


**FEAR AS AN ETHICAL TOOL IN HANS JONAS' HEURISTICS IN  
TIMORESE LULIK****O MEDO COMO FERRAMENTA ÉTICA NA HEURÍSTICA DE HANS JONAS NO LULIK  
TIMORENSE****EL MIEDO COMO HERRAMIENTA ÉTICA EN LA HEURÍSTICA DE HANS JONAS EN EL  
LULIK TIMORÉS** <https://doi.org/10.56238/sevened2025.029-004>**Luis Gouveia Leite<sup>1</sup>, Jelson Oliveira<sup>2</sup>****ABSTRACT**

Technology poses a challenge to ethics. It exhibits an ambivalent nature, wherein risks and threats to human life and nature are often concealed or obscured. Ethics must address the ambivalence of technological practices to distinguish between the appropriate and inappropriate use of technology. According to Hans Jonas, responding to the demands of technology and the threats resulting from technological progress necessitates the implementation of a *heuristics of fear* as an ethical method. This approach awakens a sense of responsibility and compels changes in human actions in the present to prevent future harm. This sense of fear should be present in our imagination as a moral duty of responsibility, enabling the anticipation of negative prognoses while simultaneously preventing threats to authentic life in the future. We will demonstrate how the concept of fear, as present in *lulik* thought, is regarded as a moral principle within the traditional ethical discourse of Timor. Understood within the framework of traditional thought, *lulik* represents a body of knowledge that generates moral values and highlights the urgency of these values in the face of the radical and accelerated transformation brought about by unlimited technological progress, which induces significant changes and challenges for both humanity and nature in contemporary times. We will argue that applying these principles can help anticipate and confront situations that should and must be foreseen in advance, thereby preventing physical and psychological punishments in the future. Therefore, the significance of employing the *heuristics of fear* and the *fear of lulik* as ethical and moral methods lies in the necessity of preserving and maintaining balance and harmony between human beings and nature in the future.

**Keywords:** Hans Jonas. Technology. Heuristics of Fear. Lulik. Ethics of Responsibility.

**RESUMO**

A técnica é um problema para a ética. Ela apresenta sua característica ambivalente, na qual se confundem e se escondem os riscos e as ameaças para a vida humana e para a natureza. A ética deve ocupar-se da ambivalência dos efeitos das práticas tecnológicas para identificar o bom ou

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mau uso da técnica. Segundo Hans Jonas, para responder às demandas da técnica e às ameaças resultantes do progresso tecnológico, impõe-se a necessidade de uma heurística do medo como método ético, que desperta o sentimento de responsabilidade e obriga a promover mudanças nas ações humanas no presente para evitar danos no futuro. Esse sentimento de medo deve estar presente na nossa imaginação como um dever moral de responsabilidade, permitindo antecipar prognósticos negativos e, ao mesmo tempo, prevenir ameaças à vida autêntica no futuro. Demonstraremos como o conceito de medo, presente no pensamento do *lulik* é considerado um princípio moral no discurso ético tradicional de Timor. Entendido nos termos do pensamento tradicional, trata-se de um conhecimento que gera valor moral e identifica a urgência desse valor diante da transformação radical e acelerada do progresso tecnológico ilimitado, que provoca grandes mudanças e desafios para o ser humano e para a natureza na contemporaneidade. Demonstraremos que utilizar os princípios desse valor permite prevenir e enfrentar situações que podem e devem ser previstas com antecedência, evitando, assim, punições físicas e psíquicas no futuro. Portanto, a importância de empregar a heurística do medo e o medo de *lulik* como métodos éticos e morais reside na necessidade de preservar e manter o equilíbrio e a harmonia da vida entre os seres humanos e a natureza no futuro.

**Palavras-chave:** Hans Jonas. Técnica. Heurística do medo. Lulik. Ética da Responsabilidade.

## RESUMEN

La tecnología plantea un reto a la ética. Muestra una naturaleza ambivalente, en la que los riesgos y amenazas para la vida humana y la naturaleza suelen quedar ocultos u oscurecidos. La ética debe abordar la ambivalencia de las prácticas tecnológicas para distinguir entre el uso apropiado y el inapropiado de la tecnología. Según Hans Jonas, para responder a las exigencias de la tecnología y a las amenazas derivadas del progreso tecnológico es necesario aplicar una heurística del miedo como método ético. Este enfoque despierta el sentido de la responsabilidad y obliga a modificar las acciones humanas en el presente para evitar daños futuros. Este sentido del miedo debe estar presente en nuestra imaginación como un deber moral de responsabilidad, que permita anticiparse a los pronósticos negativos y, al mismo tiempo, prevenir las amenazas a la vida autêntica en el futuro. Demonstraremos cómo el concepto de miedo, tal y como está presente en el pensamiento lulik, se considera un principio moral dentro del discurso ético tradicional de Timor. Entendido en el marco del pensamiento tradicional, el lulik representa un cuerpo de conocimientos que genera valores morales y destaca la urgencia de estos valores frente a la transformación radical y acelerada provocada por el progreso tecnológico ilimitado, que induce cambios y desafíos significativos tanto para la humanidad como para la naturaleza en la época contemporánea. Argumentaremos que la aplicación de estos principios puede ayudar a anticipar y afrontar situaciones que deberían y deben preverse de antemano, evitando así castigos físicos y psicológicos en el futuro. Por lo tanto, la importancia de emplear la heurística del miedo y el miedo al lulik como métodos éticos y morales radica en la necesidad de preservar y mantener el equilibrio y la armonía entre los seres humanos y la naturaleza en el futuro.

**Palabras Clave:** Hans Jonas. Tecnología. Heurística del miedo. Lulik. Ética de la responsabilidad.

## INTRODUCTION

In his work *The Principle of Responsibility: An Essay on an Ethics for Technological Civilization* (1979), Hans Jonas demonstrates that modern technology has become a problem for environmental ethics, insofar as it has increased the power of human intervention over nature. For the author, the technique shows its ambivalent face, confusing and hiding the risks and threats to the life of nature and humanity. Therefore, for him, ethics must deal with the ambivalence of the effects of technological practices in order to identify the good or bad use of technique. Thus, the threats resulting from technological progress impose the need for a "heuristic of fear" (Jonas, 2006, p. 71) as a method to guide and analyze the risks of catastrophes associated with technical action, enabling us to act with caution and in advance, through a feeling of responsibility. As we will demonstrate, this strategy can also be found in the tradition of *lulik*, a central concept of East Timor culture, usually associated with something sacred, forbidden or that must be respected. This concept encompasses a spiritual and social dimension, regulating behaviors and values in Timorese society. *Lulik* can be present in objects, places, rituals, family relationships, and even in the political and social organization of the community. In the ethical context, the concept works as a moral principle that guides people's actions based on fear and respect for the sacred. As we will see, this concept influences the way Timorese interact with nature, ancestry and social structure, ensuring the maintenance of harmony and order within the communities. Thus, both the fear heuristic and the concept of *lulik* open paths to build a new ethic to preserve the future of nature and humanity.

Thus, the central objective of this article is to demonstrate the proximity of the two concepts (whose cultural and theoretical roots are quite different) and how they can contribute, in the specific case of East Timor, to ensure responsible practices in view of the protection of nature and human beings, in the present and in the future. It is, therefore, a question of analyzing how ethics should deal with the ambivalence of the effects of technological practices in order to distinguish between the good and bad use of technology in the construction of a better future for human life and nature, and how the concept of fear can be used to the benefit of responsibility. The second question we can ask ourselves concerns how can we identify the contribution of fear in the face of the radical and accelerated transformation of limitless technological progress, which has caused great changes and challenges for human beings and nature in this era?

Thus, in this work, we will reflect on the proximity of the concepts of fear heuristics in Jonas and fear in *lulik*, with regard to the phenomenon of technique and its implications for human and extra-human nature. In addition, we will seek to present the task of the ethics of

responsibility and how it can contribute to the resolution of the problems arising from the misuse of technology in the construction of a better future for humanity and for extra-human nature. In our study, we will use, especially, the works *The Principle of Responsibility: An Essay on an Ethics for Technological Civilization* (1979) and *Technique, Medicine and Ethics* (1985), in addition to other works related to the theme of the study.

## MODERN TECHNIQUE AS THE ETHICAL PROBLEM

Responsibility, being an ethical principle, provides a perspective of critical and in-depth analysis in the technological age. Jonas understands that "under the sign of technology, ethics has to do with actions of a causal scope that lacks precedent [...]. All this places responsibility at the center of ethics" (Jonas, 1995, p. 16-17). This is because, in modern technology, magnitude and ambivalence are confused and come to represent unprecedented dangers in the history of life, so that they constitute a problem for ethics. Technology imposes its own rhythm and places us in a situation in which technological powers are immediately applied in everyday life, so that the relationship between *knowledge*, *power* and *doing* can be explained by the metaphor of breathing: "being able to breathe and having to breathe" are inseparable (Jonas, 2013, p. 31). In other words, the threat contained in the technique concerns this immediacy of the application, which removes any possibility that its procedures and their consequences can be ethically analyzed. As Jonas demonstrates in the article that would become the first chapter of *Technique, Medicine and Ethics*, the separation between the power to act and action itself was possible in the pre-modern era, but now, in the modern era, this no longer happens, because modern technology develops in a continuous and unlimited progress, without interruptions. For him, the difference is that pre-modern technique presented itself as a state and a possession characteristic of a certain social group or people; while in modernity it presents itself as an enterprise and a process, which have, above all, a collective character and, therefore, also uncontrolled, insofar as it has the support of science and economics (as we read in the first line of the preface to *The Principle of Responsibility*; p. 21).

To think about the problem of modern technique, Hans Jonas not only analyzes its impacts and consequences in philosophical terms, but does so in ethical terms. If the first chapter of *Technique, medicine and ethics* deals with analyzing why technique is an ethical problem, in the second chapter the author demonstrates that it has become an ethical problem. In this text, he presents the ambivalence of the effects of technology as one of the

five reasons why ethics should be interested in technology<sup>3</sup>. The first of these motivations is particularly interesting to us at this moment, that is, the ambivalence of the effects of technology, insofar as, as we have already said, allied to the question of magnitude, it is precisely for this reason that technology has become a danger in the face of nature.

For Hans Jonas, technique is ambivalent from an ethical point of view because its use can be good and it can be bad, leaving Ethics, as a philosophical discipline, to contribute to its orientation towards the common good. As a consequence, man himself endangers himself and the totality of life, both in the present and in the future, given the great dimensions of what is at stake. Thus, the magnitude and ambivalence of technology conceal the risks and threats inherent to technical practice, whose unlimited will to power imposes serious ethical implications by revealing its dark face. Although the power of technical action is recognized, what differentiates good and evil in its action "is its use or abuse" (Oliveira, 2014, p. 118).

For Jonas, in addition, the question is not limited to evaluating the intentions of a technological use considered good or bad, as this use always brings negative effects inseparable from the positive ones. This is the importance of ethically evaluating the consequences of modern technical actions: "Ethics can clearly distinguish between both, between the correct and wrong use of the same capacity" (Jonas, 2013, p. 30). Thus, the main task of ethics is to discern between the good and bad use of technique, even if the technique itself, in its essence, cannot be judged morally. Therefore, ethics must deal with the ambivalence of the effects of technological practices in order to identify their implications, in view of their technical greatness: "Even when benevolently used for its most legitimate and proper ends, it has a threatening side in itself, which, in the long run [*langfristig*], may have the last word" (Jonas, 2013, p. 30). Thus, in technical practice, good and evil coexist, and even good use can hide dangerous damage. In this sense, "in the case of technique, any use that is made can always lead to negative effects, inseparable from the positive ones; thus, even when the technique is used for good, its effects can result in disastrous consequences" (Moretto, 2015, p. 114).

The characteristics of the ambivalences of the effects "constitute a problem—which is new—for ethics, which must now assume responsibility as the main ethical category" (Mreira, 2022, p. 51). In this sense, we explain the essence of the technological problem, as understood by Jonas, evidencing the confluence between the greatness and ambivalence

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<sup>3</sup> In addition to the ambivalence of the effects – which we will deal with in detail in this work, Jonas speaks of the inevitability of application, the new global dimensions in space and time, the break with anthropocentrism and the emergence of the metaphysical question, which places us before the question about the supreme threat of destruction of "being".

of modern technology, which becomes an apocalyptic potential, whose consequences can be disastrous both for the future of humanity and for extra-human nature. This scenario imposes on ethics a new way of acting as a response to the problem posed by technology, so that "ethics can contribute to the avoidance of evil", through responsible action, assumed by the heuristic of fear or "a prediction of the future consequences of human action" (Oliveira, 2014, p. 118).

It is important to understand that Jonasian ethics "does not divide technique into a good side and a bad side, nor does it guide us to avoid the possibility of evil simply by remaining on the side of good. Jonas is, in fact, arguing that even 'the good' use of the technique contains a threat" (Moretto, 2015, p. 117). However, Jonas warns us of the dangers through what he calls the fear heuristic, so that the risk of undesirable and unpredictable consequences does not occur unexpectedly. In this way, we realize that the threats resulting from technological progress impose the need for fear heuristics as a method, guiding us to analyze the risks and catastrophes associated with technical action and allowing us to act with caution. Thus, the way is opened for the construction of a new ethics focused on the future.

For Jonas, traditional ethics are unable to respond to these new challenges, so that the threats and dangers brought by technology impose the requirement of a new ethical imperative for current times, which, according to Jonas, is the principle of responsibility. To ground this new principle in the ethical theory of responsibility, Jonas develops a method called the "fear heuristic." This method is considered more appropriate to solve unforeseen problems, serving as a safe criterion to evaluate the dangers presented by the technique.

## THE HEURISTIC OF FEAR IN HANS JONAS' ETHICS OF RESPONSIBILITY

Hans Jonas, in his book *The Principle of Responsibility* (1979), proposed the fear heuristic as a kind of alternative to the utopias that guide technical knowledge: if utopias give preference to a positive projection of the future, this heuristic (as an imaginative exercise) does precisely the opposite, that is, it gives preference to the negative prognosis. In the preface to his work, Jonas introduced the term "fear heuristic", stressing that this feeling in the face of an imagined danger should awaken what he calls a "feeling of responsibility" and that it should guide us to anticipate catastrophes and lead us to give priority to the prevention of evil rather than the search for good (Jonas, 2006, p. 22). Jonas uses this concept as a prognosis that makes it possible to detect catastrophic damage that can occur at any time and that, if imagined, should motivate us to act ethically to prevent this imagined evil from happening.



In this way, the fear heuristic works as an instrument for prognosing the risk arising from technological power, anticipating moral issues and fundamental principles for technological action. In this way, fear becomes necessary and constitutes the "first obligation" of an ethics of responsibility (Jonas, 2006, p. 352). This is based on the formation of a fundamental ethical attitude, motivated by the desire to avoid the worst, that is, a prognosis of the risk of catastrophe caused by technological action.

On the basis of this negative projection, fear can be used to identify the new technological times and establish a new value — the value of responsibility — as the foundation of a new ethic, encouraging human beings to act responsibly (cf. Jonas, 1984, p. x). In this way, this feeling opens up new possibilities for people to act prudently in the face of the negative effects resulting from the current use of science and technology.

This is how the heuristic of fear comes to occupy a central place in the ethics of responsibility, based on the observation that "the promise of modern technology has become a threat" (Jonas, 2006, p. 21). It is worth noting that Jonas is not against the technique itself, that is, his position is not technophobic. The appeal to fear does not lead, moreover, to a quietist position, but defends the humanization of technology, proposing that man is not a slave to a power that threatens to eliminate him, but rather a guardian of the environment that must ensure the maintenance of a safe and balanced existence on Earth, respecting all forms of life. Its main concern is to protect human beings from catastrophic damage, not only in relation to their "physical survival", but also to the "human image" and the "integrity of their essence" (Jonas, 2006, p. 21). Thus, "the fear of catastrophe takes on an affirmative metaphysical meaning, which emerges from the possibility of the destruction of nature and human life" (Moreira, 2022, p. 53).

Jonas considers the fear heuristic a fundamental principle of the ethics of the future, because it is through it that human beings can act ethically to avoid the worst. Thus, fear can help us predict and express the desire to preserve both human and extrahuman nature. In this way, the fear heuristic can act as a voluntary brake to limit the unlimited power of science and technology, warning of the real danger of destruction that humanity currently faces. Jonas reminds us: the use of the fear heuristic is not only a guiding principle of future ethics to deal with evil, but also serves to mobilize feelings about the evils that may occur. Even if these evils are only imagined, based on experience, there is always the possibility that the worst will happen, and heuristics warn us to anticipate these risks. Fear, in this context, is not paralyzing, but an essential component of the ethics of responsibility, which seeks to avoid the worst in the future. Therefore, it can be considered both a beginning and an end of action, directing responsibility for the good of future generations.

Jonas points out that fear is, at the same time, "a doctrine [of ethical principles] in itself" (Jonas, 2006, p. 26), constituting the foundation of the ethics of responsibility, since it is through it that human beings can reflect and act to protect the destiny of humanity and nature in the future. Thus, fear becomes an ethic of the present, focused on the future. Although this ethic does not aim to create definitive norms for future generations, it does create the possibility that those to come can make responsible choices, promoting responsibility that precedes everything or "[...] to the collective interest" (Jonas, 2006, p. 174). Fear, therefore, functions as a call to responsibility for the future of humanity (Jonas, 2006, p. 353).

Jonas, therefore, applied the heuristic of fear to predict evil through imagination and the anticipation of catastrophes that may occur in the present and future. However, the fear heuristic does not refer only to a negative feeling, but to a fear "that is part of the responsibility; it is not the one who advises us not to act, but the one who invites us to act" (Jonas, 2006, p. 351). In other words, fear is a call to action, which alerts us and mobilizes our feelings to act responsibly. It has the power to awaken a sense of care, allowing us to detect and predict harmful consequences in the future. Its use as a method makes it possible to understand the prognosis of catastrophe risk for both human and extra-human nature.

## THE TASKS OF THE FEAR HEURISTIC

We can divide the tasks of the fear heuristic into two parts. The first consists of its role as a prognostic method of evil. As a method, it is not only a matter of analyzing the prognosis of the damage or negative effects of technological action in reality, but also of imagining such damage in order to avoid it, that is, "imagining in advance the horrible destruction in our imagination before it actually happens" (Jonas, 2006, p. 72). Through this imaginative attitude, Jonas seeks to sensitize us to the risk of destruction that could occur and compromise the survival of humanity on Earth, if our attitudes towards the use of technology are not responsible.

The second part of the task of the fear heuristic concerns its role as a moral guide, mobilizing the feeling of fear in our imagination to establish a moral duty in the formation of the ethics of responsibility. This duty aims to anticipate negative prognoses and, at the same time, prevent threats to authentic life in the future. In this context, "an imaginary casuistry must be applied" (Jonas, 2006, p. 30), in order to promote changes in human actions in the present and avoid negative consequences in the future. Hence the need for



responsibility not only to be imaginary or rational, but also a moral sentiment – in this case, a sentiment of fear (cf. Sganzerla, 2015, p. 181).

### Prognosis of the disease

The fear heuristic, as a method of seeking the good through prognosis or imagining evil, aims at responsibility for the future of humanity and nature. The author emphasizes evil or worse than good, as he is aware that people are more likely to perceive what they do not want rather than what they want, or to identify evil more easily than good, since the latter only acquires meaning in opposition to the former. Here a dialectical game between *malum* and *bonum* takes place. As Jonas states, "the recognition of the *malum* is infinitely easier than that of the *bonum*; it is more immediate, more urgent, much less exposed to differences of opinion" (Jonas, 2006, p. 27), because "evil imposes its mere presence on us, while good can remain discreetly there and remain unknown" (Jonas, 2006, p. 71). Often, "we understand more easily something we don't want than something we want", because what we reject is at stake (Jonas, 2006, pp. 75-76).

This dialectical movement emerges as an essential function to sustain the search for the good in the project of the ethical philosophy of the future. Feeling, when linked to responsibility, "is not just any feeling, that is, it is clothed in a heuristic of hope and always presents itself as a counterbalance game" (Nodari; Pacheco, 2014, p. 81). The dialectical game in the heuristic of fear, as a fundamental principle of metaphysics in the construction of the ethical concept of responsibility through negative projection, is crucial. Although, for Jonas, the fear heuristic is not the last word in the search for good, it is an extremely useful tool. Its potential should be fully explored as a prudent ethical guideline for the preservation of planet Earth in the face of possible present and future threats.

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prognoses and, at the same time, prevent threats to authentic life in the future. In this context, "an imaginary casuistry must be applied" (Jonas, 2006, p. 30), in order to promote changes in human actions in the present to avoid disastrous consequences in the future. From this necessity arises the need that responsibility be not only imaginary or rational, but also a moral sentiment — in this case, a sentiment of fear (cf. Sganzerla, 2015, p. 181).

The fear heuristic, as a method, should enable us to recognize evil in order to obtain good in the future, or to learn from evil in order to know good. Jonah justifies the virtue of bad prognostications over the good by stating that:

[...] This uncertainty, which threatens to render inoperative the ethical preconception of a responsibility for the future, which of course cannot be eliminated from the prophecy of evil, must itself be included in ethical theory and serve as a motive for a new principle, which in turn can function as a practical prescription. This prescription would affirm, roughly speaking, that it is necessary to give more attention to the prophecy of doom. (Jonas, 2006 p. 77)

So, we need evil prophecy because it can reveal dangers and threats to human life and nature. Therefore, it is necessary to seek knowledge based on the principle that "the knowledge of *the malum* allows us to understand the *bonum*, or that, with evil, good can arise" (Jonas, 2006, p. 352). In this way, it becomes possible to keep alive the duty of responsibility towards the future and, at the same time, cultivate a concern for the continuity of life on Earth. Even so, Jonas does not fail to reiterate these negative predictions to lead us to an emotional preparation that allows us to "recognize the evil of the terrible catastrophe that may affect humanity due to the advance of scientific and technological civilization" (Jonas, 2006, p. 28). He defends this negative view as a method of the ethics of responsibility and considers the ethics of fear essential, as fear is a "more spontaneous and inevitable reaction of the tendency to self-preservation innate to our nature" (Jonas, 2006, p. 72). The importance of this approach in mobilizing feeling can serve as a basis for justifying moral action, whether in the prevention of evil or in the promotion of good.

### Moral guidance

The fear heuristic "is not only a theoretical concept in the strict sense of the term, but above all a procedure" (Oliveira, 2014, p. 132) in the formulation of moral guidelines to guide the action of each individual or the collectivity. This law is in us, as humans; We are potential moral beings because we possess the capacity to be affected, and that is precisely why we can also be immoral beings. Thus, according to the author, the moral feeling itself demands that we truly recognize that our immoral actions in the present will lead to the destruction of the life of living beings. Armed with this feeling of responsibility, we

will be able to change our lifestyles, such as the way we produce, consume, and care for the environment as a whole. In other words, humans will only change the way they produce and consume when the fantasy of a future catastrophe becomes part of their everyday feelings. Only in this way can the feeling of responsibility arise to prevent the catastrophes of the future.

Jonas' argument is clear and convincingly affirms "respect (*Ehrfurcht*) for the integrity of the human essence and its natural environment" (Jonas, 2006, p. 202). The fact that the irresponsible use of modern technology threatens human existence and its environment is the fundamental reason for the fear heuristic as a temporal moral reference of ethics, oriented towards the preservation of humanity and its integrity. If we do not preserve it now with responsible action, this terrible danger will be inevitable sooner or later. Thus, "ethical reflection based on the idea of responsibility, considering this theory of the fear heuristic, is a guide that can be very useful for both individuals and the public in conducting responsible actions" (Tibaldeo, 2015, p. 234). Therefore, responsibility here is a moral obligation dealt with by Jonah to avoid evil. Fear, in turn, is a natural feeling of the human being, which must always be present and become a moral knowledge to save the future of humanity and nature.

With the feeling of fear, a moral value is generated that identifies what is the most urgent priority to prevent and face a foreseen situation, thus avoiding the risk of physical and psychological punishment in the future. This view, according to Jonas, is related to futurology, which can form knowledge about the present damage and the prognostic risks from a theoretical point of view. This futurology, Jonas calls the projection of the future or prognosis of evil, with the objective of arriving at an ethical principle that protects future interests. In his ethical theory, the author uses the term *fear heuristic*. Here, fear does not refer to the fear of a physical or psychic punishment, but rather to a scientific method or a principle of knowledge in the search for truth through the prognosis of possible negative results in the future. From this scientific knowledge, it becomes possible to diagnose the dangers and risks of evil, thus provoking a change in human action and in general conduct, so that threats or risks associated with technological advances and their impacts on future life are not ignored (cf. Oliveira, 2014, p. 130-1). This prognosis has direct effects on practical action in the present, as it can curb the unbridled use of modern technology. It is a predictive value, in which the ethics of responsibility bases its axiom and establishes its tasks to "visualize the long-term effects" (Jonas, 2006, p. 2006, p. 72) of modern technique, as well as to identify what must effectively be protected and preserved so that the

authenticity of the being is not put at risk. We cannot, therefore, risk the future interests of humanity's existence and extra-human nature.

## FEAR IN *LULIK* AS A TRADITIONAL MORAL FOUNDATION OF TIMOR

In this second part, before presenting the task of fear in *lulik* as a moral principle in the traditional ethical discourse of Timor, it is necessary to clarify the concept of *lulik*. Culturally, *lulik* represents a comprehensive formulation of all forms of knowledge, encompassing all dimensions of life—physical, psychological, economic, cultural, spiritual, health, and moral—and serving to guide human behavior based on the principle of fear and respect for the sacred. It is, therefore, a moral reflection based on respect for the taboo, being understood, in traditional thought, as a mechanism for protecting human beings and the environment in a sustainable way (cf. Marfai, 2013, p. 35).

Based on this understanding, it can be said that the *lulik* constitutes an order of values that responds to the issues that arise in traditional societies, namely in the socioeconomic, cultural, spiritual, health and moral spheres. Thus, the Timorese, in all their activities — from the inauguration of new lands, cultivation and harvesting, through health and illness issues, to interpersonal and spiritual relationships — perform *lulik* rites. From birth to death, these practices permeate daily life, so that *lulik* presents itself as a living spirituality of a people, who conduct their activities, both physical and spiritual, through attitudes based on fear and respect for *lulik* (sacred).

In the sense of the moral law, the *Lulik* It establishes prohibitions: it is forbidden to curse others, lie, steal, set fire to forests, damage nature and murder animals considered taboo and sacred. All destructive acts are seen as transgressions of the morality of the *Lulik*. Therefore, in this context, the *Lulik* It functions as a regulator of attitudes and behaviors in the relationships between human beings, between humans and nature, and between humans and the biosphere.

Fear is a "fundamental psychological reaction of the human being, playing an important role in determining human behavior [...] and serving as a mediator for the processes of judgment, evaluation and decision-making" (Astrain, 2018, p. 594). Fear manifests itself as restlessness and also as a feeling of apprehension in the face of an imaginary danger, as we saw in Jonas, a "negative prognosis of the future that opens up in new possibilities, more attentive to risk than to successes" (Oliveira, 2014, p. 129-30). As we have seen, linked to Jonas' theory, fear is an element of great importance in the ethical formation of responsibility. Therefore, fear gives us attention to act with prudence and caution in our actions.

From fear, human beings can build a basic defense and protection mechanism against threats that put their lives in danger (cf. Wielyanida, 2013). Fear can often help human beings to increase their readiness to face various challenges and dangerous situations that could threaten their own life or the lives of others (cf. Siswadigede, 2022, p. 21). In *lulik*, fear is associated with the punishment or punishment that would come from the cosmic deity. It is believed that there will be a direct and inevitable punishment for the offender or his family due to the transgression committed against the *lulik*. This punishment may come from God or from the spirits of nature. This belief gave the *lulik* a key role in the moral education of the Timorese, functioning as a brake to prevent evil actions against others and the destruction of nature, especially the sacred sites designated by *the lulik*. When the Timorese "hear the word '*lulik*', they immediately stay in their place for a moment, pay all their attention, with respect and fear, which leads them to obey without hesitation" (Trindade, 2011, p. 1). For Jonas, this fear is "fear and trembling", that is, human nature and the existential condition of man (cf. Jonas, 2006, p. p. 352).

The basis of this fear lies in the belief in the creation myth, according to which nature and human beings are products of the divine will. God rules the universe and has the power to punish those who do not respect social rules and nature in the spaces of *the lulik*. Moreover, certain elements of nature are believed to be the dwelling place of divine spirits, who exert influence over cosmic phenomena and regulate the social order and the universe (cf. Durkheim, 1976, p. 273). Traditionally, Timorese society believes that spirits or "gods" are more powerful, possessing immense supernatural power and controlling or influencing the forces of nature, such as wind, rain and fertility (cf. Eller, 2018, p. 65). These spirits are responsible for establishing moral rules and punishing those who do not comply with them.

The fear of punishment makes people obey the rules of *lulik*, because disobedience would bring disasters in the future life, either through cosmic punishments or punishments imposed by gods or spirits (cf. Braz T., 2014, p. 35). It is also believed that this punishment may occur in the future for those who violate the rules of *lulik*, manifesting itself through serious illness or even death (cf. Durkheim, 1976, p. 302). Psychologically, this fear makes people respect and obey *lulik*. Therefore, fear of punishment is a human existential element that has emerged to warn people of dangers that may affect them or affect others in the future. The feeling of fear, in this context, constitutes a moral foundation within the ethics of *lulik*, educating people to always be aware of the threats of danger that may arise. Thus, fear in *lulik* is a human existential feeling that acts as a preventive protection against future punishments arising from disobedience to the rules of *lulik*.

Thus, the fear of punishment in *the lulik* and the fear heuristic, as a method and foundation of knowledge, differ in terms and applications, but share the same objective: protection and removal from risks and dangers. In practice, both are part of an attempt to provide moral guidance for human actions, either through the feeling of psychological fear (*lulik*) or through ethical knowledge. Fear in *lulik* has the function of promoting a moral attitude of respect, while the purpose of the fear heuristic is to modify the human being's perception of danger, in order to avoid everything that may put him at risk in the future. Through this principle, it becomes possible to avoid avoidable risks and establish a moral conscience based on responsibility. Thus, fear emerges as a more effective substitute for virtue and wisdom in circumstances in which we perceive imminent risks. Hans Jonas believes that fear is also essential to help us make decisions in situations whose long-term consequences.

*Lulik* is a form of traditional morality that recognizes the sacredness of nature. Therefore, nature must be respected, protected and preserved collectively so that the balance of the ecosystem is maintained. While Jonas's ethical theory of responsibility can be applied to all entities, both personal and collective, the value of local wisdom continues to play a key role in maintaining environmental ethics. Here, we can understand that collective responsibility is not an exclusive concept of Jonas, as the concern with the survival of nature is already present in the values of local wisdom. Just as the collective ownership of an area or region has positive implications for the care and conservation of nature (cf. Jonas, 2006, p. 39), Jonas's ethics of responsibility is not intended to replace traditional values or local wisdom, but rather to reinforce the need for environmental protection in a global context.

One of the main contributions of the ethics of responsibility to *lulik* is the stimulus to the development and improvement of care for nature, so as not to put the existence of humanity and other living beings at risk. This can occur, as we know, through the concept of "comparative futurology" and, even more, the "heuristics of fear" (Jonas, 2006, p. 71), both central to Jonas' ethical proposal and also to *Lulik's*, as they induce an attitude of respect and responsibility. Through a responsible attitude, it is possible to minimize the negative impacts of the advancement of new technologies, which foster a consumerist mentality and aggravate the damage caused to nature. What was once a local problem has become a global issue. Even so, *lulik*, as moral knowledge, continues to play an important role in preserving the environment. This occurs through the practice of values such as the use of renewable energies, the reduction of polluting gas emissions, and efficient waste



management. These actions contribute both to the protection of the environment and to the mitigation of the impacts of human activities.

## FEAR AS AN ASPECT OF RESPONSIBILITY AND THE TASK OF PRESERVING THE HUMAN FUTURE AND NATURE

As we have seen, fear plays a central role both in the ethics of responsibility proposed by Jonas and in the Timorese tradition of *lulik*. It counters the naïve, blind and dangerous optimism that guides the evolution of civilization, marked by the application of science and technology in various areas and various fields, facilitating individual or group interaction to achieve mutual well-being. In addition, fear protects us from the negative effects that are included in this process, reducing human respect and responsibility for the environment, culture, and local traditions. Fear is, therefore, a mechanism of utility, an instrument capable of helping us to preserve the right of extra-human nature.

Currently, natural resource management has been used primarily as a tool to generate financial and economic profits for investors, while the needs and rights of nature are not the primary concern. In fact, the practice of science and technology does not consider this issue, just as it ignores the affective connection between nature and human beings. Modernity, driven by technological advancement, has led to the degradation of natural resources, characterized by a decline in the quality and quantity of land, water, air, soil, and other essential elements, resulting in crises and environmental problems. These changes occur due to irresponsible human activities, which do not contribute to the preservation and quality of the environment. Therefore, it is inevitable that the exploitation of nature will continue to be linked to development. However, environmental ethics — an alternative to guarantee the rights of the environment, natural resources and ecosystems — has not been considered a priority in the development processes, which occur in all sectors and aspects of life. Development is fundamental, but if it does not take into account the long-term negative effects, it can generate disasters for future generations. After all, everything the current generation does will directly impact the next ones. Thus, regardless of development planning, whether in the short or long term, the most important aspect to be considered is the responsibility in the management of natural resources and the environment, in a balanced and sustainable way.

The sustainability of the ecosystem begins to be threatened when all the needs of human life are transformed into merely material demands that must be met, disregarding spiritual principles and moral responsibility with nature in development. As a result, ecosystems are threatened, and the preservation of nature and the environment is no

longer prioritized. The aspect of spiritualism in culture has been dissipating, while the responsibility to conserve and manage nature is being neglected in favor of the relentless pursuit of material gain. This phenomenon of environmental crisis must be seen not only as an ecological problem, but also as an ethical and moral question, linked to spirituality (cf. Marfai, 2013, p. 7).

## FINAL CONSIDERATIONS

The consequences "of science and technology, in a largely globalized society, would have universal reach, since almost the entire planet would already be subject to technological interventions, bringing environmental risks and catastrophes" (Alencastro; Moser, 2014, p. 3). Faced with this situation, Hans Jonas' ideas are fundamental and should be applied in order to identify their possible contributions, especially in relation to the traditional ethical discourses of *the lulik*, in order to establish a standard of behavior for people who will face the current (and future) risks and dangers arising from the environmental crisis. In addition, it seeks to contribute to the development of strategies aimed at environmental preservation and the protection of human nature, as well as to environmental ethical education. This education should be directed to preparing for decision-making and facing the serious socio-environmental problems that seem to anticipate an increasingly uncertain future" (Alencastro; Moser, 2014, p. 4).

As we have seen, technology represents a problem for ethics. Its grandeur and ambivalence become dangerous and challenging for environmental ethics. In the face of the technique, there is no certainty about the results, nor moral control over its effects. Modern technology hides the risks and threats inherent to technical practice, and its unlimited will to power has serious ethical implications, revealing its dark face, as "the power of technical action is recognized, between the correct and wrong use of the same capacity" (Jonas, 2013, p. 30). The task of ethics must be to distinguish between the good and bad use of technique. But what criteria does ethics use to establish this distinction clearly and precisely? In practice, "any use that is made can always lead to bad effects, inseparable from the good; thus, even when the technique is used for good, its effects can result in disastrous consequences" (Moretto, 2015, p. 114). Jonasian ethics does not divide technique between a good side and a bad side; on the contrary, he argues that even the "good" use of the technique carries with it disastrous threats.

This scenario proposes to ethics a new way of acting as a response to the problem posed by technology, so that "ethics can contribute to the avoidance of evil", through responsible action, assumed by the heuristic of fear, or "a prediction of the future

consequences of human action" (Oliveira, 2014, p. 118). Thus, it seeks to prevent undesirable and unpredictable consequences from occurring unexpectedly. Even if these evils are only imagined, experience shows that there is always the possibility that the worst will happen, and heuristics warn us to anticipate these risks. By using imagination to predict these long-term consequences, even if the catastrophe is not yet real in the present, we can and should conceive of it. But how can we imagine a catastrophe that has not yet happened or that will occur in the future? In this way, we understand that this fear becomes an ethic of the present, focused on the future. It can be considered both a beginning and an end of action, directing responsibility for the good of future generations. While Jonah's ethic does not aim to create definitive norms for the futures of human beings, it does create the possibility that future generations can make responsible choices, promoting responsibility for the collective interest. Fear, in this context, serves as a call to take responsibility for the future of humanity.

Meanwhile, fear in *the lulik* has an existential and spiritual character in human nature, exercising the power to order and regulate human attitudes through values such as morals and ethics. Thus, fear in *the lulik* constitutes a moral order that responds to emerging issues in traditional societies, such as socioeconomic, cultural, and spiritual challenges. Its main task is to protect ecosystems, which are increasingly threatened by the fact that the preservation of nature and the environment is not prioritized in the current development model. Therefore, it is not enough for fear in the *lulik* and ethics to only debate about what is good or right in the present. The most important thing, both for *lulik* and for ethics, is to take responsibility for the effects of our present actions on the future, ensuring the continuity of human existence and all forms of life in the biosphere. The quality of life in the future will be determined by the quality of the environment in the present. The current environmental condition defines the possibilities of a dignified life for future generations.

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