

## New Analysis Categories Of Global Bioethics

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Since 1970, when bioethics started as a knowledge field (Potter, Hellegger), it has been considered as a branch of applied ethics (except for some complexologists, who think that bioethics is a new field of knowledge) and therefore, it entails a multidisciplinary analysis of the main issues that have an impact on the quality of life of human beings. These problems include euthanasia, abortion, genetic manipulation, doctor-patient relationship, informed consent, patients' rights, research ethics, etc. Thanks to this integrative approach, a pedagogical distinction has been made. Bioethics issues can be grouped in two different categories: issues related to biomedical ethics are considered as part of "microethics" category (1) and, wider and more complex issues that require a multidisciplinary analysis are included in the "macroethics" category (2).

Macroethical issues (3) include health policies, environmental problems, bioterrorism, poverty, vulnerability, big data, posthumanism, etc. Healthcare Ethics Committees have developed decision-making strategies, like clinical ethics analysis, where different models and methodologies address microethical problems. In contrast, ethical problems solved through decision-making processes have not been included in literature, methodologies, or research models in macroethics. This Editorial aims to create a

mathematical matrix that leads the ethical analysis of the global macroethical issues present in the world nowadays.

Bioethics, in its pure state, has focused on thinking and dreaming about a different world in which biological knowledge (scientific knowledge, by extension) could meet our comprehension of human values systems (social, educational, political, cultural systems) (4). Bioethicists have proposed several methods of analysis for ethical problems since the 1970s. Over the years, they have used two different perspectives for approaching ethical matters. The rational choice theory (5) considers the existence of ethical dilemmas and the possibility to find a solution in opposite sides of those dilemmas (the black or white matter). Moreover, the deliberative method (1) analyses ethical issues and focuses on the process instead of the conclusion itself.

Biomedical ethics has utilized the rational choice theory in its decision-making process for many years (6). The applied methodology has two main features: (i) Every dilemma must have one (and only one) rational solution that should be reached using the correct methodology. (ii) Ethical dilemmas (which determine the correct and incorrect answers) can be reduced to technical issues (considering the dilemma as a technical problem instead of an ethical problem) (7).

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The Principlism approach (developed by T. Beauchamp and J. Childress, deontologist and utilitarian, respectively) (8) works with a dilemmatic mindset and has been the most widely used by medical ethics for years. It prioritizes the final decision over the decision-making process because the process itself becomes obvious when the principles and rules are applied in a direct and deductive way.

Other intellectuals (Aristotle, Gracia, Cortina, Habermas, Apel, among others) (9) think that moral issues are imperfect and uncertain (problematic) by definition. Judgments about responsibility cannot be certain but prudent, and “Prudence” is the art of making uncertain reasonable moral decisions (10). The Deliberative method has some features (1): (i) there is no guarantee that moral problems have a solution in all cases, especially those that could have one (and only one) solution. (ii) Deliberation is the ability to relativize our perspective by considering and discussing other’s opinions, and progressively adjusting our view of the complete process. According to Gracia, “throughout its history, Bioethics has been influenced by the idea of eradicating dilemmas and making decisions in situations of conflict instead of deliberating on problems.” (1. Pag.22)

Furthermore, Garrafa and Porto inquire about Principlism’s absence of intervention in practical ethics, especially when solving problems caused by economic and social inequity in peripheral countries (11). In contrast, they outline the use of intervention bioethics, essentially conceived as supportive, political, and active. This approach includes sustainability, vulnerability, inequity, bioterrorism, transhumanism, and posthumanism, as the emerging concerns of bioethics. Since the value of the ethical world and the complexity of the emerging problems in the contemporary world (12) are not considered by the four principles of classic bioethics (respect for autonomy, beneficence, nonmaleficence and justice), it is required to create a new analysis framework.

Recently, Bioethics has applied many categories of analysis to address large-scale problems

such as environmental and sustainability problems. Since 2009, professor Garrafa has promoted analysis subcategories aiming to address emerging problems in peripheral regions (13). The 4P approach includes prudence, prevention, precaution, and protection.

**1. Prudence:** «It is classically considered as one of the four Cardinal virtues; is the ability to judge between virtuous and vicious actions and further decide to follow them or run away from them» (14). When applied to environmental problems, the prudence approach allows identifying the probable existence of threats, risks, fears caused by human acts, and their consequences in their natural and social environments (Human Ecology).

**2. Prevention:** It refers to the beforehand preparation and disposition to avoid any hazards (15). This principle is the cornerstone of public health and introduces the imaginative redesign of social communities and environments to promote better health and security systems. It also includes the replacement of outdated models for problem resolution. One could ask “Can we anticipate natural disasters such as floods and landslides that could cause the extinction of entire communities?”

**3. Precaution:** This principle is related to the indiscriminate use of technological advances. According to Kottow, the accelerated activity of biotechnology has dramatically increased the perception of risk, as it creates massive effect products impacting global collectivities. In this scenario, individuals do not have the option to avoid the consequences (16, 17).

**4. The Protection of socially excluded, fragile and vulnerable individuals.** Are vulnerable and underprivileged populations the most affected whenever there is an ecological problem? Displaced communities must migrate and build unworthy artificial environments that cause ecological unbalances (cutting of forests and river pollution).

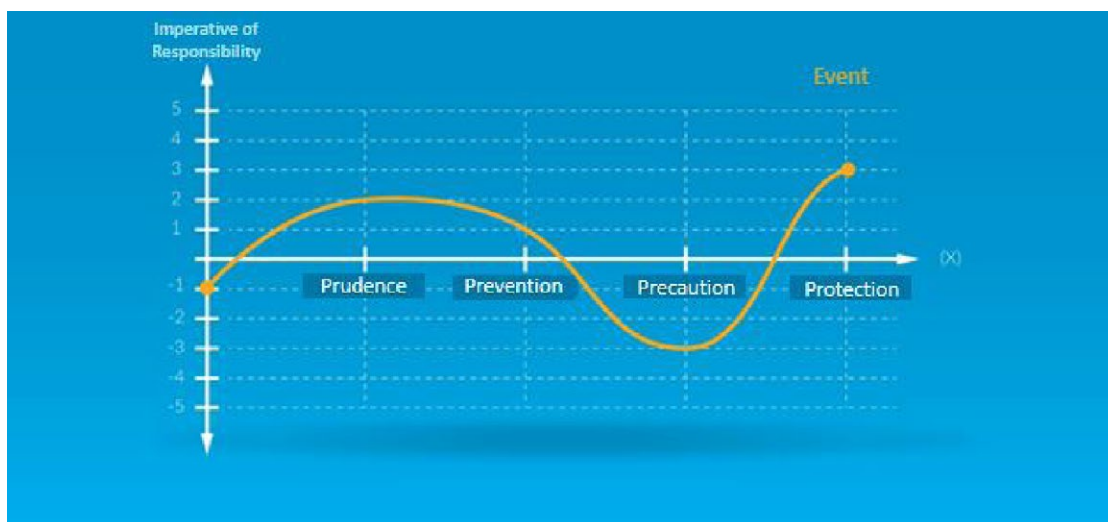
The Imperative of Responsibility and its core idea will be used to measure each one of the four subcategories: «Act so that the effects of your

action are compatible with the permanence of genuine human life» (18. Pag. 40), in other words, so that future generations can have the best possible living conditions.

The subcategories are placed in the macrobioethical analysis matrix aiming to evaluate and measure the risks and the threats that external agents represent for all types of life on Earth (19).

The analysis matrix (Fig. 1) represents a Cartesian plane, with the Imperative of Responsibility (which determines the compatibility of the action effects and the permanence of life on Earth) located on the horizontal axis (x) and the prudence (which identifies the probable existence of threats, risks, fears caused by human

acts, and their consequences in their natural and social environments), prevention (it refers to the beforehand preparation and disposition to avoid any hazards), precaution (towards indiscriminate use of new technologies transforming the quality of life of living being on the planet), and protection (of excluded, fragile and vulnerable people) principles, located on the vertical axis (y). Each implemented action should be located on the Cartesian plane, measuring the level of impact on the Imperative of Responsibility (using a scale from +5 to -5) versus the risks and/or the benefits of each one of the subcategories, using sustainable development indicators (20).



**Figure 1.** Macro bioethical analysis matrix. (Prepared by the author)

## References

1. Gracia, D. "La deliberación moral. El papel de las metodologías en ética clínica". Comités de Ética Asistencial, Sarabia, A. & Reyes, M. (eds.). Madrid: Asociación de Bioética Fundamental y Clínica, 2000. 21-41
2. UNESCO. ¿Por qué una bioética global? Paris: Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. 2015. (Repositorio UNESCO de acceso abierto ([www.unesco.org/openaccess/terms-use-ccbysncsa-sp](http://www.unesco.org/openaccess/terms-use-ccbysncsa-sp))).
3. Bostrom, N., & Circovic, M. Global Catastrophic Risk. New York: Oxford University Press. 2008.
4. Garzón Diaz, F. Del Antropocentrismo al Biocentrismo. Un nuevo paradigma Bioético. Revista Latinoamericana de Bioética. Revista Latinoamericana De Bioética, 2002(2), 10-19.
5. Gowans, c. W. (ed). Moral dilemmas. New york: oxford university press. 1987.
6. Carney, Frederick S. On McCormick and Teleological Morality. The Journal of Religious Ethics, vol. 6,

- no. 1, 1978, pp. 81–107. JSTOR, [www.jstor.org/stable/40024221](http://www.jstor.org/stable/40024221). Accessed 9 Aug. 2021.
7. Eddy, DM. *Clinical Decision Making From Theory to Practice*. Sudbury, Mass., Jones Publishers, USA. 1996.
  8. Beauchamp TL y Childress JF. *Principles of biomedical ethics*. Oxford University Press. 5ª ed. New York:USA. 1999.
  9. Cortina, A. El estatuto de la ética aplicada. *Hermenéutica crítica de las actividades humanas*. Isegoría. 1998(13)119-134.
  10. Aristoteles, *Ética a Nicómaco*, 1112a, 1140a. Alianza Editorial. Madrid. 2014.
  11. Azambuja, L.G, y Garrafa, V. La teoría de la moralidad común en el trabajo de Beauchamp y Childress. *Revista Bioética*, 2015, 23(3), 634-644. DOI: <https://doi.org/10.1590/1983-80422015233100>
  12. Beck, U. *La sociedad del riesgo: hacia una nueva modernidad*. Barcelona: Paidós. 1998.
  13. Garrafa V. y Azambuja L.G *Epistemología de la bioética - enfoque latino-americano*. *Revista Colombiana de Bioética*. 1999. 4(1), 74-92.
  14. Canto-Sperber M. *Diccionario de Ética y de Filosofía Moral*. Fondo de Cultura Económica. Ciudad de México, México. 1994.
  15. Kottow, M. *Ética de Protección. Una propuesta de protección bioética*. Bogotá: Universidad Nacional de Colombia. 2007.
  16. Kottow M. Acerca del “principio” precautorio. *Nuevos folios de bioética y pensamiento biomédico*, 2011 (5), 7-26.
  17. Fuller, S. Precautionary and Proactionary as the New Right and the New Left of the Twenty-First Century Ideological Spectrum. *International Journal of Politics, Culture, and Society*, 2012:157-174. DOI: <https://doi.org/10.1007/s10767-012-9127-2>
  18. JONAS, J, *El principio de responsabilidad. Ensayo de una ética para la civilización tecnológica*, Herder, Barcelona. 1995.
  19. Mepham, B. *Bioethics: an introduction for the biosciences*. New York: Oxford. 2008.
  20. UNESCO. (08 de 10 de 2017). *Declaración de las Responsabilidades de las Generaciones Actuales para con las Generaciones Futuras*. Obtenido de UNESCO: [Http://portal.unesco.org/es](http://portal.unesco.org/es)