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TOPOGRAPHIES OF RISK. THEORETICAL APPROACHES (Vol. 44, No. 1; 2024)

TOPOGRAPHIES OF RISK. AREAS OF APPLICATION (Vol. 44, No. 2; 2024)

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How to Navigate Uncertainty?

Introduction

The concept of risk has undergone significant changes and variations over the centuries, but its purposes have remained constant. It has always represented an attempt to control and manage the disorder that invades reality. This is particularly highlighted by Mary Douglas, an anthropologist who has extensively studied the political and cultural significance of this notion. Connected to the sphere of contamination and purity, risk is part of those symbolic aspects that allow for the attribution of blame and the creation of social cohesion:

Whose fault? is the first question. Then, what action? Which means, what damages? what compensation? what restitution? and the

preventive action is to improve the coding of risk in the domain which has turned out to be inadequately covered. Under the banner of risk reduction, a new blaming system has replaced the former combination of moralistic condemning the victim and opportunistic condemning the victim's incompetence. (Douglas 1992, 15–16.)

Risk is a concept of Modernity, related to the idea of calculus and probability. It has gained increasing centrality, even to the point where we now speak of a true “risk society.” Today, in the face of the climate crisis, pandemics, geopolitical instability, and the terrifying advances of Artificial Intelligence, references to risk are much more frequent and require special attention. Is “risk” still the appropriate term to describe our reality, so unstable and uncertain? Can we use it to control and predict these incalculable dangers?

The purpose of the two 2024 issues of the journal *Teoria* is precisely to investigate the meanings and applications of the concept of risk. In this contribution, we begin with a historical and conceptual survey and then go on to present the contents of the issues of the *Teoria* journal.

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History of risk

The need to confront the future and its uncertainties has been one of the hallmarks of human history. However, not all cultures have employed the same strategies, in order to address this issue. In ancient times, these concerns were addressed through the relationship with divinity and the interpretation of its will, without using the concept of risk and the associated techniques of calculation, management, and evaluation. According to Peter Bernstein (1996), it is precisely the shift away from relying on gods to manage and predict the future, in favor of rational and strategic calculation, that marks the distinctive feature of this concept.

Although the origin of the term is not entirely certain—it may possibly be Arabic (cf. Luhmann 1996, 9)—, the neo-Latin form *risicum* is documented as early as the medieval period. It finds its first usage mainly in relation to maritime trade and ship insurance, indicating primarily adverse events that could jeopardize the success of a voyage, such as floods, epidemics, and earthquakes. These phenomena do not depend on human action and are

not even considered calculable, which excludes the connection between this initial idea of risk and human responsibility. Additionally, the scope for action and prediction is extremely approximate. Therefore, in this initial phase of its appearance, risk essentially represents a danger of encountering misfortune, over which human intervention has very little control.

With the transition to modernity in the 18th century, the meaning of the term expands to include elements related to human action. In this context, it acquires a calculable and objective character. A clearer distinction between risk and danger is established: “[...] only in the case of risk does decision-making (that is to say contingency) play a role. One is exposed to dangers.” (Luhmann 1996, 23.)

A combination of factors contributed to the development of this new understanding. Firstly, the Enlightenment mentality fostered a general belief in human progress and the rational and objective knowledge of the world. Additionally, actual advancements in the fields of probability and statistics allowed for the refinement of prediction techniques based on mathematical principles.¹

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The modern sense of the term is characterized by its distinction from danger, as it depends on human decision, its distinction from uncertainty, due to its rational and measurable nature, as well as its ambivalence between positive and negative connotations. Especially in its use in finance and insurance, taking risks can represent a loss, but also an opportunity and a gain.

Things change significantly in the transition from modernity to postmodernity or late modernity, marking the entry into what Ulrich Beck has effectively defined as “the risk society.” With the growing distrust in certainties and the objectivity of sciences, the fragmentation of grand narratives and traditions, and the concurrent suspicion with regard to authority and institutions, the conception of risk gradually shifts from the dimension of control to that of uncertainty. As Anthony Giddens argues:

¹ For a reconstruction of the link between the concept of risk and the development of probabilistic theories, see Bernstein 1996.

Risk was supposed to be a way of regulating the future, of normalising it and bringing it under our dominion. Things haven't turned out that way. Our very attempts to control the future tend to rebound upon us, forcing us to look for different ways of relating to uncertainty. (Giddens 2000, 40.)

362 A widespread sense of insecurity unsettles society, primarily because the nature of the dangers we face has changed. In her text dedicated to this topic, Deborah Lupton (2023) identifies six types of risks that characterize our era: 1) environmental risks; 2) lifestyle risks; 3) health risks; 4) risks in interpersonal relationships; 5) economic risks; 6) crime-related risks. While different areas of impact can be identified for these risks, their common origin lies in their connection to the development of new technologies. As Luhmann states, technology “transforms dangers to risks simply because it creates possibilities of making decisions that had not existed before” (Luhmann 1987, 88).² We thus speak of both technical risks and sociotechnical risks. The former refers to adverse events caused by the very structure of the technology used (e.g., an accident due to a system malfunction), while the latter refers to damage caused by a specific intent to use such technologies and the power dynamics that drive it (e.g., the dropping of a bomb).

It is not surprising that the evolution of the concept of risk has become even more evident in our era of significant technological progress. On the one hand, calculative and predictive capabilities, as well as tools for improving life, have greatly increased. On the other hand, the margins of instability and unpredictability regarding the consequences of human actions have equally intensified. The distinction between natural and artificial is also becoming blurred: the catastrophes looming over our planet are increasingly caused by humans and their use of technology. François Ewald has even referred to these as true “artificial catastrophes” (Ewald 1993, 223).

2 The author uses this effective example: the risk of getting wet exists from the moment an umbrella exists. Previously, there was a *danger* of getting wet, since such a happening was not related to a human decision.

The global nature³ and, in many aspects, unpredictable consequences of current issues make it difficult to exercise calculability and control. The spatial and temporal extension of the impact of our actions renders the causal chain of responsibilities less certain and often impossible to reconstruct. The responsibility for present actions increasingly conceals the pitfalls of unimaginable and unforeseeable consequences.

In this context, risk transforms into uncertainty, diminishing the possibilities of compensation, damage limitation, security, and calculability: "Risk society is a catastrophic society. In it, the exceptional condition threatens to become the norm." (Beck 2013, 25.) In an era like ours, the impact and importance of each decision increase, as does the desire to identify those responsible, but likewise does, at the same time, also the difficulty of doing so in the face of uncertainty. Thus, the modern idea of risk gives way to a much more unstable and vaguer concept, which does not allow us to fully contain and control our future and the consequences of our actions. However, it does not stop trying to "calculate the incalculable" (cf. Dean 1998). As Mark Coeckelbergh (2015) argued, risk, or rather being-at-risk, becomes a true existential category, describing the state of exposure and uncertainty of humanity in the age of new technologies.

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The purpose of any risk prediction and calculation is to develop strategies for eliminating or containing the threat. Covello and Mumpower (1985, 108) suggest that, historically, the main techniques are: 1) avoiding risk through prohibitions; 2) regulating and modifying human activities to decrease the magnitude of the risk; 3) reducing the vulnerability of exposed individuals; 4) developing interventions following events to mitigate the impact; and 5) compensating for damages through insurance methods.

However, in the face of such power and unpredictability, our risk management techniques, as Beck says, "would be like a bicycle brake on an intercontinental jet" (1992, 106). Precautionary techniques for prevention and reduction of subjects do not seem entirely effective, because the catastrophic consequences of our actions are often not entirely predictable (consider, e.g.,

³ It is important to distinguish between globalized risks, which, although local, occur in various parts of the planet, and global risks, which involve all of humanity. Cf. D'Andrea 2004.

pollution and climate change). On the other hand, *ex-ante* solutions, such as interventions and insurance, do not appear sufficient or proportional: how and who will compensate in the event of a catastrophe or irreversible global damage, like the explosion of a nuclear power plant?

In addition to its evolution over time, which has caused significant changes in the concept, there is also a plurality of ways to interpret this notion (cf. Lupton 2023). Although the landscape is broad and varied (cf. Zinn 2008), we can mainly distinguish two interpretive schools: one that understands risk in a fundamentally objective and rational way, and another that defines it as a social and cultural construct that does not depend on factuality, but on how it is managed and constructed.

364 In the first case, the disciplines of engineering, actuarial mathematics, statistics, and epidemiology are primarily involved, relying on a technical-scientific approach. In this context, risk is something inherent in the reality of things. What is not objective is rather the perception of risk, which varies between experts and laypeople, and is influenced by specific cognitive mechanisms that compromise the rationality of human evaluation. As a factual datum, therefore, it can be measured objectively, as the product of the probability of an event occurring and the harmfulness of its consequences, namely the magnitude. The attempt to contain and mitigate risk, therefore, involves modifying the value of one of these two variables. Thus, both the identification of risk and the solutions proposed to address it are normally entrusted to technical aspects.

The second perspective—of a sociocultural nature—is developed mainly through philosophical, anthropological, and sociological reflection. The basic premise is that risk, even before being an objective datum, is the interpretative category, through which modern society is governed, and which determines its relationship with otherness, knowledge, and the future. This makes the category of risk and the decisions that derive from it into a political dimension, leading to the development of specific governance strategies and the distribution of responsibilities in response to a risk. In the past decade, Artificial Intelligence has taken the leading role in public and academic discussions. The so-called “Fourth Revolution” (Floridi 2014) has exposed humanity’s illusory superiority over machines, demonstrating the ability to simulate human actions almost

indistinguishably. In fact, in some areas, AI has even surpassed humans in performing tasks and practices that have traditionally been their domain.

Alongside the many opportunities opened up by interacting with these systems, new problems are also emerging, raising concerns about their use. There are both continuities with past risks and some elements of significant novelty. In today's situation, these risks often assume a global dimension, potentially leading to real catastrophes. In the case of AI systems, these global and globalized risks are primarily due to the amount of data involved and the pervasiveness of the technologies. Like the risks of the 20th century, the risks associated with AI can also be defined as incalculable and unpredictable, falling more within the realm of uncertainty.

However, unlike in the past, these characteristics are not solely due to the human inability to foresee consequences, distant in spatial and temporal terms. In the case of AI systems, which are often opaque, the very functioning of the system remains unknown, representing a black box for humans. This poses serious problems, when we apply algorithmic decisions to various contexts, such as finance or medicine, basing our decisions on outcomes that are unintelligible to us and creating new modes of correlation. The risk of AI, therefore, becomes exponentially incalculable and unpredictable.

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The Teoria journal issues on risk

How can this state of uncertainty be inhabited? In this day and age, can one still rely on calculation and strive for control over risks that are growing into global proportions? Based on which criteria can one interact with risky situations that lay bare the limitedness of the human being? The two 2024 issues of *Teoria. Rivista di filosofia* set out to investigate this key concept of contemporary thought and to answer these and more questions. The ultimate goal is to recreate and work out a “risk topography” that may allow us to understand more dependably the meaning of such a notion and that may bring together the spheres of application, in which it is used. The combination of the two issues then tries to keep the two complementary directions together. The first issue, a more descriptive one, focuses on the conceptual re-creation through the main milestones and most significant figures in the history of

thought. The second issue explores the many potential uses of the term in the areas it has been applied to: environmental, economic, political, technological, medical, pedagogical. The effort to survey widespread debates on the subject of risk wants therefore to achieve a double goal: on the one hand, it wishes to provide an exhaustive guiding overview and, on the other hand, to work out new, unprecedented perspectives on risk management.

366 The first issue is opened by two essays that piece the development of the concept together within the modern tradition. Notably, Natasha Cola's article shows how the concept of risk has spread as an expression of the crisis of modern social imagery that, through the notion of social choice, can offer a new idea of rationality. Osvaldo Ottaviani's essay deals instead with the distinction between risk and uncertainty, emphasizing that they do not represent two different approaches to the same sphere of interest, but two approaches to different domains, the calculable and the non-calculable one. Considering in particular the concept of radical uncertainty put forward by Knight and Keynes, the author runs through the highlights of the debate throughout the history of thought, especially the dispute between Leibniz and Bernoulli. On a more epistemological note, Maria Laura Ilardo and Marta Bertolaso analyze the connection between causality and risk, claiming that when the former is differently understood, the latter takes a different shape too. Prompted by such an assumption, the authors discuss the implications of risk management in different contexts (cause and effect, probabilistic causality and Bayesian causality). This is followed by articles that are more focused on the ethical implications of the notion. At the center of Roberto Formisano's essay is the relationship between risk and fear in Jonas's philosophy. An analysis of the German philosopher leads the author to update the theory and to consider risk as a central factor in the development of moral judgement and in finding principles even in today's real world. Simone Grigoletto focuses on the role of moral risk and its importance in normative ethics. Supported by Thomas Aquinas's considerations and Second Scholasticism, he argues against moral perfectionism, showing that the total removal of uncertainty from the sphere of decision-making is impossible, and even less desirable. Partly along the lines of such an argument, the perspective opened by Ivan Rotella's essay shows that, rather than being a society of control, that of risk becomes a non-knowledge

society that, through strategies and methods, struggles with the lack of a single preordained path. The focus of Ralf Lüfter's essay is mainly on risk in its relationship with the future within the confines of economic theory. The author emphasizes the extremely critical character of the concept, since in this context, the calculability of the present future often ends up disregarding some critical factors that are essential to understanding how transition, investment, and credit work. Melanie Erspamer delves deeper into the subject of risk in the inherently uncertain domain of political decision-making. As she lingers on the case of the COVID-19 crisis, the author proposes that an "auxiliary principle" (AP), inspired by Neurath's auxiliary motive, should replace the precautionary principle as advocated by Rawls. At the end, with Corrado Claverini's article, we move from the discourse on risk to that on risks. His essay addresses new risks, emerging in the context of generative AI and, more specifically, its manipulation for malevolent purposes. His analysis brings into sharp focus the growing need for a human-centered AI, in order to counter the new dimension of risk in the technological sphere.

The rich tapestry woven by the first issue of *Teoria* shows us the main routes to the topography of risk. The second issue enables us to further extend, without the pretense of exhaustiveness, the scope of enquiry, in order to find our feet in the multidimensional reality of risk in its semantic richness, in its multiple evolutions, and in the ethical-political implications it carries.

The second *Teoria* issue on risk focuses on the exploration of the main areas of application of this concept. These include ecological reflection and climate risk, technological risk, its management in the new dimension of Artificial Intelligence, risk in health care, as well as in pedagogical education. The need to move into the terrain of application is conditioned by the very nature of the subject, which is used in the most diverse fields, becoming a pivotal concept in the management of our daily lives. Our thinking is in fact shaped by the idea of risk, the calculation of the probability of the occurrence of an adverse event, and the attempts to control or limit the damage. On the practice of calculating and managing risk depends the success of our activities and our greater or lesser confidence in the infrastructure, systems, and devices we use. This concept is so present in our society that it is almost transparent and interwoven with our very lives, and is thus likely to end up escaping criticism. In order to retrace its

meaning and bring out its various uses, the second issue explores some of its main areas of application.

368 The second issue therefore opens with Dean Komel's contribution that offers a reflection on the nihilistic root of the risk society in correlation with a series of current phenomena that undermine or redefine the sense of the world, in particular the climate crisis and the development of AI. By critically analyzing Ulrich Beck's notions of "reflexive modernization," Zygmunt Bauman's "liquid modernity," and Niklas Luhmann's "self-production of social systems," the author highlights how "the risk society" constitutes an "operational concept," only if it is grounded in the apparatus of ecosociology, which links eco-nomics, eco-logy, and eco-technology. Dimitri D'Andrea clarifies the difference between risk and threat, arguing that in the case of climate crisis, it is more correct to speak of a threat, since it appears as a natural and certain consequence of our reckless behavior towards the environment. The author analyses the reasons for the general denial that paralyses the fight against this phenomenon, identifying them in particular in the emotional and cognitive distortions that derive from the perceived excessive renunciation of goods and freedoms that such a fight implies, and the difficulty of devising realistic and effective solutions. The answer to this impasse lies mainly in the coordinated engagement of global and local institutions, recovering the value of the closest and most particular realities. Marco Emilio's paper also examines ecological and climate risk. In particular, the argumentation is based on local examples that underline the conflicting nature of the transition to different energy sources. The author illustrates conflicts that include social, technological, economic, and ecological aspects. Using the concepts of epistemic responsibility and vulnerability, he suggests improving the interaction between the social sciences, climate science, and the philosophical exploration of risk and collective action. This improvement aims at a deeper understanding of decision-making, particularly in situations of profound uncertainty, and effective risk communication, in order to prevent the dangers of collective inaction and the sense of powerlessness. With Žarko Paić's essay, we move onto the terrain of the technosphere, i.e., the relationship between human beings and technology. The author analyses the link between risk and chaos, entropy and contingency. These concepts, in fact, increasingly present in both contemporary science and philosophical reflections, are both

the foundation of policies and practices based on risk and their threat: they are contained and controlled by the disciplines of statistics and probabilistic calculation. Still remaining on the technological terrain, Veronica Neri focuses in particular on the risks of image-generating AI. Indeed, images created by artificial intelligence allow the development of unimaginable creative possibilities, but open up equally serious ethical issues, which must be regulated, in order to limit their dangerousness. Through an examination of these risks (bias, deep fakes, manipulation, multiple identities), the author offers a public ethics response based on strengthening information and awareness, in order to provide subjects with the appropriate skills to counter the state of uncertainty caused by these systems. Anastasia Siapka analyses the risk-based approach in the European regulation of artificial intelligence (AI Act). The author argues that, in order to make this approach more operational and effective, the objective dimension must be integrated with a regulatory governance perspective. To achieve this integration, she examines AI-induced risk from the dominant approach of consequentialism, highlighting its limitations under conditions of uncertainty. She then proposes virtue ethics as an alternative approach to AI-induced risk. The essay concludes with an analysis of the implications of this approach for research, policy and practice. With Leopoldo Sandonà's essay, we move on to analyze risk in the context of health services. While at first this concept was only considered from the medical-clinical perspective, today, it is joined by a corporate perspective. However, this complex system that holds together the clinical space and that of complex organizations seems to reveal its limitations, particularly linked to a legalistic approach that puts the ethical approach towards the patient and the therapeutic relationship in the second place. In response to this, the author emphasizes the importance of an ethically informed approach to risk, which makes it possible to approach the individual case, but relates it to a global ethical perspective. To conclude the monographic section, Ilaria Malagrino's contribution focuses on the relationship between risky conduct and young actors. This relationship is usually mediated by the use of new technologies, in particular social media, which modify our practices, revealing moral connotations. Precisely by analyzing this technological context and the idea of risk and uncertainty that are promoted in it, the author expresses the

urgency for a rethinking of our moral conduct within digital environments and a serious assumption of responsibility for future generations.

The contributions gathered in both issues of the *Teoria* journal dedicated to the topography of risk, varied in their contents and perspectives, provide a comprehensive view of the multifaceted nature of this concept. It is not possible to simplify this complexity; what can be done is to outline a topography that allows us to navigate the meanings and the applications of risk.

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| Petar Bojanić | Holger Zaborowski | Dragan D. Prole | Susanna Lindberg | Jeff Malpas | Azelarabe Lahkim Bennani | Josef Estermann | Chung-Chi Yu | Alfredo Rocha de la Torre | Jesús Adrián Escudero | Veronica Neri | Žarko Paić | Werner Stegmaier | Adriano Fabris | Dean Komel



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Damir Barbarić | Dragan Prole | Artur R. Boelderl | Johannes Vorlauffer | Cathrin Nielsen | Virgilio Cesarone | Mario Kopić | Petr Prášek | Žarko Paić | Tonči Valentić | Dean Komel | Emanuele Severino | Jonel Kolić | Jordan Huston

