



RESEARCH

Geography and geopolitics of hunger: bioethics in the work of Josué de Castro

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Abstract

The research studies the works “Geography of hunger” and “Geopolitics of hunger”, by Josué de Castro, taking as reference for analysis a set of Unesco Universal Declaration on Bioethics and Human Rights principles and the theoretical foundation basis of bioethics of Latin American origin. Although Castro never worked on Bioethics, his critical view on inequities and the “conspiracy of silence” that surrounds the hunger issue allow the establishment of an updated dialogue with intervention bioethics. The paper concludes that are several elements in common between Castro’s work and the context of bioethics. These elements can be ethical analysis tools on the hunger issue and its geopolitical relationship with social inequalities and injustice.

Keywords: Hunger. Bioethics. Respect. Human rights. Right. Equity. Social justice.

Resumo

Geografia e geopolítica da fome: bioética na obra de Josué de Castro

A pesquisa estuda as obras “Geografia da fome” e “Geopolítica da fome”, de Josué de Castro, tomando como referência de análise o conjunto de princípios da *Declaração Universal sobre Bioética e Direitos Humanos* e a fundamentação teórica de bioéticas de origem latino-americana. Apesar de Castro jamais ter trabalhado com a bioética, seu olhar crítico sobre as iniquidades e a “conspiração de silêncio” que rodeia o tema da fome permite estabelecer diálogo atualizado com a bioética de intervenção. O trabalho conclui que há diversos elementos em comum entre a obra de Castro e o contexto da bioética. Esses elementos podem ser ferramentas de análise ética do problema da fome e sua relação geopolítica com a desigualdade social e a injustiça.

Palavras-chave: Fome. Bioética. Respeito. Direitos humanos. Direito. Equidade. Justiça social.

Resumen

Geografía y geopolítica del hambre: bioética en la obra de Josué de Castro

La investigación estudia las obras “Geografía del hambre” y “Geopolítica del hambre”, de Josué de Castro, tomando como referencia de análisis un conjunto de principios de la *Declaración Universal sobre Bioética y Derechos Humanos* y la fundamentación teórica de las bioéticas de origen latinoamericano. A pesar de que Castro jamás haya trabajado con la bioética, su mirada crítica sobre las inequidades y la “conspiración de silencio” que rodean el tema del hambre permite establecer un diálogo actualizado con la bioética de intervención. El trabajo concluye que hay diversos elementos en común entre la obra de Castro y el contexto de la bioética. Estos elementos pueden ser herramientas de análisis ético del problema del hambre y su relación geopolítica con la desigualdad social y la injusticia.

Palabras clave: Hambre. Bioética. Respeto. Derechos humanos. Derecho. Equidad. Justicia social.

Josué Apolônio de Castro, a Brazilian physician, intellectual and politician, was the world-wide thinker who most probably drew attention to one of the main problems of humanity: hunger¹. Josué denounced universal hunger as a *man-made plague against men*² having created concrete explanatory theory for the sad relationship between underdevelopment, hunger, poverty and misery³.

Josué de Castro noted in his publications that hunger was not related to the quantity of food available or to inhabitants of the planet, but to unequal distribution of wealth³. The author integrated three perspectives to understand the problem: the scientific one, which explained the origin of hunger; the pedagogical one, which was used to educating generations of students, mainly in the field of geography and nutrition; and the political perspective which he used, in addition to denouncing the precarious living conditions of the majority of the people living in the world, to plan and carry out actions to minimise the human suffering produced by hunger. From the scientific point of view, in particular, it stand out the breadth and diversity of the means and instruments of work used by Josué to study the central object of his concern¹.

From a theoretical and methodological point of view, Castro sought to integrate knowledge of geography, biology, medicine, nutrition, hygiene, epidemiology, history, sociology, anthropology, ecology, economics, philosophy, law and politics¹. It is in this same period and socio- historical context that bioethics incorporates universal human rights as essential, defending the collective right to equality and the individual right to equity, in the search for truly expanded citizenship¹.

The *Universal Declaration on Bioethics and Human Rights* (UDBHR)⁵, adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2005, has been consolidated as a historical conceptual framework for bioethics, based on universal human rights, diminishing inequities and building more social justice. With the declaration, bioethics extended its field of interest beyond the biomedical issues which were, until then, its main focus and incorporated public issues of social and collective interest to its scope.

With this new structure, bioethics became an active part of international discussions on the main problems of the world today, such as social exclusion, different forms of vulnerability and discrimination, poverty, lack of access to adequate food and unequal distribution of benefits of research, among others⁶. The UDBHR presents universal principles based on transformational

ethical values, recognising that the individual's identity includes social, cultural and environmental dimensions in addition to biological dimensions.

Ever faced by humanity, hunger has been the object of research and heated debates. In the Brazilian context, its study is still inseparable from the work of Josué de Castro, who proposed an extended articulation between the biological and the social, approaching the problem from the scientific and economic perspective, and relating it to the greater question of the construction of the nation. His work does not reveal a compartmentalised view of hunger and it also involves health and society in a given period, although his reflections are still present at the beginning of the twenty-first century. And even considering that Josué de Castro died shortly after the formal emergence of bioethics, not having participated in its formulation and expansion, Castro had already outlined in his writings many of the references and principles used by bioethics.

In the search for parameters that reinforce the construction of citizenship and respect for universal human rights, a comparison between the ethical assumptions of Josué de Castro and the principles of the UDBHR can be very productive. Thus, this study aims to analyse the theoretical foundations of the two most important books of Castro, "The Geography of Hunger"⁷ and "The Geopolitics of Hunger"⁸, having as reference the principles proposed by the Universal Declaration on Bioethics and Human Rights. The perspective presented here is that the two works mentioned above, as well as the UDBHR, are pioneers in the defense of human dignity with regard to the universal right to food and the fight against hunger.

Referential framework

The UDBHR, the bioethics developed in Brazil and the social theme

From the outset, Latin American bioethics developed very specific characteristics, different from the original US approach, which focused on biomedical issues. This process was directly related to the fact that from the beginning of the Cold War until the end of the 1980s, most of the countries of the region lived under totalitarian governments that, in addition to pursuing university professors and researchers (many of them health professionals), tried to create obstacles to stop bioethics to proceed from its own independent and more critical reflections⁹. It is worth noting that a great number of Brazilian scholars dedicated to bioethics during this period came from movements in defense

of democracy and participated in the national struggle for health reform¹⁰.

With the democratic opening, Latin American intellectuals in the field of bioethics were free to devote studies and research to the problems of their countries, reflecting on the consequences of these issues in people's lives and exposing situations of moral conflicts¹¹. This was the main reason for the bioethics of the region to have become a kind of political movement or social reform rather than an academic discipline restricted to health care. In the particular case of Brazil, a "*new Brazilian bioethics*" or *hard bioethics* began to flourish (...) under the inspiration of the contradictory social reality of the country, exploring alternative perspectives to traditional bioethics currents"¹².

In this context, Brazilian bioethics has been linked to social issues since its birth, especially the right to health. This relationship is reaffirmed by Giovanni Berlinguer - a public health scientist of international renown and a reference in the Brazilian health reform - who, in a foreword to the pioneering book by Garrafa, "The Dimension of ethics in public health", points out the relationship between health policies, inequalities, social movements and bioethics in the country¹³.

In the same vein, Daniel Wickler, the first bioethics consultant of the World Health Organization, stated that the VI World Congress of Bioethics provided an innovative *historical combination of bioethics and politics*¹⁴. The event was held in Brasília in 2002, and had as its central theme the relationship between bioethics, power and injustice.

A few months after this congress and as a reflection of it, Unesco began discussions to elaborate the aforementioned Universal Declaration on Bioethics and Human Rights, which was adopted unanimously in Paris by its 191 Member States¹⁵. In addition to biomedical and biotechnology themes directly related to the field of health, the document included social, health and environmental issues hitherto absent from the international bioethics agenda. However, as we have seen, the central themes included in the declaration had already been worked in Brazil since the previous decade, especially with regard to the different forms of social exclusion and the right to universal access to health care¹⁶.

It is clear, then, the proximity of the bioethics developed in Brazil with social themes, among them access to good food. In order to deepen the analysis proposed in this article, we will take as reference the Brazilian theoretical current of intervention bioethics (IB), whose main concepts and theoretical assumptions are clearly committed to the *most vulnerable in society*^{17,18}.

Initially called hard bioethics^{19,20}, since its origins intervention bioethics has criticised the approach traditionally produced in the United States and Europe, where themes related to bioethics were mostly directed to the use and application of new (bio) technologies in clinical research or problems in the relationship between health professionals and patients. One of the main features of intervention bioethics is the emphasis given to the State's responsibility to defend the most vulnerable groups, based on the promotion of equity and equality^{21,22}.

IB starts from the idea of a politicised bioethics, capable of becoming an instrument for the defense of human rights, focusing especially on "persistent situations", that is, those that should no longer exist at this time of the 21st century, with so many discoveries and new available technologies²³. This approach proposes that bioethics re-signifies the concept of autonomy, linking it to public responsibility and shared responsibility towards society and nature, leading individuals without a voice to develop their autonomy, starting with social inclusion^{4,23}.

In Brazil, as is well known, the persistence of high rates of social exclusion is largely due to inequality in income distribution. The relation between social inequities, nutrition and health is known. Poverty and hunger, for example, are related but distinct phenomena, in which effective interventions that focus on both can yield results.

Access to adequate food and nutrition is a fundamental human right, which is a basic requirement for the promotion and protection of health, making it possible to fully uphold the potential for human growth and development with quality of life and citizenship. And being a citizen's right, the right to food is therefore the duty of the State and the responsibility of society²⁴. The bioethical reflection and the principles contained in the Universal Declaration on Bioethics and Human Rights, which form part of the presuppositions of intervention bioethics, can provide important elements to improve and consolidate these rights.

Josué de Castro and the question of hunger

Eating properly is an essential guarantee. Nutrition is understood as a fundamental and universal human right provided in article 14 of the UDBHR, which deals with "Social Responsibility and Health"⁵. In 1948, after the war, Josué de Castro was already starting an international movement to fight hunger with the publication of "The Geography of Hunger". The book highlights the defense of the dignity of all people,

the right to justice, peace, and the need for honest relations between countries, considering hunger to be harmful not only to the individual because it weakens society itself. According to Josué, the anguish of hundreds of millions of people, related to “having what to eat tomorrow”, is the biggest scandal on our planet, signalling that hunger, rather than a biological phenomenon, is a social disease that requires new structures of society⁷.

Castro recorded in a pioneering way that undernutrition comes from the unequal distribution of income among the Brazilian population. He also associated diseases to the qualitative aspect of this problem. Therefore, a thorough look at the problem is necessary, incorporating the nutritional component as indicator of food quality and nutrition^{7,8}. For the author, *the economic interests of the dominant minorities also work to conceal the phenomenon of hunger*²⁵, which dialectically highlights the contradictions of Capital-labour exploitation:

*It is because economic imperialism and international trade at the service of the former were concerned that the production, distribution and consumption of food products continued indefinitely as an exclusively economic phenomena - and not as facts closely linked to the interests of public health*²⁶.

Castro also denounced, with scientific precision, a clearly perceptible situation in Brazil and in other parts of the world at that time: what he called an *authentic conspiracy of silence about hunger (...), only explicable by moral interests and prejudices (...), political and economic (...), which made hunger a forbidden subject*²⁷. In his work “The Geopolitics of Hunger”, published in 1951⁸, the author pointed out that the governments of the great powers were willing to put together men and resources to fight a world war, but not to unite to end the hunger and misery of the world. Among other data concerning the international situation, Castro transcribes estimates published in 1938, which shows that the world, with the prevailing technological levels at that time, was already able to produce food for 11 billion people.

Among the causes of hunger, which at that time reached two-thirds of humanity, Josué de Castro pointed out the lack of a coherent and articulated vision from governments. According to the author, the problem of the food of the peoples had to be faced in its biological, economic and social aspects; in other words, through the “actions and reactions of living beings in face of influences of the environment”²⁸. And Josué did not limit himself to diagnosing hunger in the world, he also guided the fight for its eradication

in writings that held responsible the colonial system of organisation of geopolitical territories⁸.

Method

The study was carried out based on the qualitative method and the content analysis of the works “The Geography of Hunger”⁷ and “The Geopolitics of Hunger”⁸, with the purpose of identifying convergences with the UDBHR’s principles⁵.

Content analysis gained prominence at the beginning of the 20th century due to the academic concern to seek methodological resources that validated, through objectification and systematisation, the findings obtained in theoretical research. This technique is used in comparative analysis, since it is systematic and can deal with large amounts of data, offering a well-documented set of procedures²⁹.

This type of analysis focuses on syntactic and semantic dimensions of the text, allowing the researcher to make informed conjectures about the content of the text, admitting the inference of values, concepts, principles and symbols³⁰.

Content analysis of the works of Josué de Castro

The research is organised in three phases: pre-analysis, exploration of the material and treatment of the results³⁰. As the objective of this study was to analyse the two most important books of Josué de Castro (“The Geography of Hunger” and “The Geopolitics of Hunger”)^{7,8} in light of the Universal Declaration on Bioethics and Human Rights⁵, a skim reading of the material was initially done. Subsequently, through a more precise appraisal of the entire corpus of the study, the ethical principles of the chosen works that could converge with greater or lesser proximity were pointed out.

To confirm the consonance, the two books were submitted to lexical analysis, or textual statistic, performed with the Alceste software for textual data analysis or textual statistic³¹, developed in 1979 by Max Reinert³². Alceste analyses sets of texts through four procedural steps³³, grouping the semantic roots and defining them by classes, considering the function of the word within the text. Thus, it is possible to quantify how to infer the delimitation of the classes, defined as a function of the occurrence and co-occurrence of words, as well as their textual function, in order to categorise them in content analysis³⁰.

The first work analysed, “The Geography of Hunger”⁷, points out the interests and prejudices of a moral, political and economic order from the Western civilisation, which made hunger a forbidden subject. The second, “The Geopolitics of Hunger,”⁸, is not limited to diagnosing hunger in the world, but also seeks to guide the fight for its eradication. In the same way as the UDBHR, the two books are pioneering works in the defense of human dignity regarding the guarantee of the universal right to food, nutrition, justice, equality and equity in the fight against hunger⁵.

Already in its name, The Declaration on Bioethics and Human Rights incorporates human rights as a fundamental element for reflection, along with proposals for (bio)ethical actions, establishing justice, social responsibility and the right to health as guiding axis. The choice of theoretical references analysed is justified by the interrelation and complementarity between the two works of Josué and the principles of the Declaration, with their social contents converging at all times. The content analysis of the two books allowed us to critically

compare the author’s ethical and political thinking and to establish a relation with the principles of the Declaration on Bioethics and Human Rights.

Selection of articles in the Universal Declaration on Bioethics and Human Rights

Due to its direct relation with issues dealt with in the two works of Josué de Castro, three UDBHR articles were selected for comparative analysis and discussion: article 3 (“Human dignity and human rights”), Article 10 (“Equality, justice and equity”) and article 14 (“Social responsibility and health”) (Table 1). After presenting the results of the content analysis of Castro’s two books, these articles will be discussed in the section “Discussion”, along with some theoretical fundamentals of intervention bioethics with which they relate directly.

The three principles selected are closely interrelated and interdependent, as set out in Article 26 of the Declaration (“Interrelation and complementarity of the principles”).

Table 1. Selected UDBHR articles

<p>Artigo 3 Human dignity and human rights</p>	<p>a) Human dignity, human rights and fundamental freedoms are to be fully respected. b) The interests and welfare of the individual should have priority over the sole interest of science or society.</p>
<p>Artigo 10 Equality, justice and equity</p>	<p>The fundamental equality of all human beings in dignity and rights is to be respected so that they are treated justly and equitably.</p>
<p>Artigo 14 Social responsibility and health</p>	<p>a) The promotion of health and social development for their people is a central purpose of governments that all sectors of society share. b) Taking into account that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition, progress in science and technology should advance: i. access to quality health care and essential medicines, especially for the health of women and children, because health is essential to life itself and must be considered to be a social and human good; ii. access to adequate nutrition and water; iii. improvement of living conditions and the environment; iv. elimination of the marginalization and the exclusion of persons on the basis of any grounds; v. (e) reduction of poverty and illiteracy.</p>

Results and brief data analysis

The textual analysis was carried out with the aid of the Alceste software. The results provided by the programme were analysed and organised in order to provide relevant information about the object of study.

The software Alceste classified 74% of elementary context units (ECUs) in the corpus composed by the two works of Josué de Castro, “The Geography of Hunger” and “The Geopolitics of Hunger”. These were organised into seven classes, as can be seen in Figure 1, which shows the number and the percentage distribution of the ECUs contained in each of them.

By means of hierarchical descending classification (HDC) it is possible to know how these classes were distributed, the approximate percentages of ECU that constitute them and the relations that they maintain between each other. It is worth mentioning that the relation (R) between classes is greater the closer to 1 this index is. The HDC of the corpus and the relationship between classes is shown in Figure 2.

Analysing the words belonging to each of the classes, it was possible to situate the specific subjects treated by each of them and the axis that compose them. The classes were denominated as follows: 1) "Hunger as object of scientific investigation"; 2) "Land, production and population"; 3) "Nutritional deficiencies, diseases and poor children"; 4) "Power, politics and the human right to adequate food"; 5) "Monoculture, latifundium, colonisation and famine"; 6) "Eating habits and nutritional deficiencies"; and 7) "Brazilian biodiversity and food aspects".

Classes 1, 3 and 6 refer to Axis 1, "The study of hunger", and correspond to 49% of the corpus analysed by the programme, maintaining relative association with Axis 2 ($R = 0.5$), that is, there are in Axis 1 very specific issues which are moderately approached by the classes that form the second axis.

Figure 1. Percentage distribution of elementary context units by classes

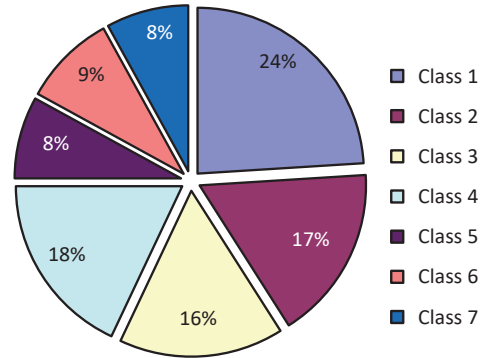
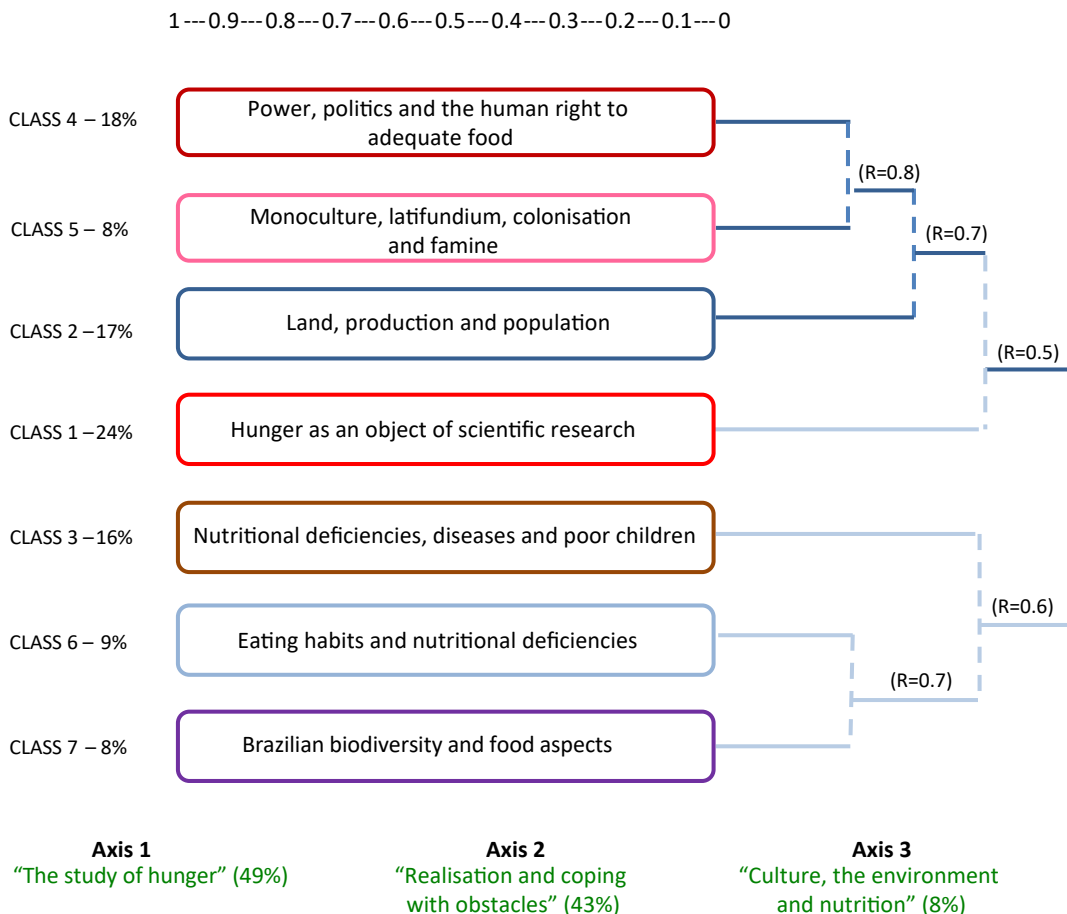


Figura 2. Hierarchical descending classification of the corpus and relationship between classes



Axis 2 was called “Realisation and coping with obstacles”, a short for “Realisation of the human right to adequate food and coping with historical-economic-political-social obstacles”. Composed by classes 2, 4 and 5, this axis corresponds to 43% of the corpus. It should be noted that classes 4 and 5 have a strong association relation ($R = 0.8$), which, although slightly reduced in relation to class 2, remains significant ($R = 0.7$), therefore, there is a great proximity between the content addressed by these three classes. Class 7, on the other hand, presents an expressive relationship in itself ($R = 0.7$) and moderate when compared to class 3 ($R = 0.6$).

Axis 3, “Culture, the environment and nutrition”, corresponds to 8% of the corpus. Classes 6 and 7 show an expressive association ($R = 0.7$), and together they are moderately related to class 3 ($R = 0.6$). The names of the classes and axis were based on the analysis of the vocabulary (words with meaningful presence and absence for the classes), hierarchical ascending classification and ECU belonging to each of the classes.

Discussion

The discussion of the results of the analysis of the work of Josué de Castro starts from the epistemology produced by the Declaration on Bioethics and Human Rights, especially in its articles 3, 10 and 14, and Latin American intervention bioethics. The study had as a sequential reference the three axis resulting from the research, based on the dialogue between the main ideas gathered from the two works and the selected bioethical foundation.

In dealing with bioethical thought developed in Latin America and its relationship with the social field, Porto³⁴ affirms that bioethics can be applied in this type of research, establishing ethical criteria that guarantee not only physical and mental integrity of human beings, but also moral and social integrity.

Recognising that bioethics is not restricted to biomedical ethics is to extend its scope of analysis to health-related discoveries that relate directly and indirectly to the essence of human living itself, explicitly included in Article 14 of the UDBHR in the right to adequate nutrition.

In analyses with this nature, Latin American bioethics has interacted with several areas, absorbing theoretical, historical and methodological foundations of other fields of knowledge in its structure, especially of philosophy and social sciences. In this way, it enriches its tools for ethical evaluation of conflicts concerning human dignity and human rights (article

3) and the the need for unassisted persons to be treated with equality, justice and equity (Article 10) - rights whose guarantee is indispensable especially on this side of the continent.

In Axis 1, which works “The study of hunger” using the lens of the “four P’s” (precaution, prudence, prevention and protection) proposed by intervention bioethics for responsible ethical practices^{4,35}, it is seen that Castro’s works provide concrete ethical support for the defense of people who are unable to protect themselves.

This first axis brings in its three classes historically emergent expanding (from limits of knowledge) and persistent (everyday), according to the language of intervention bioethics. On the one hand, we can mention “hunger as an object of scientific research”, as in recent studies with industrially developed foods and food manipulated by transgenic techniques. On the other hand, there is the historically persistent hunger that accompanies humanity from its earliest days and appears to be the reverse of what is stated in Article 10 of the UDBHR, that is, inequality, injustice and inequity.

Castro asserts that his thinking is not individual but collective. Based on the principle of protection, his action is based on the search to protect people in conditions of vulnerability. The protection principle, as intervention bioethics indicates, is considered essential in the evaluation of public health policies, aiming at social justice³⁵.

Reinforcing this comprehension, protection can be understood as shelter or coverage of essential needs - health, education, food, water supply - indispensable items included in article 14 of the UDBHR, which must be guaranteed to all those who can not obtain those needs on their own³⁶.

In the context of Axis 1, hunger is directly linked to poverty, and is therefore a complex problem, which excludes a considerable part of the population by depriving it of food, imposing physical, mental and social underdevelopment on it. The consequence of this exclusion is the noticeable inequality in food care, health and education, which prevents people from freeing themselves from the poverty they are subjected to, reinforcing Castro’s concern to ensure adequate food as a human right. As the author suggests, respect for human dignity and the right to food demand special commitment, with the transforming reorganisation of social structures in the quest for a fair balance and for the breaking of privileges and prejudices.

For Castro, the different economic systems have been responsible for aggravating hunger, since they provoke discrepancies and privilege owners

of large territorial areas. This perception of the differences and the maldistribution of land related to production demonstrates that the themes of justice and equity, listed in Article 10 of the UDBHR, should be considered when thinking about the historical process of maintaining hunger. In face of such situations, intervention bioethics expresses that:

*This new theoretical proposal seeks a concrete alliance with the historically more vulnerable side of society, including the reanalysis of different dilemmas, among which: autonomy versus justice / equity; individual benefits versus collective benefits; individualism versus solidarity; omission versus participation; superficial and temporary changes versus concrete and permanent transformations*³⁷.

As the essence of the analysis not only of food and nutrition, but also of contextual socioeconomic reality, Axis 2 (Realisation of the human right to adequate food and coping with historical-economic-political-social obstacles) brings strong elements of Josué de Castro's perception of the effects of modernity and colonialism (one of the pillars of intervention bioethics)³⁸ in the populations he researched.

Castro argues in the book "Essays on Human Geography"³⁹ that it was from the "discovery" of America, Africa, and Asia that the interest in the people who inhabited those lands and in the riches contained therein began. The author contributes to the understanding of the colonising forces with a classification of the existing types of colonisation and their impacts, showing, from the process of colonisation of Australia by the English, the annihilation capacity of the colonisers, which attack the cultural roots, replacing them with colonial practices.

Although Castro's account is related to Australia, similar processes occurred in Latin America, where the forms of expropriation, exploitation and annihilation were the same. In fact, the food culture was also harmed in Brazil, according to the author, because although the food areas had "incomplete and disharmonious standards," the situation worsened with the colonisers' ambition to enrich quickly, overloading sugar production and the search for gold in the land for the purpose of increasing profits. As a consequence, there was reduction of food quality and abandonment of native cultures. For this reason, Castro affirms that the famine especially ravages countries that were colonised, although famine has no limits and is in all continents.

Relating this line of reflection to IB and the UDBHR, we live today what Nascimento and Garrafa³⁸

interpret as "coloniality of life", in which the exercise of power is the basis for hierarchising experiences, knowledge, cultures and lives. While Axis 1 is closer to social aspects of hunger, Axis 2 is more related to the historical process of the hunger phenomenon and to objective ways of dealing with the problem.

For Castro, the most appropriate would be a broad effort to develop policies to reduce social and economic inequalities, taking advantage of the world's reserves, consolidating a fairer economic distribution and encouraging the progress of less developed areas. In this sense, intervention bioethics is more energetic, retrieving from Paulo Freire's idea of liberation the need to identify and combat the locus where the repressive forces that lead the most vulnerable to subjection are installed⁶.

Now, Axis 3 (Culture, the environment and nutrition) highlights the destructive force of nature on people. Josué de Castro proposes the path of productive economy with organised use of land and nature, especially in less well-to-do societies. In class 7 of this axis, which deals with "Brazilian biodiversity and food aspects" (representing 8% of the corpus), the author describes the characteristics of vegetation and native foods in different Brazilian regions.

In this same axis, the author treats food as a condition of a dignified life, which again reflects the UDBHR, especially in item 2c of article 14: improvement of living conditions and the environment. The ecological issue has been increasingly considered a problem of ethical positioning. The harmful consequences to the environment generated by the way of life of the people are strongly linked to skewed positions - individual and public - included in the field of study of bioethics.

For Castro, environmental problems are more serious in areas that are heavily affected by urbanisation, such as large cities and Brazilian metropolises. However, the author emphasises that in other parts of the country the reverse is observed, that is, the absence of a balanced relationship between man and nature could in some cases be beneficial to human survival itself. His observations, which are organised on Axis 3, point to the neglect of people in regions that are difficult to access, which makes access to adequate and regular food even more precarious.

Josué de Castro demonstrates the imbalance between consumerist and nature-destroying societies and societies distant of minimally sustainable relations of life. In the latter, people would be subject to a "regime of destructive economy", deprived of the forces to dominate and use nature and to

build an organised productive system⁷. The ethical conflict posed here refers to the capacity of ethically appropriate behaviours in these situations, whether of destruction of nature or undernourishment of people.

The influence of Castro's works on many state systems and apparatuses towards food in health care is tangible, therefore Castro's works constitute a solid tool for social transformation, listing various moral justifications that reinforce the need to create a permanent alliance with the historically weakest part of society, in the same line proposed by intervention bioethics⁴.

Final considerations

In Brazil and around the world, the debate on the relation between hunger and poverty was marked by the contribution of Josué de Castro, who reinforced respect for human dignity and universal human rights through access to food, indispensable for the healthy development of life. Castro's works are very close to the foundations of Latin American bioethics and the Universal Declaration on Bioethics and Human Rights, which focused on the problem

of hunger going beyond the purely biological-nutritional field, incorporating social, economic, cultural and environmental reflections.

The present research concluded that, although bioethics did not exist formally in the time of Josué de Castro, the author already worked with several concepts that bioethics would later use. The study also sought to contribute to the epistemological foundation of bioethics by bringing Castro's studies to its space, proposing that the author's books become tools of ethical analysis on problems such as hunger, social inequality and injustice, and in this way making everyone assume social responsibility for this drama that still lasts.

Finally, it is pertinent to point out some recommendations for the field of bioethics: expansion of new ethical studies that evaluate public health policies in the field of food considering Castro's thought; deepening the analysis of Castro's work in light of Latin American bioethics; promotion of spaces for discussing food, basic sanitation and other health determinants, thinking how bioethics can contribute in these areas; and development of ethical-legal instruments to meet basic population needs.

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Participation of the Author's

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