarom<sup>70</sup> considered it inappropriate to refer to the existence of and even to the need for an “Asian bioethics.” On the contrary, he advocated surmounting the dichotomy between Western and Oriental perspectives of bioethics. Likewise, Leonardo de Castro was cautious in relation to identifying an “authentically” Asian form of bioethics. He suggested that even within Asia there are different bioethical perspectives, although at the same time there are certain ethical principles that transcend cultural and geographical differences.<sup>71</sup>

Vandana Shiva argued against those who consider bioethics a “luxury item” for developed countries and therefore claim that it would not be a priority among the interests of developing countries. She affirmed that, much to the contrary, “bioethics is particularly significant for us because it is the Third World's biodiversity and human diversity that is being pirated by Northern corporations.”<sup>72</sup>

This complex context of cultural, territorial and religious diversity of Asia makes it more challenging to construct a single theoretical and normative foundation for the bioethics of that region, and even more so for global bioethics.

## **Vulnerability as a Key Principle for Global Bioethics**

Before examining the argument of authors who advocate using the principle of vulnerability as an appropriate theoretical and normative basis for global bioethics, it is important to ascertain the different conceptualizations of vulnerability arising from different regional origins within bioethics. Of course, assessments of bioethics using geographical divisions are not rigid or absolute; not all the local expressions of bioethics necessarily express all particular features of their

production site. Nevertheless, through observing the different approaches within bioethics, particular characteristics of vulnerability can be distinguished according to their regional origins. These differences present challenges to interpreting vulnerability as a key principle for global bioethics, particularly to the proposals of Solbakk and ten Have, who specifically defend the text of Article 8 of the Universal Declaration on Bioethics and Human Rights. The definition of the “principle of vulnerability” in this declaration is expressed as follows: “Human vulnerability needs to be taken into consideration in applications and advances of scientific knowledge, medical practices and associated technologies. Individuals and groups with specific vulnerability need to be protected and the individual integrity of each person needs to be respected.”<sup>73</sup> This definition includes both a descriptive dimension, emphasizing the need “to take into consideration” human vulnerability in applying knowledge, and a prescriptive dimension: the duty to protect individuals and groups with specific vulnerability. This duality of expression is what, according to Solbakk, makes the UNESCO declaration representative of “the firm first step at a global level towards building a concept of vulnerability of dual nature.”<sup>74</sup>

Ten Have has also argued that this reconciliation between the universal and particular dimensions makes Article 8 suitable for guiding the conflicts and analyses involving vulnerability.<sup>75</sup> He emphasized that this principle comprises the broadest ethical foundation of the Universal Declaration on Bioethics and Human Rights, which also includes other important principles and values for facing up to the conflicts relating to globalization, including solidarity and social responsibility.

Although we agree with the premises of the aforementioned two authors, we argue as well that Article 8 of this declaration is excessively (and intentionally) generic. For this reason, it is necessary to understand it by taking into consideration not only its universal and contingent aspects but also, and especially, its practical function in identifying and surmounting processes that materially affect different vulnerable individuals and groups around the planet. Only through continual linkage between the different regional approaches of bioethics will it be possible to provide legitimate guidance for consolidating the principle of vulnerability, given that no matter how global the conflicts are, their expression always occurs in defined spaces and at defined times. It follows from this that a single definition of vulnerability based, for example, only on the European perspective of bioethics might neglect situations that are very relevant from an African or Latin American perspective.

It is for this reason that continual dialogue and linkage should be put in place, both by institutions involved in international bioethics production, such as UNESCO, and by universities, research centers, journals, and researchers involved in bioethics. Success in this process is not impossible, because although there are important distinctions in the concepts of vulnerability, they are not, a priori, contradictory, if only because all of them revolve around a minimum core identity centered on the etymology of the word.

As we have noted, in bioethics originating from the United States, vulnerability is usually correlated with incapacity to provide consent or to exercise autonomy, whereas in European bioethics the focus is mostly on the condition of intrinsic frailty of all living beings. From the Latin American perspective, the discussion is characterized by a political focus aimed at identifying the ways in which vulnerabilities are produced and exploited, along with vulnerable individuals themselves.



Even though these approaches are distinct, none of them annul or contradict the others. On the contrary, they may even be complementary, in that they focus on different instances of vulnerability: the individual dimension in American bioethics, the ontological dimension in European bioethics, and the political dimension in Latin American bioethics. With regard to the African perspectives on bioethics, it is possible to identify from the Ubuntu and Yoruba traditions that vulnerability is understood differently in Africa than in the American, European, and Latin American approaches. Mbũgwa<sup>76</sup> emphasized that the indissoluble relationship between people and their communities in African cultures makes the bioethics of that region closer to the Asian approach, which, despite its varieties, shares with the African tradition an emphasis on the role of the family, community, and autochthonous religious traditions. Again, these perspectives are not contradictory. Instead, they complement each other, introducing dimensions that may be fundamental to the relationship between vulnerability and the topics involved in global bioethics, particularly the community and spiritual dimensions.

It is evident that a process of dialogue in search of a theoretical and normative basis for the principle of vulnerability within global bioethics may encounter conflicts and distinct interests. However, the risk of a conflict of a deliberative nature may be more acceptable than the risks that result from application of a unilateral approach determined by any one of the regional perspectives of bioethics.

For this reason, we believe that the aim of finding a watertight universal definition for the principle of vulnerability should be abandoned, because in the real world, problems and conflicts constantly undergo transformation. For this reason, too, the production of definitions of norms and theoretical foundations for vulnerability needs to be understood as a continuous dynamic process that is open to dialogue. After all, it is more important to seek concrete solutions for conflicts involving the different dimensions of vulnerability than to find a single and allegedly “true” definition. Resolution of the conflicts involving vulnerability within the field of global bioethics cannot be achieved only through definitions negotiated among regional approaches toward bioethics but requires identifying and addressing the reasons, agents, and processes that maintain the unequal distribution of *wounds* among different individuals and groups across the planet. We believe that the principle of vulnerability presented in the Universal Declaration on Bioethics and Human Rights is able to contribute to this task, provided that it is applied through a process of dialogue that is critical, self-critical, and continuous, for theoretical, normative, and practical integration.

### **Final Remarks**

Between the commentaries of enthusiasts and skeptics, the topic of global bioethics has drawn considerable interest over the last few years. One of the matters most frequently addressed has been the definition of principles and norms that would be capable of taking into account both the global level of bioethics and particular regional, cultural features. Some authors have argued that the principle of vulnerability described in the Universal Declaration on Bioethics and Human Rights may adequately meet this requirement. However, we have seen through this study that there are different definitions and interpretations regarding vulnerability within international understandings of bioethics, which present challenges to this proposal.

In the light of the problems identified, we advocate a generously sized opening for interlinking among different regional approaches toward bioethics, so as to minimize both the possibility of unilateral universalism and sectarian relativism in applying norms and actions justified by the principle of vulnerability. We also consider that a process of dialogue to interlink the different approaches to vulnerability will be more effective for identifying the concrete problems, at both the local and the global level within bioethics.

Most importantly, we consider that the process of creating the foundations will only be legitimate if it is conducted in an organic, critical, self-critical, and continuous manner, through the engagement of intellectuals, groups, and institutions that are committed to overcoming the conditions of vulnerability that have already been identified within the field of global bioethics. Having posed the question, *Is vulnerability a key principle for global bioethics*, we find that the response is yes: vulnerability is a key principle for global bioethics, provided that it is founded on a continuing process of dialogue among the different regional perspectives of bioethics, based on mutual commitment to overcoming the conditions that render certain individuals and groups across the planet more susceptible to wounding than others.

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