

Sociedade de risco e sustentabilidade: de Ulrich Beck à contemporânea crise ambiental, de consumo e a importância da inovação tecnológica

Risk society and sustainability: from Ulrich Beck to the contemporary environmental and consumer crisis and the importance of technological innovation

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Resumo: objetiva-se realizar uma abordagem crítica da obra “Sociedade de Risco: rumo a uma outra modernidade” de Ulrich Beck em perspectiva das suas lições para a contemporânea crise socioambiental e a inovação tecnológica como instrumento da busca pela sustentabilidade. A partir da Teoria do Risco, do modelo capitalista e as suas consequências como a crise ambiental e de consumo, mesmo após anos de desenvolvimento socioeconômico e na seara da ciência, as questões tratadas por Ulrich Beck apresentam-se hodiernas e demandam soluções como inovação tecnológica, voltada para a sustentabilidade e de consciência ambiental.

Palavras-chave: sociedade de risco; sustentabilidade; crise ambiental; consumo; inovação tecnológica.

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Abstract: The objective is to critically approach the work “Risk Society: towards another modernity” by Ulrich Beck in the perspective of its lessons for the contemporary socio-environmental crisis and technological innovation as an instrument in the search for sustainability. Based on the Theory of Risk, the capitalist model and its consequences such as the environmental and consumption crisis, even after years of socio-economic development and in the field of science, the issues addressed by Ulrich Beck present themselves today and demand solutions such as technological innovation, focused on sustainability and environmental awareness.

Keywords: risk society; sustainability; environmental crisis; consumption; technological innovation.

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Introduction

In a social context where concern for the environment and sustainability have become paramount given the disastrous consequences of our society as a whole, which have resulted in environmental degradation and the uncontrolled and catastrophic use of resources, examining the arguments in this precious book allows us to draw a chronological parallel between the time of its publication (1986) and the current environmental challenges for modern society, as well as the important role of innovation.

As a consequence of a sick and myopic society, even almost 35 years after the publication of the book "Risk Society: Towards a New Modernity"³ by Ulrich Beck, we face the same problems today, and the underlying factors still exist, and, even worse, they are exacerbated by population growth, increasing consumption and the depletion of natural resources. In the author's words:

Modernization itself has led to consequences that, today, jeopardize the basic living conditions achieved through this same process.

[...] a civilization that threatens itself, in which the incessant production of wealth is accompanied by an equally incessant social production of globalized risks that affect all nations equally, and without distinction (BECK: 2011; p. 129).

Ulrich Beck (1944 – 2015) is one of the fathers of the "Theory of Risk Society," one of the sociological theories in the 20th century that has had the greatest impact on this area of knowledge, especially in the social, legal and engineering sciences. He has raised great concern among theorists with the emergence of his

³ Originally published in Germany in 1986 under the title "Risikogesellschaft: Auf dem Weg in eine andere Moderne." In Brazil, the book was published 24 years later, in 2010, with the title "Sociedade de Risco: rumo a uma outra modernidade." Ulrich Beck's book has become something of a contemporary classic in Sociology.

new perspective aimed at the conjunction of essential factors for political decision-making by respective legitimate representatives, as well as by the population in general.

This dynamic is justified as the theory presented in the book presents a series of avant-garde (and, above all, worrisome) connotations where the interpretative conjunction of its basic elements (interpretation of the problem from a multidisciplinary perspective, involving different areas of knowledge) allows us to arrive at a description of the way society is organized in response to risk.

Risk, in the author's view, does not consist of a catastrophe, but in the possibility of envisioning the event, anticipating it so that the result does not materialize. However, for this to occur, this same society must see this in perspective, as only concrete and effectively prophylactic political actions will be able to transform the future, without forgetting the crucial role played by its ability to reinvent itself, often through the tools of its own technological innovation, conceived in the process of societal development.

Thus, this rather worrying perception when evaluating the risks assumed by our current consumer society tends to also evolve into another bias, in which the awareness of global risk, through disruptive politics, leads citizens to other thoughts: the perspective of new spaces for alternative futures, fruit of an open social context, to morally and politically discuss these problems. And, in the end, achieve a culture in which responsibility is truly globalized, where all of this umbilically interconnects the capacity of this collective conscious to innovate.

Ulrich Beck hopes that this same risk society is also a great social opportunity because, precisely to the detriment of its own risks, we see the history of cultural, religious and systemic self-sufficiency of many States give way, often forcing people who lack any affinity at all to sit at the same table to find solutions and common goals.

As the global population becomes more aware of global risks and understands that these connect people to each other, regardless of where they come from, a new vision of society emerges in which people better understand their space individually as citizens.

With the transformation of modern society, we see economic development and improved quality of life. However, everything has been done “in the name of progress” without evaluating the results and, above all, the consequences. Such a scenario involves a series of risks for a society that, until now, were unimaginable.

Risk situations, such as war, terrorism, financial capital volatility and unemployment arising from new means of production (automation of production processes), as well as the environmental degradation resulting from excessive economic development, are factors that have contributed to a new understanding of the protection of human rights.

The concept of risk society expresses the accumulation of risks – ecological, financial, military, terrorist, biochemical, informational – that have an overwhelming presence in our world today (BECK: 2011; p. 361).

Thus, from the perspective of greater protection for human rights, the environmental risks that modern society faces have both a diffused and trans-individual dimension in the evolutionary line of thought. This goes through the protection of such rights in the modern era until it reaches the current model supporting the fundamental right to a balanced and sustainable environment.

According to Sarlet and Fensterseifer (2010; p. 13), during the 20th century, various constitutions legitimized the right to a balanced or healthy environment as a fundamental human right, recognizing the vital importance of environmental quality for human development with dignity:

Environmental quality must, therefore, be recognized as an integral element of the normative content of the human dignity's principle, especially because of its indispensability to the preservation and existence of life and a quality life, being fundamental to all human potential in a quadrant of complete existential well-being.

They continue:

The doctrinal concern to conceptualize and define, in normative terms, a minimum standard in environmental terms for the attainment of human dignity is justified by the essential importance that environmental quality represents for the development of human life in all its potential.

Indeed, the quality of the environment, which necessarily requires a minimum level of protection, stems from long-term responsibility, that is, from solidarity as a "broad dimension of the dignity of life and the human person, as existential effects of the protection attributed to natural resources" (AYALA: 2011; p. 176).

Thus, recognizing and having a true awareness of global risks and understanding each citizen's individual space, as a social opportunity, is an urgent requirement to understand this dimension, in other words, human development in its fullness.

This minimum level of environmental quality stems from the very basic needs inherent to human beings, not only to survive minimally, but especially to have a dignified life in all aspects and, consequently, endowed with human dignity, of life in general.

Central in Beck's work (1997, p. 11-15) is the issue of environmental security. It is presented as a central issue in contemporary discussions, given its direct relationship with the effective protection of citizens facing potential violations of dignity and fundamental rights as a result of the environmental impacts caused by the risk society.

The Rule of Law must, by itself, be able to promote the protection of human dignity in the face of new environmental risks generated by contemporary society, ensuring the preservation of life with environmental quality and, above all, anticipating future implications of adopted measures⁴, where the State of Environmental Law is understood as the representation for society's new fundamental demands (SARLET: 2010; p. 17).

Thus, Ulrich Beck's vision is fully applicable in today's social context, as, aligned with the position of Sarlet and Fensterseifer, it raises to the highest level the real awareness of global risks and the disruptive perspective of technological innovation to solve the problems faced by society.

Therefore, social opportunity is part of a context marked by alternations in society, by profound changes in the international community, such as mass society, technological development and unstable economic and social relations, among other changes arising from the new contemporary collective. Thus, creating the need for its effective preservation, where every human being comes to have solidarity rights⁵.

Given the risks in numerous spheres, which include not only global impacts such as climate change, global economic crises, terrorism and pandemics (such as the unprecedented COVID-19 pandemic that is currently devastating the world), but also the basic circumstances of each population with their local needs for subsistence and survival, people can see themselves as part of a much larger and necessary whole to satisfy the fundamental, societal needs.

The protection of human rights through solidarity, as an extended dimension of the dignity of life and of the human

4 According to Ingo Wolfgang Sarlet and Tiago Fensterseifer, (2017; p. 419): "it is not that scientific knowledge related to the known and potential damage caused by electromagnetic radiation is something new. What is new is precisely the significant increase in people's exposure to such radiation, which is especially noticeable with regard to the use of mobile phones."

5 Bobbio (1992; p. 6) explains that: "Alongside the social rights that were called second generation rights, the so-called third generation rights have emerged today, which constitute a category, to tell the truth, still exceedingly heterogeneous and vague, which prevents us from understanding what it actually is. The most important of them is the demand for ecological movements: the right to live in an unpolluted environment."

person (from the perspective of the quality of the environment), appears as an important intersection between the concerns Ulrich Beck expresses in his work and the contemporary vision of effective means for solving environmental problems.

Thus, the awareness of the origins, the consequences and the role of environmental degradation at the core of modern society has become fundamental to confront the difficulties that stem from the process of development.

Understanding what a “risk society” is in Beck’s work allows us to use it as a starting point and a philosophical basis to understand the contemporary socio-environmental crisis stemming from the constant risk inherent in industrial processes. On the other hand, technological innovation, essential in this context of development, is also conceived as one of the alternatives to achieve sustainability in production and consumer society today.

I. Ulrich Beck’S theory of risk

Without any intention of exhausting this vast and interesting topic, the Theory of Risk developed by German sociologist Ulrich Beck, published while the world was witnessing the turmoil of the greatest nuclear accident in history in Chernobyl, Ukraine (April 26, 1986), can be seen as a warning to consumer society.

The work presents a worrying scenario: a society that lives in constant risk, which comes from its own turpitude, resulting from a lack of concern for the environment, excessive globalization, lack of control and, mainly, a lack of any concern for the survival of species and the maintenance of an ecologically balanced environment, and at the same time, making immeasurable use of natural resources and depleting them, without any regard for future generations and their quality of life and, especially, sustainability.

Some coincidences are the result of chance. History shows us this all the time. However, the concurrence between the publication of this important work, which offers a warning to all,

and the occurrence of a nuclear accident that decimated many lives⁶ and rendered so many others invalid, cannot be seen as a mere historical accident.

It is, in fact, a warning to society about the existing hardships that, many times, are the result of the neglect and shortsightedness of those who insist on thinking that resources, in general, are infinite. Every action generates a reaction – explains Physics, as a branch of knowledge –, being worse when this reaction/consequence in response to degradation does not allow for the return to the *"status quo ante bellum."*

This is one of the essential points for understanding the Theory of Risk and the conditions experienced by society as it confronts global risks: the loss of control by society as it progresses in its actions of environmental degradation and depletion of natural resources, intrinsic factors in the globalization process where risks are taken (often unknowingly) in a global manner. In the author's view, the risks he describes do not respect territorial boundaries, nor the cultural aspects of peoples, nor political-economic systems of power.

This makes us think that there are no moral coincidences in the message that society's systematic consumption and depletion of natural resources, increased significantly since the industrial revolution, has always been delivering (even if sometimes between the lines), thus not allowing humans to be surprised or even ignorant regarding the intrinsic risks involved in the destruction of nature.

Thus, it can be said that, over the years, the risks caused by consumer society have become greater in form and dimension, which, according to Ulrich Beck, originated in industrial society, going through the post-industrial period and, today, becoming the risk society.

⁶ According to a study by the United Nations (UN), the nuclear accident that occurred in Chernobyl on April 26, 1986 caused 31 deaths (directly), 15 deaths (indirectly, until 2011) and more than 6,000 cases of thyroid cancer, more than 4,000 long-term fatalities in the Soviet Union, in addition to between 9,000 and 16,000 deaths in Europe due to contamination. Source: «Special Report: Counting the dead». Nature. 440 (7087): 982-983. April 1, 2006.

The aggravation of the situation (risk) highlights the existence of very worrisome factors, as scientific knowledge can no longer control the risks it has helped to create. It is also uncertain of the effects its discoveries can have on human health and the environment.

On the other hand, when approaching Ulrich Beck's "Risk Society: Towards a New Modernity" with a view to his lessons for the contemporary socio-environmental crisis, it is clear that technological innovation presents itself as an important instrument in the quest for sustainability.

Based on the Theory of Risk, the capitalist model and its consequences, such as the environmental and consumption crises, even after years of socio-economic and scientific development, the questions raised by Ulrich Beck are relevant today. They demand solutions, which, quite often, are found in innovation itself (as a product of this same risk society), such as the tools to achieve sustainability and environmental awareness.

II. So, after all, what is the risk society?

First, it will help us to look for the simplest definition of what risk society is for Beck: "a systematic way of dealing with dangers and insecurities induced and introduced by modernization itself" (BECK; 2011; p. 21).

Thus, in light of Ulrich Beck's sociological theory, it is a term used to describe the way in which today's society is organized in response to risk, with the origins and consequences of environmental degradation as central elements of modern society.

When analyzed by the author, contemporary society presents itself, to an extent, beyond the control of social institutions in that the aspects considered negative, or the "risks" arising from development, greatly outweigh the positive points. This results in a culture of risk and, consequently, the

knowledge to allow situations of this nature to be resolved through science and, especially, actions that are self-protective in dangerous situations.

In this context, technological innovation, the result of development and progress based on the science of this same social context, can serve to promote sustainability and environmental awareness, even if uncertainty plays an important role in the conception of a risk society.

Thus, this notion of society involves the accumulation of risks of the most diverse nature (ecological, financial, military, terrorist, biochemical, informational, etc.). In short, everything that presents itself daily as risk to a neoliberal society, regardless of whether they are rich or poor countries, western or eastern, to the extent that risk society, effectively, is one characterized by equality among all regarding the potential risks.

Indeed, the definition of risk cannot be related to natural and catastrophic events, including, in this discussion, elements of:

(...) social, economic and political collateral effects of these side effects: market losses, capital depreciation, bureaucratic control of business decisions, the opening up of new markets, astronomical costs, legal proceedings, loss of prestige (BECK: 2011; p. 28).

For Anthony Giddens (2002; p. 1), another important author on this subject, the term “risk,” originating from the Latin word *risco* (initially sailors’ jargon to refer to unknown waters), represents a society that, as time passes, is increasingly absorbed with the notion of risk to the extent that it worries about its future and security.

According to modern conceptions of the term, there are lines of thought that understand “risk” as something good or bad, though it is a neutral concept, which translates the probability of something occurring, combined with the magnitude of associa-

ted losses or gains⁷. Or, it can even be interpreted as a cultural response to a violation “[...] it can be understood as the cultural response to a transgression: the result of breaking a taboo, of crossing a certain line, of committing a sin” (LUPTON: 1999; p. 45). The essence of the concept is simple however: it is impossible to exclude any and all attempts to define the concept of risk.

Bear in mind that, for Ulrich Beck, technology and industrial development created these global risks. According to Beck (2011; p. 28), today’s risks and dangers differ fundamentally from those of the Middle Ages: “due to the global scale of threats, and their modern causes. These are risks of modernization. It is a global product of the industrial progress machinery and they are systematically increased with its further development.”

Moreover, he continues peremptorily, defining three possible types of global risk: risk of global destruction that is the result of industrial development (e.g., holes in the ozone layer and the greenhouse effect); poverty-related risks (e.g., housing, food and energy); and risks arising from highly destructive “weapons,” whether nuclear, biological or chemical.

Anthony Giddens (2002) diverges from Ulrich Beck when he offers a slightly different definition of risk society, which he sees as “a society increasingly concerned with the future (and also with security), which generates the notion of risk” (GIDDENS *in* LUPTON, 1999, p. 74), while the German sociologist defines it as “a systematic way of dealing with the dangers and insecurities induced and introduced by modernization itself” (BECK: 2011; p. 21).

Thus, it is understood that a risk society is characterized by the way the society deals with the dangers and insecurities, the

⁷ “The notion of risk, as understood in the insurance business, is associated with notions of opportunity and probability, on the one hand, and loss and damage, on the other. These two groups of concepts come together in the concept of accident, against which each one tries to protect himself: ‘The general model of insurance is a game of chance: a risk, an accident appears as a number on the roulette wheel, a card drawn from the deck. With insurance, the game becomes a symbol of the world’ (EWALD, 1991, p. 199). From this perspective, ‘risk’ is a neutral concept, translating the probability of something occurring, combined with the magnitude of associated gains and losses.” (LUPTON, 1999, p. 8).

fruits of the system itself, that are the results of the creation process of contemporary society.

Another characteristic that allows us to better understand what a risk society is involves the necessary paradigm shift when analyzing risk, because today there is no way to think about risk as an individual, after all, an accurate understanding can only come from a global and collective vision.

Consequently, analyzing risks involves using tools provided by modernity, especially the scientific knowledge and technology developed by contemporary society. However, even with all the countless advances, these have not been sufficient to address, in the same proportion, the problems they have created.

In this context, changes and transformations occur on another level, from a world considered more stable and traditional to a more modern one undergoing great transformations, now following the post-modern model. Today, almost 35 years since the publication of his work, there is no doubt that risk society is still framed by Ulrich Beck's initial concept, but in a much more complex manner.

The insecurity is such that we live in a liquid society with the real risk of drowning. Postmodernity has brought to light the political dichotomy between nationalist conceptions at the expense of others that focus on neoliberalism as a form of government, leading to what has been termed reflexive modernity.

In summary: the modernization processes that would promote progress had the unintended effect of creating artificial risks, as they were created by humans themselves. Hence emerges the idea that contemporary modernity has become reflexive as it confronts the mechanisms created by Western modernization, and as it becomes aware of these risks, they become a problem.

Thus, going off the hypothesis of reflexive modernization, Beck⁸ proposed understanding contemporary modernity by considering multidisciplinary aspects and without losing sight of the sociological perspective, dealing with the issue with other authors⁹ and considering the importance of transformations in the intimacy of society, which led to a global, politicized culture, where entities effectively understand the multiplicity of social roles.

From the 1990s forward, this concept of contemporary society and its reflexive construction led to the concept of risk society. This is based on the duality between the expectations of postmodern life, with the benefits derived from different areas of knowledge, especially the research and progress that culminated in greater life expectancy of the population in general and, at the same time, antagonistically, it is also based on uncertainties such as potential nuclear wars and other situations that represent a cataclysmic risk for the human species.

Paraphrasing Thomas Hobbes (2003) far from any analytical or critical approach to his representative works so that it does not get lost in the scope of the present, his phrase “man is the wolf of man” applies in the context of reflexive society, though, obviously, the aforementioned author could not have foreseen the hardships of contemporary society¹⁰.

Therefore, the risk becomes part of society and materializes through this duality, fruits of the same tree, of technological development.

With respect to solving contemporary problems, technological innovation was fundamental for the industrialization process, which, in turn, initiated the process that has brought us to the current environmental crisis. It is also possible to affirm

8 In his work entitled “Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order,” Beck describes both what he calls industrial society and a new form of social organization that emerges after the fall of the Berlin Wall (1989) – considered a symbolic date marking the end of an era and the emergence of a new social form. (BECK, 1997).

9 Ulrich Beck, Anthony Giddens and Scott Lash use the term “reflexive modernity” to characterize postmodern or contemporary society.

10 For the author of “Leviathan,” humans are naturally selfish and evil, and it is up to society to overcome this – with something called the “Social Contract” in: HOBBS, Thomas. *Leviatã*. (Translation by João Paulo Monteiro, Maria Beatriz Nizza da Silva and Cláudia Berliner.) 1. ed. São Paulo: Martins Fontes, 2003.

that, at the same time, it has become essential precisely for the solution to the problems faced by the current risk society.

Similarly, the proposal to solve current environmental problems and, in general, those of the (contemporary) risk society derives fundamentally from the innovation process itself. Based on social awareness, it allows for not just development, but development in a sustainable and balanced manner with the adoption of innovative technologies (e.g., electric cars, clean energy, biodegradable products and recycling, among countless other possibilities).

With risk becoming part of society, an important dilemma emerges: predicting what will happen given all the substantial changes that have led to an unforeseen rearrangement between risks and opportunities, and ensuring the optimal use of this hard-earned knowledge for sustainable development.

The aforementioned duality presents itself again: technological innovation, taking more shape and form, mainly from the industrial revolution when there was still no concern in society for the disastrous consequences of uncontrolled development, contributing greatly to the worsening of the current production and consumption crisis. We can note that this same innovation begins to play a crucial role in the pursuit of sustainability in this process, as observed by Beck.

For some authors, such as Fensterseifer and Sarlet (2010) and John Elkington (2001), aligned with eminent British sociologist Anthony Giddens (2002), there emerges a “third way” embodied in a proposal that seeks good elements both in the sphere of liberation and the proposal for conciliation to, thus, achieve a better political, social and intercultural coexistence, that is, it starts from the idea of convergence of ideological thoughts, always and necessarily based on mutual respect.

Finally, even in the face of divergent doctrinal interpretations of some aspects, the authors converge on the notion that

the problems caused by development may find solutions in the developmental process itself, with the emergence of new technologies.

Thus, according to Rifkin,¹¹ new forms of communication within complex communities (risk society) end up becoming organization and management mechanisms with new technologies, that is, the development process that generated the risks can provide the solutions:

Communication technology is the nervous system that oversees, coordinates and manages the economic organism, and energy is the blood that circulates through the political body, providing the food to convert natural wealth into goods and services that keep the economy alive and growing. The infrastructure is similar to a living system that brings together an increasing number of people in more complex economic and social relationships (RIFKIN: 2012; p. 54).

So, the very process of modernization, created by this risk society and the result and consequence of uncertainty and, especially, the concern with issues that are evidently essential to the quality of subsistence of the human species, led to this same social collectivity, underpinned by security and the expectation of a sustainable future, to find tools that can mitigate global social risks.

This new global cosmopolitan reality, full of uncertainties that express the accumulation of risks that cut across the self-sufficiency of cultures, languages, religions and systems, leads to the necessary alignment of collective interests. With this, the needs of this cosmopolitan reality are recognized and, consequently, the obligation to think and act in an interdependent manner.

¹¹ The author, a social and economic theorist, defends the need for a new economic narrative where the plot stems from the understanding that the great economic transformations of history occur with the convergence of new communication technologies and new energy production and distribution systems.

Similarly, the author's proposal evidently does not present itself as the solution to all the problems of this society infused with many kinds of risks, but as a point of reflection between reality and what is desired for future generations. And the tools of innovative technology resulting from scientific progress in this same risk society play a crucial role in overcoming (or even mitigating) the consequences of global risk, especially in the environment.

Thus, we can say that a risk society is the way in which citizens confront the dangers and insecurities of modernity, the consequences of the very system of contemporary society consolidation, and obtain, from the process itself, the instruments to strive for sustainability through technological development and innovation.

For this, one must analyze the significance of the environmental damage inherent in the global risk society and, as defended by the author, observe its influence on the legal and institutional infrastructure, evidencing the principal concern of the State's duty to control risk, knowing that the greater the scientific development, the greater the risk to society and the environment, on a scale that goes from the individual to the global community.

III. Reflexive modernity in a liquid society

Based on a concept arising from Ulrich Beck's theories, contemporary society can be conceptualized as one that organizes itself in the face of risks, uncertainties, dangers and insecurities arising from the modernization process itself.

The author's analysis denotes a reading that starts from different historical moments up to the present day and the post-modern society, much more complex and multifaceted, expanding our understanding of the term "risk" to different dimensions.

The present work seeks to externalize the two main focuses of contemporary society, separating them into two distinct moments.

The first, focused on industrial modernity, with characteristics of a state and nationalized society, endowed with collective structures, employment conditions and favorable opportunities, accelerated industrial growth with a substantial increase in the use of natural resources (though with few visible consequences), mainly guided by revolutionary political and industrial processes from the 18th century onwards.

And, the second, focused exclusively on reflexive modernity, which arises at the end of the second millennium. Given its importance for the theories of U. Beck and A. Giddens, the exact understanding of the expression “reflexive modernity” leads us to an understanding, in an oblique manner, of the risks inherent to this society that supersede individual realities and national and temporal borders:

Reflexive modernization implies the possibility of creative (self) destruction for an entire era: that of industrial society. The subject of this creative destruction is not the revolution, not the crisis, but the victory of Western modernization (BECK: 1997; p. 10).

Thus, the adoption of the correlated term to “reflexivity” emerges, in principle, from the fact that the premises, contradictions and mistakes of the previous phase should be the object of a wider reflection, with the future perspective of building a society that is more coherent and that ensures in its public policies the perpetuation of the species with quality of life, and all of this as a consequence of a broader dialectical process of construction.

As previously stated, postmodernity has brought to light the political dichotomy between nationalist conceptions, at the expense of others, that focus on neoliberalism as a form of government, leading them to what is termed reflexive modernity. These processes of modernization, initially aimed at promoting progress, ended up creating unintentional artificial risks, the result of man’s own actions and, as a result, contemporary modernity has become reflexive, acquiring greater social awareness of the

mechanisms created by the western evolutionary process, and realizing the real dimensions of the risks it created.

Likewise, it is evident that the risks arise from different causes, with social inequality, greatly accentuated by the accelerated process of globalization, as one of the main generators of risk in the “risk society.”

Thus, the term proposed by Giddens, Beck and Lash in the book *Reflexive Modernization* underscores the changes in the current world and their possible consequences (good or bad), through the promotion of active criticism and dialectics, which involves a process of individualization and the rupture of traditional paradigms.

According to these authors, we must remember that human knowledge is also reflexive.

The social and natural worlds closely correlate with the stage of knowledge of society and, thus, the original idea of ecological crisis arises, since it is a field where the unpredictability of facts and consequences is more clearly seen, in addition to a real understanding of the dimensions of risks. That is, risk, unpredictability and crisis are elements of knowledge that have become essential in contemporary culture. As a result of this hermeneutic and interpretive process, reflexive sensibility arises, which is rooted in ordinary issues, in everyday life itself.

The social desire for ordinary situations to be controlled by reason is one of the main areas of questioning by the risk society, as everyday facts present themselves with a certain degree of unpredictability, showing us what one does not want to see: the empire of uncertainties. In this sense, the author states that “reflexivity and the impossibility of controlling social development invade individual sub-regions, disregarding jurisdictions, classifications and regional, national, political and scientific limits” (BECK: 1997; p. 12).

With the emergence of uncertainties in all areas of life in society, criticism intensifies, resulting in reflexive modernization

what can be called the foundation of its autonomous form, given that there is no certain and definitive element.

Another characteristic of reflexivity lies in the daily routine of this new society, where tradition is no longer the essential element that shapes it. The actions and situations of everyday life come to place the individual as the only and exclusive actor, the fruit and consequence of the uncertainties that oblige him to pursue an intense process of individualization, which cannot be confused with free will, since the correct understanding of the term consists in dependence in relation to decision-making processes.

Equally important, the individualization process is intensified not only in the private sphere, but also in the public sphere. Although in a new sense, political bias becomes integrated in society beyond traditional limits, such as in duties and protocol hierarchies. Decisions start to demand greater efforts, as it is necessary to form, build and think in perspective, with a new conviction that, in Ulrich Beck's view, this rebirth consists of a political subjectivity understood as "sub-politics."

Indeed, among the theories concerning reflexive modernity, we note that the previously prominent role played by orthodox spheres (the traditional political system) in making decisions of greater social interference no longer have the same relevance, while informal ones formed by the politicization of the non-political, emerge as new forces against the conjecture of paralysis of political pretension.

Thus, life in society consists of a risk, from which another important concept emerges: liquid modernity.

Developed by sociologist Zygmunt Bauman (2001; p. 12) in a more accentuated manner after the 1960s, but having its origins in the beginning of industrial capitalism (the Industrial Revolution), the concept of liquid modernity refers to a new era where economic-social relations and production are fleeting and malleable, like a liquid; a vision of ephemerality, immediacy and the frailties of institutions and human relations, submitted to the inherent issues in the model of consumption (logic of capitalism): "fluidity" is the

quality of liquids and gases. (...) liquids, unlike solids, do not easily maintain their shape. (...) fluids move easily. They “flow,” “run,” “flow away” (BAUMAN: 2001; p. 14).

Unlike other authors, Bauman understands that the term “post-modernity” should not be applied to contemporary society, but rather the concept of “liquid modernity”. This metaphor of the fluidity of liquids is supported in his doctrine. According to him, we cannot affirm that “post-modernity” is the result of an evolutionary process, of rupture and superseding, but rather it is a process of continuity of what was conceptualized as modernity, because despite the notorious changes, capitalism’s core remains the same, though with a different logic (individualism, consumption, immediacy and volatility), “everything is temporary, modernity (...) – like liquids – is characterized by the inability to keep its shape” (BAUMAN: 2001; p. 14-18).

Thus, liquid modernity would be “a world full of confusing signals, prone to change quickly and unpredictably” ((BAUMAN: 2001; p. 18), marked by liquidity, volatility and fluidity where interpersonal relationships and social events are not made to last, being in constant transformation and, therefore, of short and ephemeral duration.

Given these considerations, when analysing these concepts and definitions, we conclude that society is in constant transformation (even if in an unwanted and unnoticed manner and, equally in silence), reflexive modernization starts to externalize its phy-siognomy through small gestures that, taken together, lead to an important result: which is nothing more than the process of evolution of industrial society.

In this context where everything dilutes in the air, Beck returns to understand contemporaneity, considering several aspects, including the sociological bias and the importance of transformations in the intimacy of society, culminating in a globalized, politicized culture, where everyone knows their exact social role.

And, as stated by Ulrich Beck, the main characteristic of this cultural and globalized society, that is, of risks, lies in the fact that the very technological and organizational innovations of contemporary society lead to disastrous effects that, with the increasing complexity of interpersonal relationships, become increasingly complex, unpredictable and, in certain situations, beyond human control. This is a characteristic that we see in the failure of conventional institutional systems with the end of the industrial period:

The nation-state is no longer able to regulate highly complex risks, especially those that have spatiality and temporality that go beyond national geopolitical borders. (BECK: 1997; p. 210).

That is, the set of risks generates “a new form of capitalism, a new form of economy, a new form of global order, a new form of society and a new form of personal life” (BECK: 1997; p. 7).

Thus, contemporary reflexive society is the result of the duality between the expectations of postmodern life, with its benefits, and, on the other hand, it is based on uncertainty, insecurity and the unknown.

Consequently, the new questions that arise in this new society will serve to shift the foundations of industrial society, leading modernity to a true act of inner reflection (reflexive modernization), which will, in the end, allow for the collective awareness that the traditional social order is shaken, as well as the trust in modern institutions, since they are incapable of solving current problems, precisely reflexive, as it has become an issue and a problem in itself.

Conclusion

This article discusses one of the current topics in Sociology, risk society, in an attempt to better understand the definitions and extent of risk and, consequently, to reflect on the limits with

respect to protecting legal interests, in this case, a balanced environment.

Ulrich Beck's approach to his work, from the perspective of his lessons for the contemporary socio-environmental crisis, reveals technological innovation as an important instrument in the quest for sustainability and environmental awareness.

Although there are challenges that the State will continue to face in order to adapt to the changes that have occurred in post-industrial society, it is necessary to study risk society from a sociological, philosophical and legal perspective, because every day citizens are imposed to new risks, and the State must seek solutions that protect a society that often does not trust or believe in its institutions.

Risk society must be understood as the way in which citizens face the dangers and insecurities of modernity, as consequences of the process itself, which will also provide the tools needed for sustainable development (technological innovation).

It is not up to the law to prohibit the imposition of risk. Knowledge and, consequently, regulations are necessary, and this is the apparatus that will ensure the confidence that the *alter* will not deny the legitimate social expectations of it, but regulate them harmonically.

The challenges imposed by a complex, multifaceted and decentralized risk society on the law lead to a mandatory improvement reflection within a scientific perspective capable of understanding and describing its complexities and challenges.

Indeed, concrete solutions emerge that improve and optimize, in a coherent and adequate manner, the needs of the present and, especially, of the future as a result of this new vision of society where individuals come to understand their space as citizens of a single community, that is, the way society organizes itself in response to risk.

The incessant production of wealth has led to the aggravation of risk to the balance of life, such as threats to a balanced environment and, consequently, to the health and well-being of all.

The community is moving toward a situation that has already been exposed: a society of risks, which becomes the measure of its aggravation, unpredictable and irreversible, on a global scale, in addition to substantially impacting work as it becomes pluralized, flexible and decentralized, exposing labor relations' weaker side even more to situations of vulnerability and fragility, greatly increasing the exploitation of available labor.

Thus, we are faced with certain social changes that provoke and demand a punitive action by the State. And it is precisely the protection of new legal assets that have been creating challenges not previously imagined in a branch of law that has regularly adopted principles such as subsidiarity or minimal intervention.

We put aside the exclusive protection of the individual to protect supra-individual legal assets, such as the environment, the consumer, bioethics and the economy. In fact, with the understanding of the existence of the risk society, one becomes aware of the origins and the role of environmental degradation at the core of modern society.

There is no use in denying the idea that the risk society did not exist before, or that risk was not always present in human relations.

We are experiencing a time of social transformation that requires a detailed study and reflection on which positions will effectively address the fundamental rights of individuals and, consequently, safeguard the application of constitutional norms, requiring the State and the Law to adopt a perspective, based on the preservation of life and devoid of technical pragmatism in order to use tools promoted by the developmental process itself to achieve a necessary balance.

Thus, as previously mentioned, modernization itself brought about consequences that became threats to the very existence of civilization by generating unchecked wealth without concern for sustainability. Similarly, it implies an increase in global social risks without distinction. The uncertainty generated expresses the accumulation of risks, cutting across the self-sufficiency of cultures, languages, religions and systems, that is, global risks that created a global cosmopolitan reality.

This undoubtedly leads to the alignment of individual and community interests, through the recognition of the legitimate instances of others (a cosmopolitan reality), consequently obliging everyone to be concerned and act as parts of a whole that increasingly communicates and presents itself in an interdependent manner.

The global nature of socio-environmental problems, the need for a new perspective on the legal culture of attributing responsibilities and reparations, and also the insurgence in other areas of society representing non-state positions of sub-politics and social action in the face of the environmental risks of postmodern society, are essential points of great interest in environmental law, which, without necessary confrontation and, principally, presenting solutions using the tools created by the intrinsic technological development process (innovation), tend to worsen while the risks arising from this society become greater and more complex.

Therefore, the author does not propose a magic remedy for all the ills of the world, but an honest invitation to think about the future, with the understanding that life goes on, and we must keep moving forwards.

In addition, in line with the ideas expressed here, the Law ends up acting as an instrument to reduce complexity, a reductive order, constantly improving. This legal and sociological perspective, in turn, contributes to the Law remaining focused on this circular perspective, as opposed to the casual (myopic) view

of legal relations, while seeking to improve and overcome its own paradoxes with a solid legal epistemology that is concerned with building a sustainable future for our risk society.

Environmental law has the important mission of proposing cultural changes in accountability and reparation, more concerned nowadays with the pecuniary aspect than with a reparative culture, highlighting what the author tirelessly expresses: that risk arises from society itself and thus allows for a direct approximation to reality, with reflexivity acting as an empirical-theoretical mediator.

Ulrich Beck's suggestions (and not just the theoretical ones) confront reality and make us think ahead. A view towards the future allows us, essentially based on respect, to imagine what we want for our children and, if we are wise, we can use this important invitation to reflect on the need for social transformation through technological innovation, as a means of ensuring a better future for this plurilateral society.

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